GARLOCK PACKINGS



Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/1

GARLOCK PACKINGS



AND OTHER GARLOCK PRODUCTS

The Garlock Packing Company

GENERAL OFFICES AND FACTORY: PALMYRA, NEW YORK

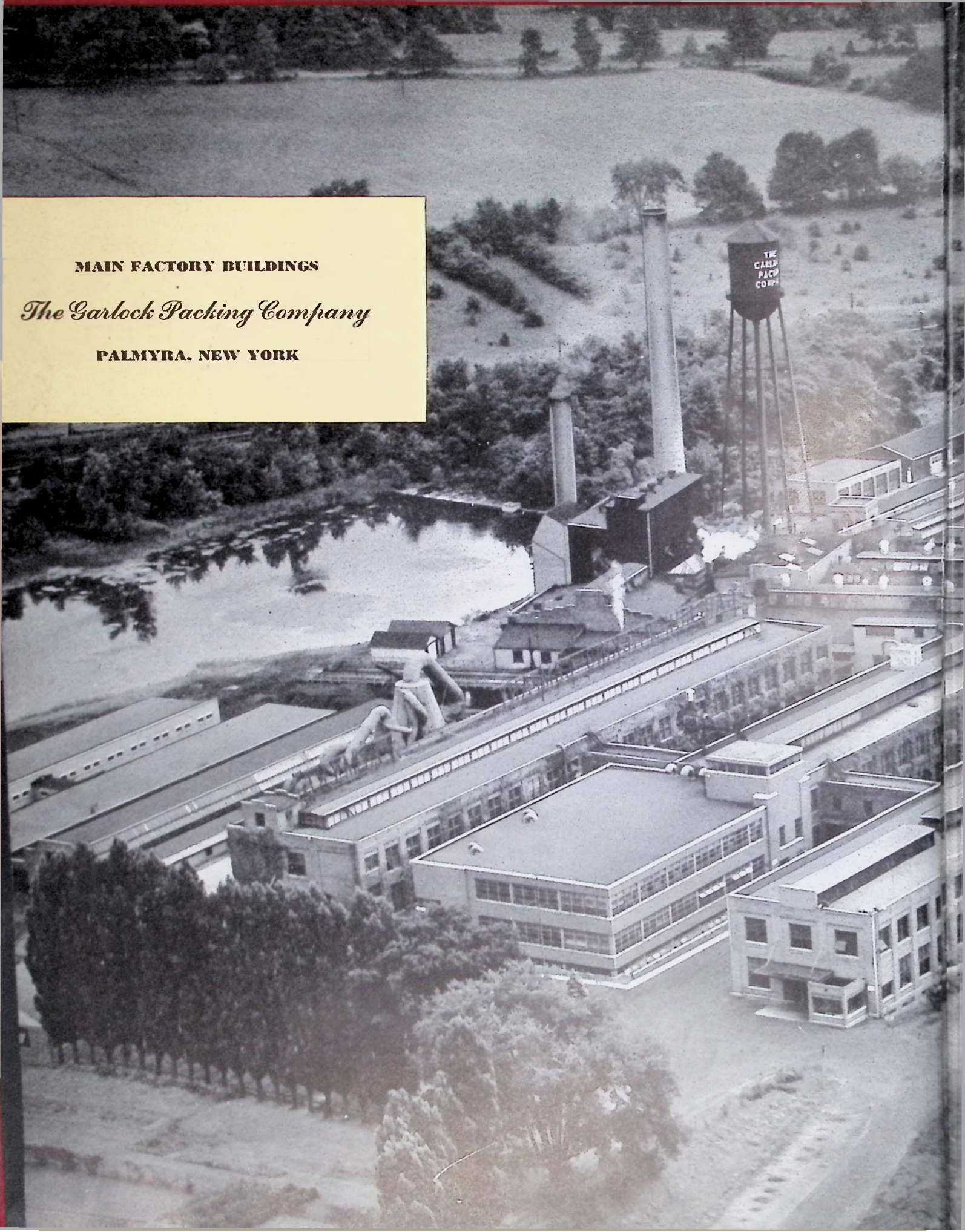
IN CANADA:

The Garlock Packing Company of Canada, Ltd.

MONTREAL, QUEBEC · CANADIAN FACTORY: HAMILTON, ONTARIO

Catalog J-1949
Copyright 1949—The Garlock Packing Company—All rights Reserved

Printed in U.S.A.



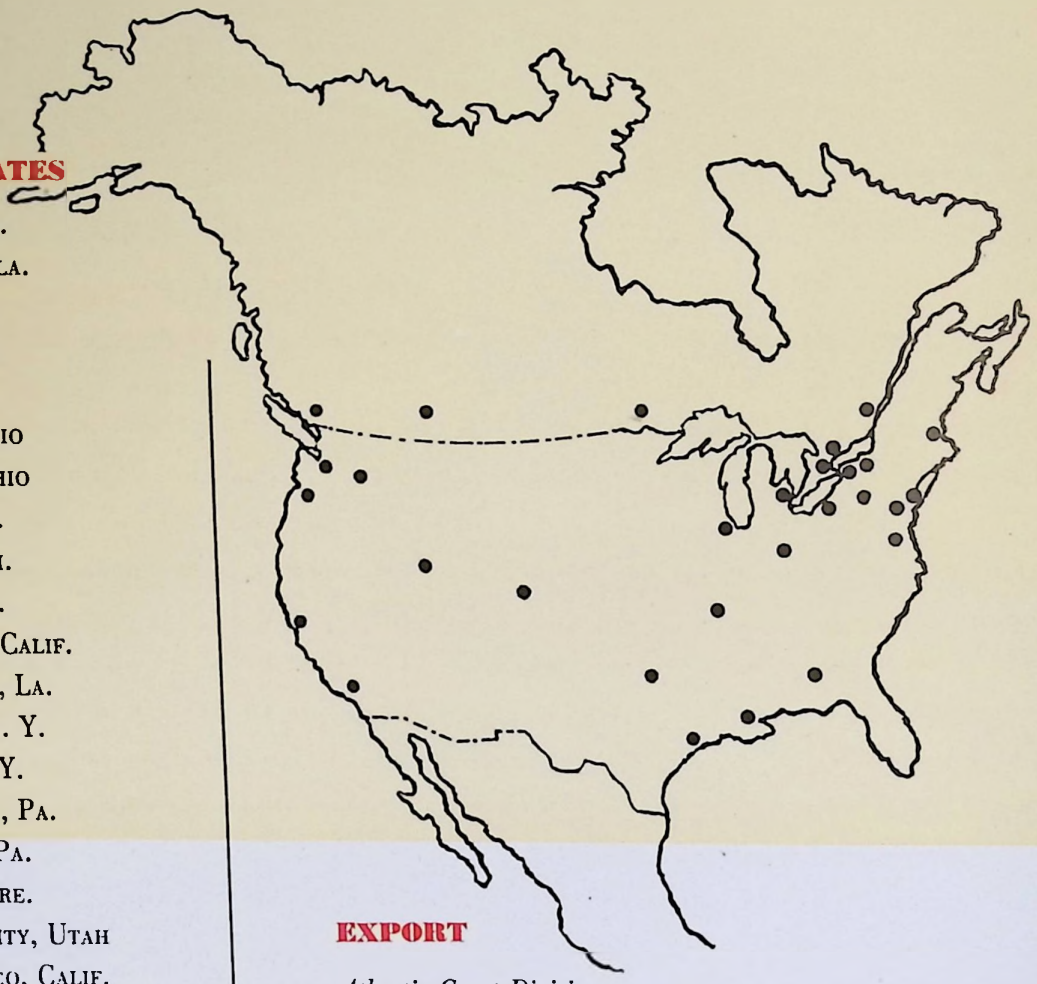
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/3



Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/4

Sales Offices and Warehouses

throughout the United States and Canada



UNITED STATES

Baltimore, Md.
Birmingham, Ala.
Boston, Mass.
Buffalo, N. Y.
Chicago, Ill.
Cincinnati, Ohio
Cleveland, Ohio
Denver, Colo.
Detroit, Mich.
Houston, Tex.
Los Angeles, Calif.
New Orleans, La.
New York, N. Y.
Palmyra, N. Y.
Philadelphia, Pa.
Pittsburgh, Pa.
Portland, Ore.
Salt Lake City, Utah
San Francisco, Calif.
St. Louis, Mo.
Seattle, Wash.
Spokane, Wash.
Tulsa, Okla.

CANADA

Calgary, Alta.
Hamilton, Ont.
Montreal, Que.
Toronto, Ont.
Vancouver, B. C.
Winnipeg, Man.

EXPORT

Atlantic Coast Division
114 Liberty Street, New York, N. Y.
for
Europe, Mexico, Central America, South America, West Indies, Africa.

Pacific Coast Division
930 Bryant Street, San Francisco, Calif.
for
Hawaiian Islands, Philippine Islands, Australia, New Zealand, China, Japan, Dutch East Indies, British India

Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/5

INTRODUCTION

A Complete Packing Service

Since 1887 The Garlock Packing Company has supplied its products to, and served industry throughout the civilized world. The Company's familiar caliper-and-scale trade mark and the registered name GARLOCK, which identify all mechanical packings and allied products manufactured by Garlock, are trusted emblems around the globe.

No single catalog could properly describe all the hundreds of types and styles of Garlock products. This book, therefore, contains only the *standard* Garlock line—those materials for which there is general usage and demand. By referring to the text and to the recommendation table on page 17, the user of this catalog generally can select a Garlock product satisfactory for any ordinary application.

If, however, special equipment is being used or operating conditions are unusual no product described in this catalog may exactly suit the requirements. To take care of such unusual conditions a comprehensive line of *special* Garlock materials has been developed and is available to the packing user. These hundreds of special products are not included in this catalog.

All Garlock representatives, however, are fully conversant with these many special materials and are fully qualified by training and experience to determine which Garlock product is most suitable for any condition. The services of this corps of competent Garlock representatives are available to packing users everywhere.

If, following a survey by a Garlock representative, it is determined that a suitable material is not available either in the line of Garlock standard or special products, an entirely new product will be developed for the job. Garlock's modern laboratories and test departments are completely equipped and staffed for such work and are devoted exclusively to the development and improvement of packing materials.

Thus, with its standard products, with its special products and with its individually-created products The Garlock Packing Company strives constantly to solve every packing problem and to justify the Garlock slogan — *The Standard Packing of the World.*

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 6 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/6



The GARLOCK TRADE MARK

WHICH APPEARS ON EVERY PACKAGE OF GARLOCK PACKING HAS BEEN REGISTERED BY THE GARLOCK PACKING COMPANY IN THE COUNTRIES LISTED AT THE RIGHT

Argentina
Australia
Austria
Belgium
Bolivia
Brazil
British Guiana
Bulgaria
Burma
Canada
Chile
China
Colombia
Costa Rica
Cuba
Czechoslovakia
Denmark
Dominican Republic
Dutch East Indies
Dutch Guiana
Ecuador
Finland
France
Germany
Great Britain
Greece
Guatemala
Haiti
Holland
Honduras
Hong Kong
Hungary
India
Irish Free State
Italy
Jamaica
Japan
Mexico
Newfoundland
New Zealand
Nicaragua
Norway
Pakistan
Panama
Paraguay
Peru
Philippine Islands
Portugal
Puerto Rico
Roumania
Salvador
Southern Rhodesia
Spain
Straits Settlements
Sweden
Switzerland
Thailand
Tobago
Trinidad
Turkey
United States
Union of South Africa
Uruguay
Venezuela
Yugoslavia

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 7 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/7

Application and Care of Garlock Packings

The GARLOCK Packing Company consistently makes every effort to place in the hands of its customers packings that are standard in every way. Through the Company's Quality Controlled method of manufacture the finished products are right in quality of material, uniform in excellence of workmanship, correct in measurements and in general conformity with the Company's established standards.

The actual application and care of packings are responsibilities of the user. The few simple suggestions set forth below may save annoyance, trouble and expense if followed out carefully.

ROD PACKINGS

Rod packings should be applied to a clean stuffing box. Each ring should be firmly seated, by tamping, as it is applied. When the stuffing box is full, the gland should be tightened with a wrench to seat the packing properly; then slacken off and retighten by hand, locking the gland a quarter turn with a wrench. Care should be taken to avoid cocking the gland.

Ammonia compressor rod packings contract during a "freeze back," making it necessary sometimes to tighten the gland to stop leakage. With the returning heat following the "freeze back" the packing expands, and unless the gland then is slackened off to compensate for this expansion the packing may be damaged. Most of the packing failures on ammonia compressors are caused by the failure to adjust the packing after a "freeze back."

Packings applied to hot water pumps sometimes cause trouble because of expansion as the temperature of the water increases. In this service packing should be watched carefully for a few days after application and the gland slackened off from time to time if expansion or swelling of the packing has occurred.

Proper lubrication is essential. A liberal application of one of the GARLOCK lubricating compounds described in the Miscellaneous Products Section of this catalog to all surfaces of rod packings before installation is strongly recommended. Rods should also be swabbed with the same compound at frequent intervals. Observance of the above practice will reduce friction, prevent scored rods and add life to the packing.

GASKETS

Before applying gaskets the flanges should be cleaned thoroughly. Gaskets should be cut and centered so that no portion of the inner diameter or flange of the gasket projects beyond the flange of the pipe or equipment on which the gasket is being applied.

Many gasket users wish to coat gaskets with a paste before applying them to pipe lines or equipment handling hot or cold gasoline, oil or petroleum derivatives. Inasmuch as the pastes sometimes used for this purpose actually are harmful to the gaskets, the Company developed GARLOCK Gasket Paste, Compound No. 1, for this service. Compound No. 1 has the correct body for a seal, expands under heat, will not discolor gasoline and is not harmful to gaskets.

When tightening the gasket in the flange make sure that the bolts are drawn up evenly all around. Unless this is done trouble will follow. Please see the data showing compression characteristics of gaskets appearing in the Sheet and Gasket Section of this catalog.

In the event of apparent failure of any packing at any time the Company will gladly have a competent GARLOCK Representative investigate all of the plant conditions as applying to packings, and make suitable recommendations for future packing usage.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 8 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/8

How to Order Garlock Packings

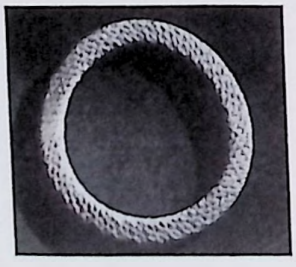
This catalog has been designed to make the selection and ordering of Garlock products as easy and as simple as possible and it is hoped that it will serve the user as a practical packing guide. The recommendation tables, the quick-reference index and the section indexes at the beginning of the product sections should be of assistance in selecting, from the many items contained in the catalog, the proper packing for each job.

The Company's experience over the years, however, has proved that no packing catalog can answer all the questions or solve all the complex packing problems of present day industrial plants and that individual study of the equipment and service conditions frequently is necessary before the proper packing can be intelligently selected. To that end Garlock maintains sales offices and warehouses in important industrial centers (see page 4) to which are attached staffs of trained, competent and practical representatives, always available for consultation on any packing or gasket problem—without charge or obligation to the packing user.

In recommending a packing for any job the Garlock representative is not limited with respect to the material from which the packing is made but is entirely free to select the material which, in his opinion, is the best for that particular installation. He may select a packing made of asbestos, rubber, synthetic, flax, cotton, rayon, leather or metal or of a combination of those or other materials, all of which are processed into finished products in the Garlock factories. The Garlock representative's only interest in recommending one material in preference to another, therefore, is to provide the packing user with the best product for the application under consideration.

GASKETS

Cut, formed or molded gaskets are available in any commercial size or shape, fabricated to the customer's specifications.

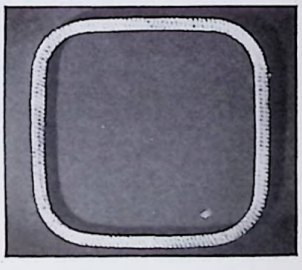


ROUND GASKETS

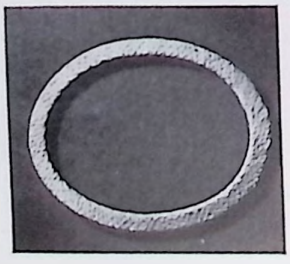
Specify the Garlock style number, the inside diameter, the outside diameter, the thickness and the number of gaskets required. If gaskets are to be with bolt holes specify the number and size of bolt holes and the diameter of bolt circle or supply a drawing or template.

SQUARE GASKETS

Specify the Garlock style number, the inside dimension, the width of flange or rind, the thickness and the number of gaskets required. When gaskets with rounded corners are required the radii must be specified or drawings or templates furnished.



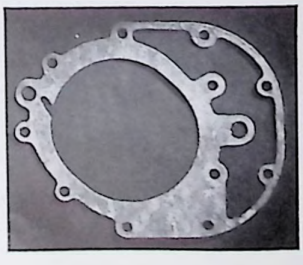
OVAL OR FLATSIDED GASKETS



Specify the Garlock style number, the long and short inside diameters, the radii, the width of flange or rind, the thickness and the number of gaskets required. Drawings or templates are desirable.

ODD-SHAPED GASKETS

Supply a drawing or template and specify the Garlock style number, the thickness of the gasket (unless shown on the drawing or template), and the number of gaskets required.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 9 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/9

ROD AND PLUNGER PACKINGS

Garlock rod and plunger packings are fabricated into a variety of forms such as ring, set, spiral, coil, spool and reel.

All rod and plunger packings are available in ring or set form and, because we have complete facilities for the accurate cutting and forming of rings and for assembling rings into sets, it is recommended that packings be ordered in rings or sets when practicable to do so.

Some materials cannot be supplied in spiral form and others cannot be produced in coil, spool or reel forms. The catalog page describing any desired product indicates the forms in which that material is available. Forms other than those shown in the catalog are not standard items.

To insure the receipt of the proper material and to prevent delays, orders should carry the following information:



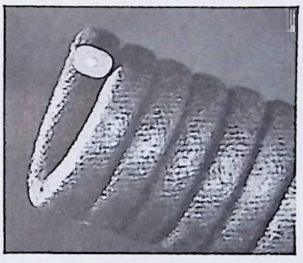
RING FORM

Specify the Garlock style number, the inside and outside diameters of the ring and the number of rings required.

SETS

Specify the Garlock style number, the inside and outside diameters of the rings, the depth of the set and the number of sets required.



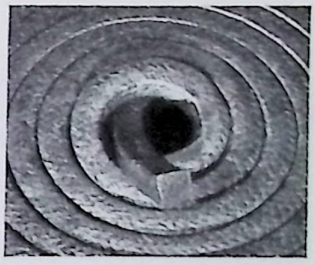


SPIRAL FORM

Specify the Garlock style number, the size of the packing and the number of pounds or number of boxes required. Packaging information is shown on the catalog page describing the desired material.

COIL FORM

Specify the Garlock style number, the size of the packing and the number of pounds or number of boxes required. Packaging information is shown on the catalog page describing the desired material.





SPOOL FORM

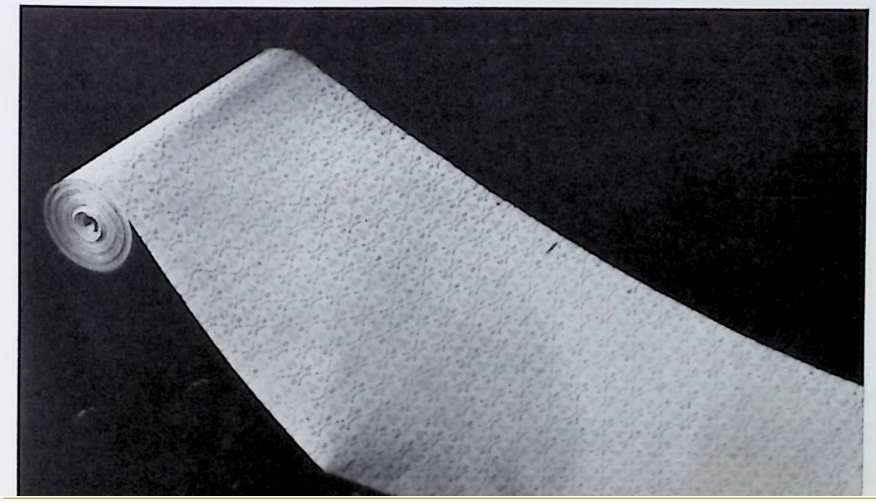
Specify the Garlock style number, the size of the packing and the number of 1-pound, 2-pound or 5-pound spools required.

REEL FORM

Specify the Garlock style number, the size of the packing and the number of 25-pound, 50-pound or 100-pound reels required.



SHEET PACKINGS



COMPRESSED ASBESTOS

Specify the Garlock style number, the size and thickness of the sheet and the number of sheets required. Sheet sizes and thicknesses are shown on the catalog page describing the desired material.

RUBBER SHEET

Specify the Garlock style number, the thickness and the number of linear yards or the number of pounds required. Standard widths, thicknesses and full-roll quantities are shown on the catalog page describing the desired material.

WOVEN ASBESTOS SHEET

Specify the Garlock style number, the thickness and the number of linear yards or the number of pounds required. Standard widths, thicknesses and full-roll quantities are shown on the catalog page describing the desired materials.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
Published by AsbestosClaims.Law
ACL Doc 21280 · Page 10 of 228
asbestosclaims.law/library/21280/10

RESEARCH

THAT MAKES GARLOCK "THE STANDARD PACKING OF THE WORLD"

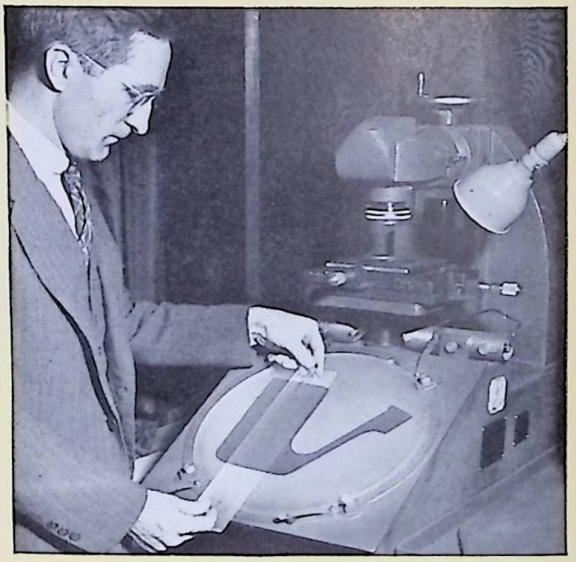
Garlock entered into research in the mechanical packing field many years ago. At that time little, if anything, concerning the laws governing Packing Mechanics were known. Garlock research, therefore, started with the fundamental question: "What makes packing pack?"

The first step in the Garlock research program was the establishment of a Test Department. Machines and instruments for testing packing, however, were not available and it was necessary, therefore, to design and construct special equipment for this purpose. Gradually over the years new and different testing machines have been developed in our Engineering Department and thousands of tests conducted on every known type of packing material. From the accurately tabulated results of all this research it has been possible to formulate provisional laws governing Packing Mechanics.

Having determined the kind or type of packing best suited for a given application the next step has been the selection of materials and constructions best adapted to produce the desired product. This involves further research and requires

Engineering Department

Linked with Research is the Engineering Department. In this department improvement and refinements in production equipment are developed and new machines to make new products are designed. The engineering department also provides the thousands of molds required to produce Chevron, Sealing Elements for Klozures and other molded products, and checks constantly the size and shape of these molded items.





Chemical Laboratory

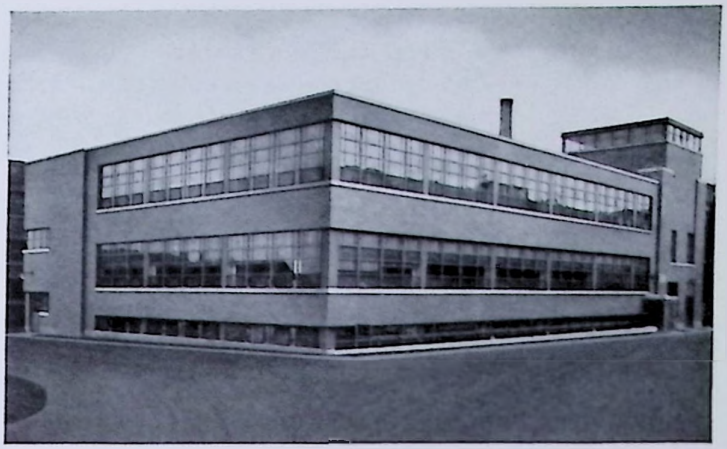
Chemical Laboratory with well equipped analytical and microscopic facilities for analyzing materials used in production or proposed for such usage and for determining the causes of packing failures in the field.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 11 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/11

the facilities of the chemical laboratory and physical laboratory plus the compounding laboratory if the product under development involves the usage of rubber.

The product thus evolved undergoes rigorous testing in the Test Room. If approved, it moves to the pilot plant, a small-scale factory equipped to duplicate, on equipment of semi-commercial size, every important factory manufacturing operation. In the pilot plant manufacturing methods are developed, manufacturing specifications are prepared and issued and new machines developed by the Engineering Department are put into initial operation. In short, the Pilot Plant is an important link between research and production.

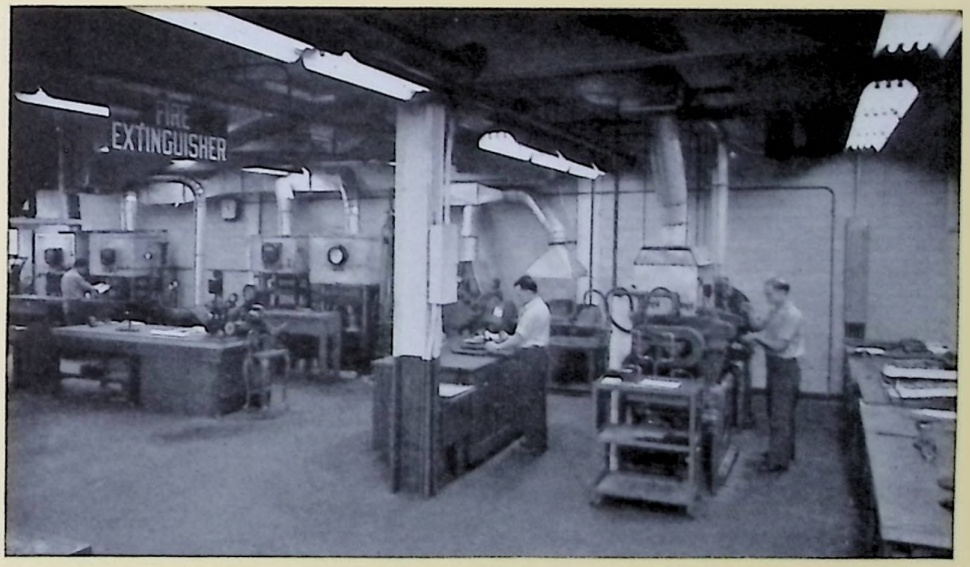
Of the many hundreds of products thus developed and tested only a very few ultimately clear the pilot plant and enter into regular production as Garlock products for sale to Garlock customers. Those which do receive final approval, however, have a known background of actual measured performance and are worthy of a place in the Garlock line—The Standard Packing of the World.



This modern building provides facilities for Garlock's chemical laboratories, physical laboratories, rubber-compounding laboratories, test department and pilot plant.

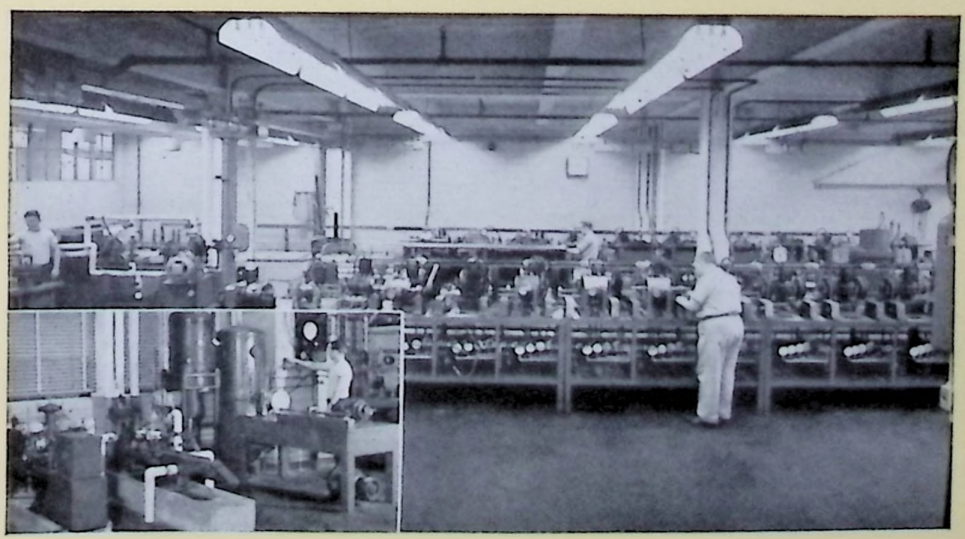
Compounding Laboratory

Compounding Laboratory where new synthetics or rubber compounding materials are investigated exhaustively in relation to the possible usage of such materials in Garlock products. Here, also, formulae for new compounds to meet specific service conditions or individual customers' specifications are developed.



Test Department

Test Room where rod, piston and valve stem packings, gaskets, diaphragms, valve discs, oil seals and other Garlock products are tested under operating conditions approximating those in actual service. Means are provided for accurate quantitative measurement of results.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 12 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/12

Chart Showing the Effect of Various Gases and Liquids on

• This chart, indicating the effect of various gases and liquids on the base materials commonly used in packings and gaskets, is intended only for the general information of the packing user. Obviously the subject of the interaction of packing materials with the several liquids listed is too complex to be covered adequately in a few words. Although chemical considerations are important in the selection of packings, the mechanical

MEDIUM	METALS	NATURAL RUBBER OR GR-S	NEOPRENE	BUNA-N	THIOKOL
Gases					
Air or Oxygen up to 700°F.	Little effect (except lead melts above 600°F.)	Hardens or becomes tacky. May ignite in oxygen	Hardens and decomposes at temperatures above 300°F.	Hardens	Volatile at temperatures above 212°F.
Halogens (Chlorine, Bromine, etc.)	No effect if free from water. Otherwise attacked.	Hardens on exposed surfaces	Hardens on exposed surfaces	Hardens on exposed surfaces	Hardens on exposed surfaces
Other Hot Gases or Dry Steam	Little or no effect below melting point of metal. Hot compressed hydrogen embrittles steel	Hardens or becomes tacky	Hardens. Decomposes at temperatures above 300°F.	Hardens	Volatile at temperatures above 212°F.
Liquids					
Water (including all neutral water-soluble salts, sugar solutions, etc.)	No effect, except iron rusts	No effect except slow swelling	Swells—especially in fabric constructions	No effect except slow swelling	No effect at temperatures below 212°F. except slow swelling
Alkaline Solutions	Dissolve lead, tin, zinc, aluminum and alloys. No effect on iron, copper or nickel	Slow swelling. Reversion at very high temperatures	Swells—especially in fabric constructions	No effect except slow swelling	No effect at temperatures below 212°F. except slow swelling
Weak Acid Solutions (including Acetic and other organic acids, sulphurous acid and low concentrations of sulphuric and hydrochloric)	Little effect on copper and copper alloys. Attack iron (unless chromium alloy). Acetic acid attacks lead. Aluminum resists organic acids only	No effect except slow swelling if compound is free from acid-soluble fillers	No effect except swelling if compound is free from acid-soluble fillers	No effect except swelling if compound is free from acid-soluble fillers	No effect except swelling if compound is free from acid-soluble fillers
Strong Acids					
Hydrochloric Acid	Attacks all metals except Hastelloy, gold and platinum	No effect except swelling if compound is free from acid-soluble fillers	No effect except swelling if compound is free from acid-soluble fillers	No effect except swelling if compound is free from acid-soluble fillers	No effect except swelling if compound is free from acid-soluble fillers
Sulphuric Acid	Attacks all metals except Duriron, lead, gold and platinum	No effect except swelling if compound is free from acid-soluble fillers	No effect except swelling if compound is free from acid-soluble fillers	No effect except swelling if compound is free from acid-soluble fillers	No effect except swelling if compound is free from acid-soluble fillers
Concentrated Sulphuric Acid	No effect unless dilution occurs	Carbonized	Carbonized	Carbonized	Carbonized
Concentrated Acetic Acid (Glacial)	No effect unless dilution occurs	Slight swelling only, if compound is free from acid-soluble fillers	Slight swelling only, if compound is free from acid-soluble fillers	Slight swelling only, if compound is free from acid-soluble fillers	Slight swelling only, if compound is free from acid-soluble fillers
Nitric Acid	Dissolves all metals except Duriron, gold and platinum. (Stainless steel resists concentrated but not dilute)	Destroyed	Destroyed	Destroyed	Destroyed
Aqua Ammonia	Attacks all copper alloys. No effect on other metals	No effect	No effect	No effect	No effect
Liquid Ammonia (Anhydrous)	Attacks all copper alloys. No effect on other metals	No effect except from heat and oil associated with ammonia	No effect	No effect	Little if any effect
Liquid Chlorine, Bromine, etc.	No effect if free from water. Otherwise attacks all metals	Destroyed	Destroyed	Destroyed	Destroyed
Solvents					
Aliphatic (Gasoline, etc.)	No effect	Swells excessively	Swells slightly	Swells very slightly	No effect
Aromatic Types (Benzol, etc.) or Chlorinated Types (Carbontetrachloride, etc.)	No effect	Swells excessively	Heavy swelling	High swelling	Moderate swelling
Acetone	No effect	No effect except extracts softeners	High swelling	High swelling	Moderate swelling
Alcohol	No effect	No effect except extracts softeners	No effect except extracts softeners	No effect	No effect
Oils	No effect except high-sulphur hot oils attack copper, iron and alloys	Swells strongly with cold oils. Reverts and dissolves with hot oils	Swells moderately at temperatures up to 300°F. Decomposes at higher temperatures	Slight shrinkage or swelling depending upon aromaticity of the oil	No effect at temperatures below 212°F.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 13 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/13

properties of the packing itself usually are of even greater importance. Packings rarely are fully exposed to the gas or liquid and, therefore, do not necessarily react in the same degree as indicated for the base material. For these reasons packings or gaskets should not be accepted or rejected for any application solely on the basis of chemical considerations.

PHENOLIC RESINS	TEFLON	ASBESTOS	BLUE ASBESTOS	COTTON, FLAX, VISCOSE RAYON	PAPER	LEATHER
Little effect	No effect	No effect	No effect	Weakens and may ignite above 300°F.	Becomes weak and brittle above 212°F. Ignites in oxygen	Hardens. May ignite in oxygen
No visible effect	No effect	No effect	No effect	Weakens	Weakens	Hardens
No effect	No effect	No effect	No effect	Weakens at temperatures above 212°F.	Becomes weak and brittle at temperatures above 212°F.	Hardens at temperatures above 212°F.
Very slight swelling	No effect	Tendency to disintegrate in absence of waterproof binder	Tendency to disintegrate in absence of waterproof binder	No effect unless superheated	Disintegrates	Loses waxes. Shrinks and hardens on drying
Very slight swelling unless solutions are strong and hot	No effect	Hardened by strong alkalies	No effect	Destroyed by strong, hot alkalies	Destroyed	Destroyed
No effect except slight swelling	No effect	Very little effect	No effect	Weakens	Destroyed	Loses waxes. Shrinks and hardens on drying
No effect except swelling	No effect	Hardens and partially dissolves	No effect	Destroyed	Destroyed	Fairly resistant
No effect except swelling	No effect	Hardens and partially dissolves	No effect	Destroyed	Destroyed	Fairly resistant
Carbonized	No effect	No effect unless dilution occurs	No effect	Destroyed	Destroyed	Destroyed
Very slight swelling	No effect	No effect	No effect	No effect	No effect	No effect
Destroyed	No effect	Hardens and partially dissolves	No effect	Destroyed	Destroyed	Destroyed
No effect	No effect	No effect	No effect	No effect	No effect	No effect
No effect	No effect	No effect	No effect	No effect unless heat is present	Little effect if any	No definite data
Destroyed	No effect	No effect	No effect	Destroyed	Destroyed	Destroyed
No effect	No effect	No effect	No effect	No effect	No effect	Loses waxes, shrinks and hardens
Very slight swelling	No effect	No effect	No effect	No effect	No effect	Loses waxes, shrinks and hardens
Slight swelling	No effect	No effect	No effect	No effect	No effect	Loses waxes, shrinks and hardens
Slight swelling	No effect	No effect	No effect	No effect	No effect	Loses waxes, shrinks and hardens
No effect	No effect	No effect	No effect	Weakens at temperatures above 212°F.	No effect at temperatures below 212°F.	Loses waxes and tends to become porous. Hardens at temperatures above 212°F.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 14 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/14

Selecting the Right

Rock Hard $1.50 per #
Valve. $1.55 per #

To aid the packing user in selecting a suitable GARLOCK product for a given application, a table of general service recommendations is provided on page 17. That table shows, by types of materials, the packings commonly used in the services listed but does not attempt to specify which general type of GARLOCK packing or which specific style in any general type group should be used in preference to the other types or styles.

Specific recommendations are not shown because this Company has determined on the basis of its experience over the past 60 years that no single packing can be flatly and definitely recommended for universal usage with the maximum of economy and service, for these reasons:

1. Variations in operating methods in relation to one installation as compared with another.
2. Variations in operating conditions as between two apparently similar installations.
3. Variations in operating requirements to be met in different installations for same service.
4. Variations in contributory service factors surrounding one installation on a certain condition as compared with another apparently duplicate installation.
5. Personal preference of individual operators for a certain type of design or material.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 15 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/15

Garlock Packing...

From the recommendation table, however, the user can select the type of material desired and turn to the index page indicated. On that page and on the pages immediately following, the several products in that group are described and service recommendations indicated for each material. Consideration of that detailed information should permit the selection of the most suitable material for the job in mind.

Whenever convenience will permit, however, it is urged that an experienced GARLOCK representative be afforded an opportunity to survey the requirements of the job. He has at his disposal service records of thousands of actual packing installations under all kinds and classes of service and, therefore, is well qualified to investigate your packing requirements and make suitable recommendations therefor.

HOW TO USE
QUICK REFERENCE INDEX

Each section of this catalog has a table of contents and a strip index. These quick-reference helps should be used as follows:

1. Select section according to Quick Reference Index.
2. As illustrated in sketch, bend pages in your left hand, then locate desired sections with your right thumb according to the strip index and the red patches appearing on the edges of the appropriate pages.



Asbestos Packings
Duck and Rubber Packings
Flax, Jute, Cotton and Rayon Packings
Lattice Braid Packings
Chevron Packings
Sheet Packings, Gaskets and Diaphragms
Railroad Packings
Leathers, Duos and Miscellaneous Packings
Semi-Metallic and Plastic Packings
Pump Valves, Discs, Tubing and Rubber Products
Klozures and Miscellaneous Products
Floating Metal Packings

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 16 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/16

The Garlock Warranty

The Garlock Packing Company guarantees that any product of its manufacture, which upon examination is found by a Garlock representative to be defective either in workmanship or material whereby it is not suitable under proper usage and service for the purpose for which designed, will be replaced free of charge including transportation charges but not cost of installation. The sale of Garlock products under any other warranty or guarantee, expressed or implied, is not authorized by the Company.

Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/17

General Service Recommendations

• The table below shows by groups the general types of Garlock Packings commonly used against the mediums indicated. The construction, forms and style numbers of the several packings comprising any of the general type groups listed below may be determined by referring to the index page indicated and to the catalog pages immediately following that index page.

It is suggested, also, that the catalog user refer to the chart showing the effect of various gases and liquids on packing materials, appearing on pages 12 and 13.

MEDIUM	RECIPROCATING RODS, PLUNGERS AND RAMS		CENTRIFUGAL AND ROTARY SHAFTS		VALVE STEMS		PISTON OR CYLINDER PACKING		GASKETED JOINTS	
	Type of Packing	*Index Page*	*Type of Packing*	*Index Page*	*Type of Packing*	*Index Page*	*Type of Packing*	*Index Page*	*Type of Gasketing*	*Index Page*
Steam High Pressure	Chevron Lattice Braid Asbestos Metallic Semi-metallic Plastic	75 63 19 197 149 149	Lattice Braid Asbestos Semi-metallic Plastic	63 19 149 149	Asbestos Semi-metallic Plastic	19 149 149	Metallic	197	Guardian Compressed Asbestos Woven Asbestos	83 83 83
Steam Low Pressure	Chevron Lattice Braid Duck and Rubber Metallic Semi-metallic Plastic	75 63 39 197 149 149	Lattice Braid Asbestos Semi-metallic Plastic	63 19 149 149	Asbestos Duck and Rubber Semi-metallic Plastic	19 39 149 149	Metallic Duck and Rubber Asbestos Amberite	197 39 19 131	Rubber Compressed Asbestos Guardian	83 83 83
Water Hot	Chevron Duck and Rubber Semi-metallic Plastic Leather	75 39 149 149 131	Lattice Braid Asbestos Semi-metallic Plastic	63 19 149 149	Asbestos Duck and Rubber Semi-metallic Plastic	19 39 149 149	Duck and Rubber Molded Cups Hard Rubber Amberite	39 131 171 131	Rubber Guardian	83 83
Water Cold	Chevron Lattice Braid Flax or Jute Duck and Rubber Leather Plastic Semi-metallic	75 63 53 39 131 149 149	Lattice Braid Asbestos Flax or Jute Cotton or Rayon Semi-metallic Plastic	63 19 53 53 149 149	Asbestos Duck and Rubber Flax or Cotton Semi-metallic Plastic	19 39 53 149 149	Duck and Rubber Molded Cups	39 131	Rubber Guardian	83 83
Gasoline & Oils Hot	Chevron Lattice Braid Asbestos Semi-metallic Plastic	75 63 19 149 149	Lattice Braid Asbestos Semi-metallic Plastic	63 19 149 149	Asbestos Semi-metallic Plastic	19 149 149	Duck and Rubber Hard Rubber Amberite	39 171 131	Compressed Asbestos	83
Gasoline & Oils Cold	Chevron Lattice Braid Asbestos Semi-metallic Plastic	75 63 19 149 149	Lattice Braid Asbestos Semi-metallic Plastic	63 19 149 149	Asbestos Semi-metallic Plastic	19 149 149	Duck and Rubber Hard Rubber Amberite Leather	39 171 131 131	Compressed Asbestos Cork-Fiber Synthetic Rubber	83 83 83
Air	Chevron Lattice Braid Asbestos Metallic Semi-metallic Plastic	75 63 19 197 149 149	Lattice Braid Asbestos Semi-metallic Plastic	63 19 149 149	Asbestos Semi-metallic Plastic	19 149 149	Metallic Molded Cups Leather	197 131 131	Compressed Asbestos Guardian Rubber	83 83 83
Gas	Chevron Lattice Braid Asbestos Semi-metallic Metallic	75 63 19 149 197	Lattice Braid Asbestos Semi-metallic	63 19 149	Asbestos Semi-metallic	19 149	Metallic Molded Cups Leather	197 131 131	Compressed Asbestos Woven Asbestos Asbestos-metallic	83 83 83
Acids & Caustics	Lattice Braid Asbestos (blue) Semi-metallic Plastic Metallic	63 19 149 149 197	Lattice Braid Asbestos (blue) Semi-metallic Plastic	63 19 149 149	Asbestos (blue) Semi-metallic Plastic	19 149 149	Hard Rubber	171	Compressed Asbestos (blue) Woven Asbestos (blue)	83 83
Ammonia	Duck and Rubber Semi-metallic Metallic	39 149 197	Asbestos Semi-metallic	19 149	Asbestos Duck and Rubber Semi-metallic	19 39 149	Duck and Rubber Hard Rubber	39 171	Compressed Asbestos Rubber Asbestos-metallic	83 83 83

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
Published by AsbestosClaims.Law
ACL Doc 21280 · Page 18 of 228
asbestosclaims.law/library/21280/18



Asbestos Fiber Mixing Picker

ASBESTOS



Spinning Asbestos Yarn on
Large Package Spinning Frames



Looms Weaving Asbestos Cloth



Making Plied Asbestos Yarn
on Ring Twisters

Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/19

PACKINGS



	PAGE
Steam Rod Packing (*rubber back*)	20
Steam Rod Packing (*braided-round*)	21
Steam Rod Packing (*braided-square*)	22
Steam Rod Packing (*rubber core*)	23
Steam Rod Packing (*metal wearing surface*)	24
Air Rod Packing	25
Steam Rod Packing (*hollow core*)	26
Rotary Pump Packing—*water* (*braided-square*)	27
Rotary Pump Packing—*water* (*lead wire inserted*)	28
Rotary Pump Packing—*solvents* (*braided-square*)	29
Hot Oil Rod Packing (*braided-square*)	30
Rotary Pump Packings—*hot oil* (*braided-square*)	30
Blue Asbestos Packings—*acids* (*braided-square*)	31
Valve Stem Packing—*steam* (*braided or twisted*)	32
Valve Stem Packing—*steam* (*braided-round*)	33
Steam Rod Packings (*wire-wound and with wire*)	34
Furnace Door Packings (*wire cover*)	35
Expansion Joint Packing (*braided-square*)	36
Gas Generator Door Packing (*braided-square*)	36
Oxygen Packing (*braided-square*)	36
Chlorine Valve Packing Rings	36
Molded Valve Rings—*five types*	37

This index is for quick reference and indicates only the general type of each product in this section and the service on which it is most commonly used. For complete information concerning any product please consult the catalog page indicated.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 20 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/20

High Pressure Steam Packing

FOR...

Steam service at pressures up to 300 pounds per square inch and temperatures up to 600° F.

ON...

Steam piston rods and valve rods of steam equipment such as engines compressors pumps steam hammers and logging equipment and on expansion joints and in other steam services.

Construction—This high-pressure steam packing is constructed of a specially-woven Garlock asbestos cloth, wrapped around a core consisting of accordion-folded asbestos cloth combined with a resilient rubber strip.

The packing is treated externally with a modified glycerol lubricant and graphite.

Forms—Garlock 200 Rings are furnished with bevel-cut joint, formed to fit specified rod and stuffing box dimensions.

Garlock 150 Spiral and Garlock 125 Coil are manufactured in 12½ foot lengths and in packing sizes from ⅛" to 1½", advancing by sixteenths. Standard packaging data on sizes up to 1" is shown below.

GARLOCK 125 Coil

Packing Size	⅛	3/16	¼	5/16	⅜	7/16	½	9/16	⅝	11/16	¾	13/16	⅞	15/16	1"
Coils per box	6	6	6	4	4	4	4	3	3	2	2	1	1	1	1
Feet per box—approx.	75	75	75	50	50	50	50	37½	37½	25	25	12½	12½	12½	12½
Poundsperbox—approx.	1⅝	2¼	4⅛	4¼	6¼	8	10¼	9	12	8½	11½	6¼	8	9	10

GARLOCK 150 Spiral

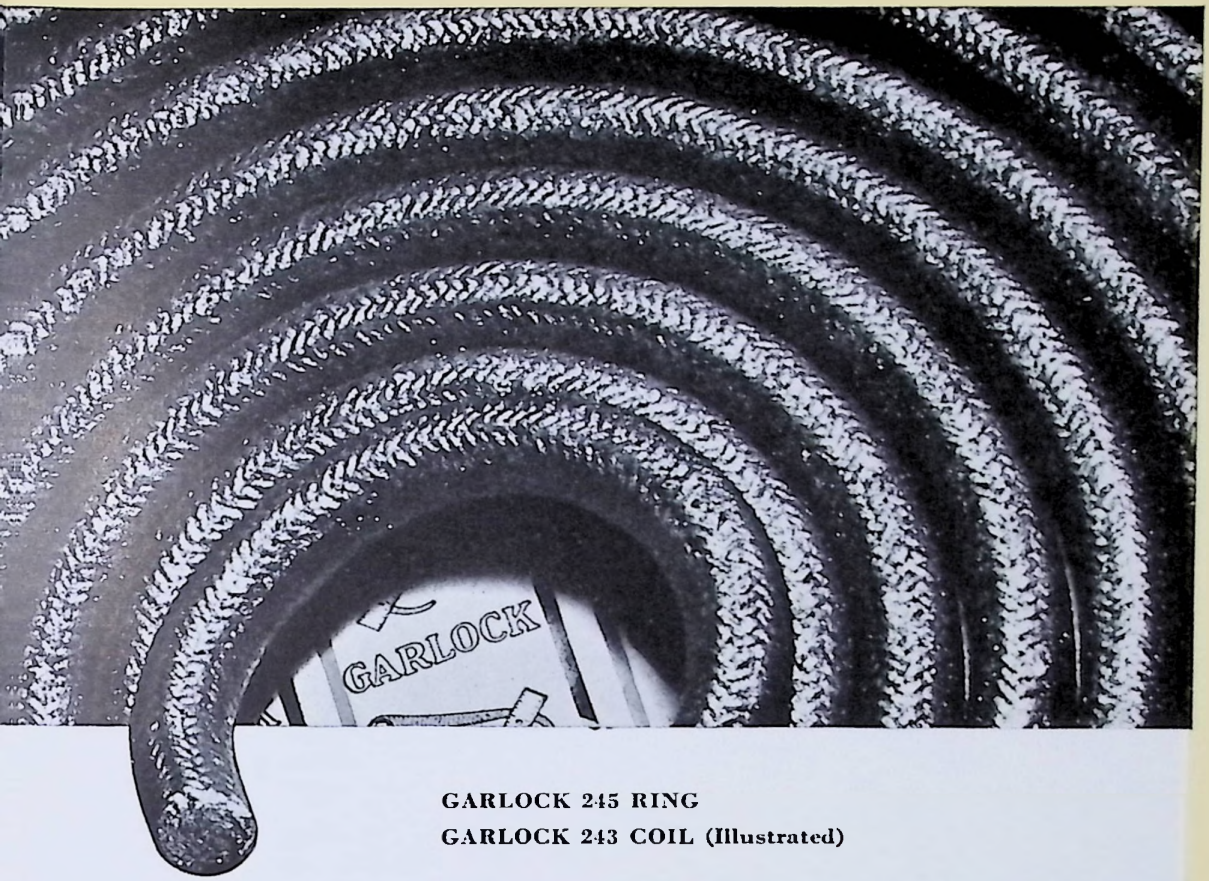
Packing Size	⅛	3/16	¼	5/16	⅜	7/16	½	9/16	⅝	11/16	¾	13/16	⅞	15/16	1"
Spirals per box	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	50	37½	25	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½
Poundsperbox—approx.	1⅜	1⅛	1⅜	1	1½	2	2½	3	4	4¼	5¾	6¼	8	9	10



GARLOCK 200 RING
GARLOCK 125 COIL
GARLOCK 150 SPIRAL (Illustrated)

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 21 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/21

Round Derby Packing



GARLOCK 245 RING
GARLOCK 243 COIL (Illustrated)

FOR...

Use against medium or low temperature steam, hot or cold water and aqueous solutions (except strong mineral acids).

ON...

Piston and valve rods of pumps and engines; stems of globe and angle valves; and shafts of centrifugal pumps.

A soft, pliable, round braided asbestos packing.

Construction—Round Derby Packing is manufactured from long-fibre, Canadian asbestos yarn by the braid-over-braid method. It is thoroughly impregnated with a mineral-fat lubricant and graphite and receives an additional surface coating of graphite.

Forms—Garlock 245 Rings are supplied with square-cut joint to fit specified rod and stuffing box dimensions.

Garlock 243 Coil is produced in sizes from ¼" to 1⅝", advancing by sixteenths. It is available in coil lengths or in continuous length on a reel. Standard packaging data on sizes up to 1" is shown in the table below.

GARLOCK 243 Coil

Packing Size	¼	5/16	3/8	7/16	½	9/16	5/8	11/16	¾	13/16	7/8	15/16	1"
Coils per box	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.	4½	5¾	9¼	7¼	9¼	10¼	11¼	11¼	12	8¼	8¼	8¾	9¼

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 22 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/22

Square Derby Packing

FOR...

Use against medium or low temperature steam, hot or cold water and aqueous solutions (except strong mineral acids).

ON...

Piston and valve rods of pumps and engines, valve stems and centrifugal pump shafts.

A soft, pliable braided packing, square in cross section.

Construction—Square Derby Packing is manufactured from long-fibre Canadian asbestos yarn by the braid-over-braid method. It is thoroughly impregnated with a mineral-fat lubricant and graphite and receives, also, an external surface coating of graphite.

Forms—Garlock 235 Rings are supplied with square-cut joint to fit specified rod and stuffing box dimensions.

Garlock 233 Coil is produced in sizes from ¼" to 1⅝", advancing by sixteenths and in coil lengths or continuous lengths on reels. Standard packaging data on sizes up to 1" is shown in the table below.

GARLOCK 233 Coil

Packing Size	¼	5/16	3/8	7/16	½	9/16	5/8	11/16	¾	13/16	7/8	15/16	1"
Coils per box	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.	5½	6¼	10¼	8½	10¾	12	12¾	12¾	14	10¾	10¾	11	11½



GARLOCK 235 RING
GARLOCK 233 COIL (Illustrated)

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 23 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/23

Palmyra Packing

Construction—Palmyra Packing is constructed of specially woven Garlock asbestos cloth wrapped around a round core of resilient rubber, and formed approximately square in cross section. The packing is treated with a modified glycerol lubricant and finished with a surface coating of graphite.

Forms—Garlock 146 Rings are furnished with bevel-cut joint, formed to fit specified rod and stuffing box sizes.

Garlock 144 Coil and Garlock 145 Spiral are manufactured in 12½ foot lengths and in all packing sizes from ⅛" to 1½", advancing by sixteenths. Standard packaging data on sizes up to 1" is shown below.

GARLOCK 144 Coil

Packing Size	⅛	3/16	¼	5/16	⅜	7/16	½	9/16	⅝	11/16	¾	13/16	⅞	15/16	1"
Coils per box	6	6	6	4	4	4	4	3	3	2	2	1	1	1	1
Feet per box—approx.	75	75	75	50	50	50	50	37½	37½	25	25	12½	12½	12½	12½
Pounds per box—approx.	1⅝	2¼	4⅛	4	5½	7½	9½	8½	11¼	8	11	6	7½	8½	9½

GARLOCK 145 Spiral

Packing Size	⅛	3/16	¼	5/16	⅜	7/16	½	9/16	⅝	11/16	¾	13/16	⅞	15/16	1"
Spirals per box	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	50	37½	25	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½
Pounds per box—approx.	1⅛	1⅛	1¼	1	1⅜	1⅞	2⅜	2⅞	3¾	4	5½	6	7½	8½	9½



GARLOCK 146 RING
GARLOCK 144 COIL
GARLOCK 145 SPIRAL (Illustrated)

FOR...

Steam service at pressures up to 300 pounds per square inch and temperatures up to 600° F.

ON...

Steam piston rods and valve rods of steam equipment such as engines compressors pumps steam hammers and logging equipment and on expansion joints and in other steam services.

A good packing for use against wet steam.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 24 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/24

Metalmarine Packing

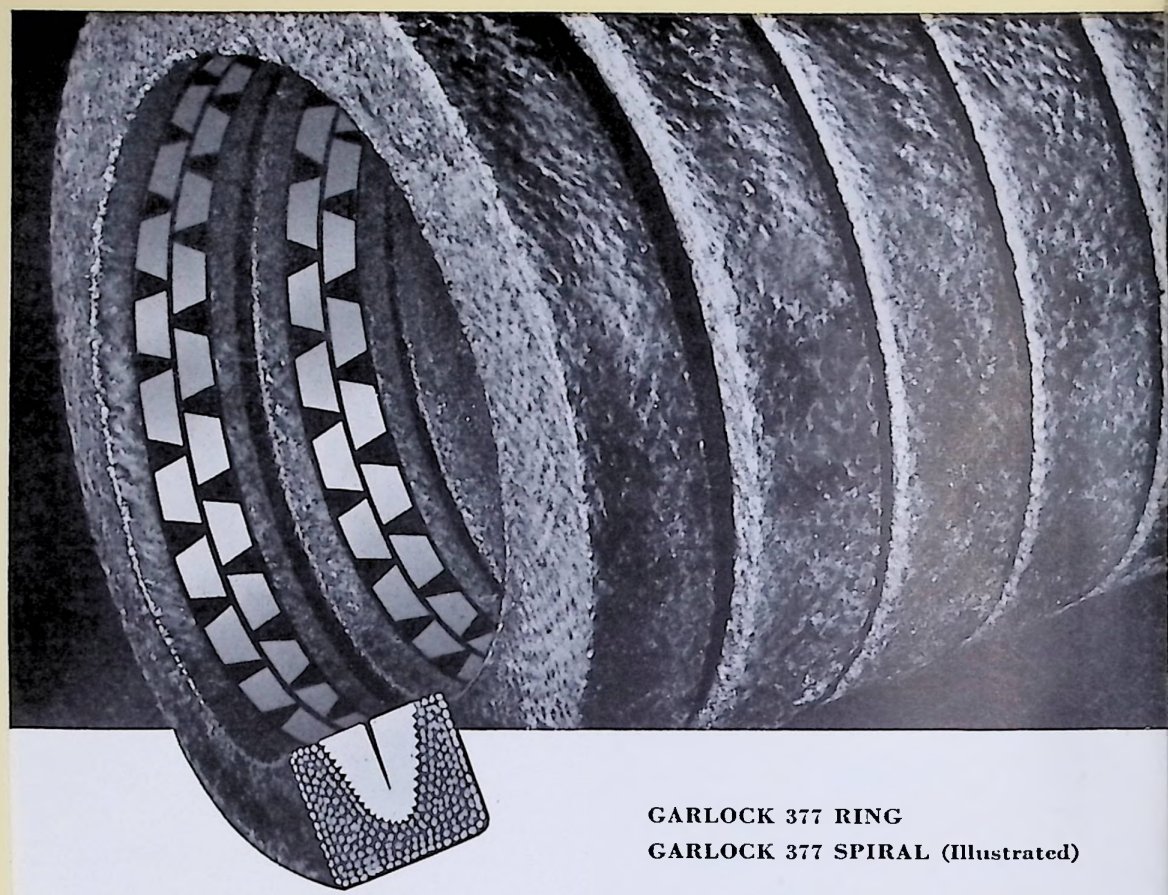
FOR...

Use against steam, air or gas at temperatures up to 600° F.

ON...

Piston and valve rods of marine main and deck engines; hoisting engines; steam shovels and dredges; steam hammers; steam logging machinery; ammonia compressor reciprocating rods and shafts of enclosed crank case types.

A good packing for vertical rods.



GARLOCK 377 RING
GARLOCK 377 SPIRAL (Illustrated)

Construction—Metalmarine Packing is constructed of a wedge-shaped core of soft bearing metal set in a channel made of specially-woven Garlock asbestos cloth. The small, wearing surfaces of the metal core are so staggered as to provide pressure-tight contact with the rod. The packing is treated with a modified glycerol lubricant and externally graphited.

Forms—Garlock 377 rings are supplied with a bevel-cut joint, formed to fit specified rod and stuffing box sizes.

Garlock 377 Spiral is manufactured in 12½ foot lengths and in all packing sizes from ¼″ to 1¼″, advancing by sixteenths. Standard packaging data on sizes up to 1″ is shown below.

GARLOCK 377 Spiral

Packing Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1″
Spirals per box	2	1	1	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	25	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½
Pounds per box—approx.	2⅞	2	3	4	5¼	6½	7½	10½	11¼	14	16	18½	21

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 25 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/25

Compressor Packing

Construction—Compressor Packing is constructed of a core of accordion-folded asbestos cloth wrapped with a cover of specially-woven Garlock asbestos cloth treated with a heat-resisting rubber cement. It is lubricated externally with a modified glycerol lubricant and receives a surface coating of graphite.

Forms—Garlock 222 Rings are regularly supplied with a bevel-cut joint and to fit specified rod and stuffing box dimensions.

Garlock 220 Coil and Garlock 221 Spiral are furnished in standard 12½ foot lengths and in packing sizes from ⅛" to 1½" advancing by sixteenths. Standard packaging data on sizes up to 1" is shown below.

GARLOCK 220 Coil

Packing Size	⅛	3/16	¼	5/16	⅜	7/16	½	9/16	⅝	11/16	¾	13/16	⅞	15/16	1"
Coils per box	6	6	6	4	4	4	4	3	3	2	2	1	1	1	1
Feet per box—approx.	75	75	75	50	50	50	50	37½	37½	25	25	12½	12½	12½	12½
Pounds per box—approx.	1⅝	2¼	4⅛	4¼	5½	7½	9½	8½	11¼	8	10½	5¾	7¼	8¼	9¼

GARLOCK 221 Spiral

Packing Size	⅛	3/16	¼	5/16	⅜	7/16	½	9/16	⅝	11/16	¾	13/16	⅞	15/16	1"
Spirals per box	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	50	37½	25	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½
Pounds per box—approx.	1⅛	1⅜	1⅜	1	1⅜	1⅞	2⅜	2⅞	3¾	4	5¼	5¾	7¼	8¼	9¼

FOR...

Air and gas services at temperatures up to 600° F.

ON...

Air and gas compressor rods and on stems of air and gas valves.

A good packing for use against high temperatures.



GARLOCK 222 RING
GARLOCK 220 COIL
GARLOCK 221 SPIRAL (Illustrated)

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 26 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/26

"O" Center Forge Packing

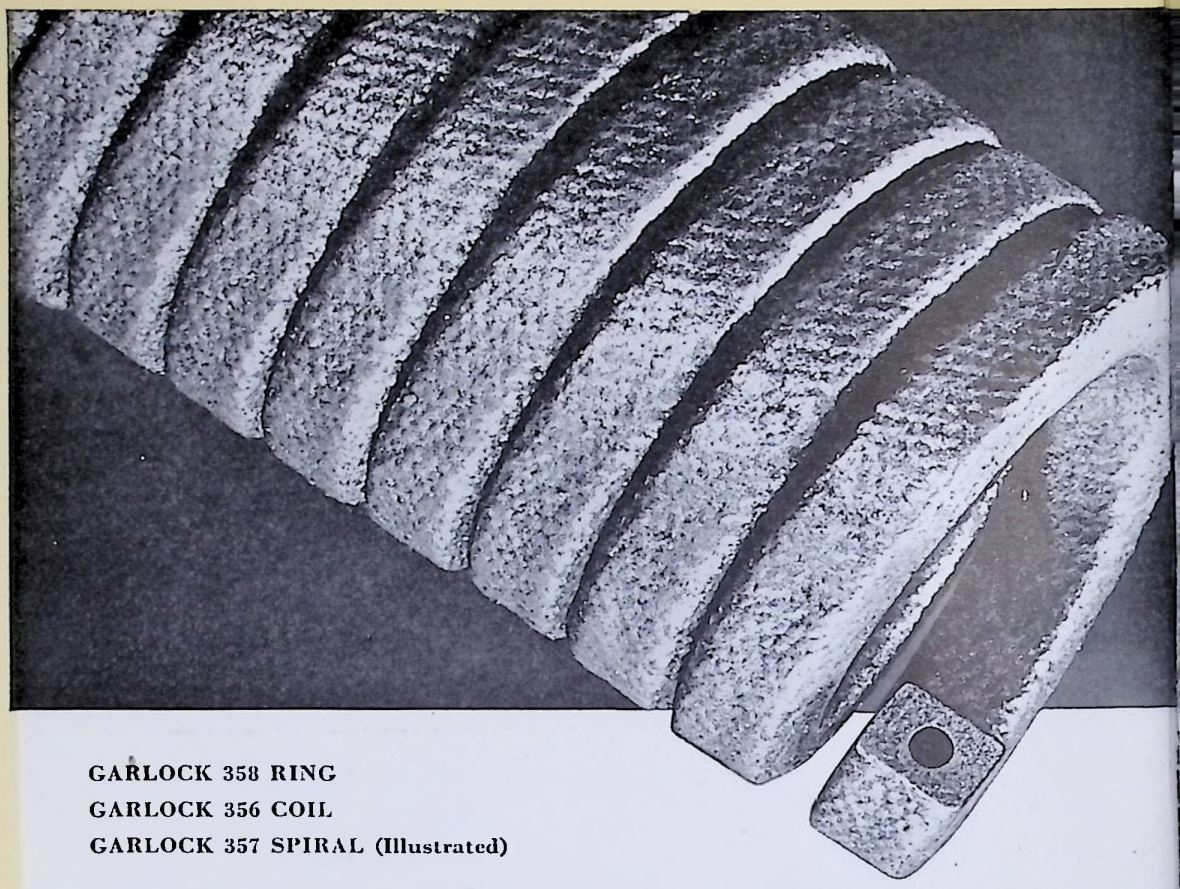
FOR...

Steam, air or gas service at pressures up to 300 pounds per square inch and temperatures up to 600° F.

ON...

Steam piston rods of engines and pumps; air or gas compressor rods; steam hammers, logging machinery and other equipment, especially where abnormal vibration or rod-weave exists.

An asbestos packing with unusual resiliency.



GARLOCK 358 RING
GARLOCK 356 COIL
GARLOCK 357 SPIRAL (Illustrated)

Construction—"O" center Forge Packing is constructed of specially-woven Garlock asbestos cloth, wrapped and frictioned with a heat-resistant rubber cement and formed with a round, hollow center. The material is lubricated with a modified, glycerol lubricant and receives a surface coating of graphite.

Forms—Garlock 358 Rings are furnished with a bevel-cut joint and in specified rod and stuffing box sizes.

Garlock 356 Coil and Garlock 357 Spiral are supplied in standard 12½ foot lengths and in all sizes from ¼" to 1½" advancing by sixteenths. Standard packaging data on sizes up to 1" is shown below.

GARLOCK 356 Coil

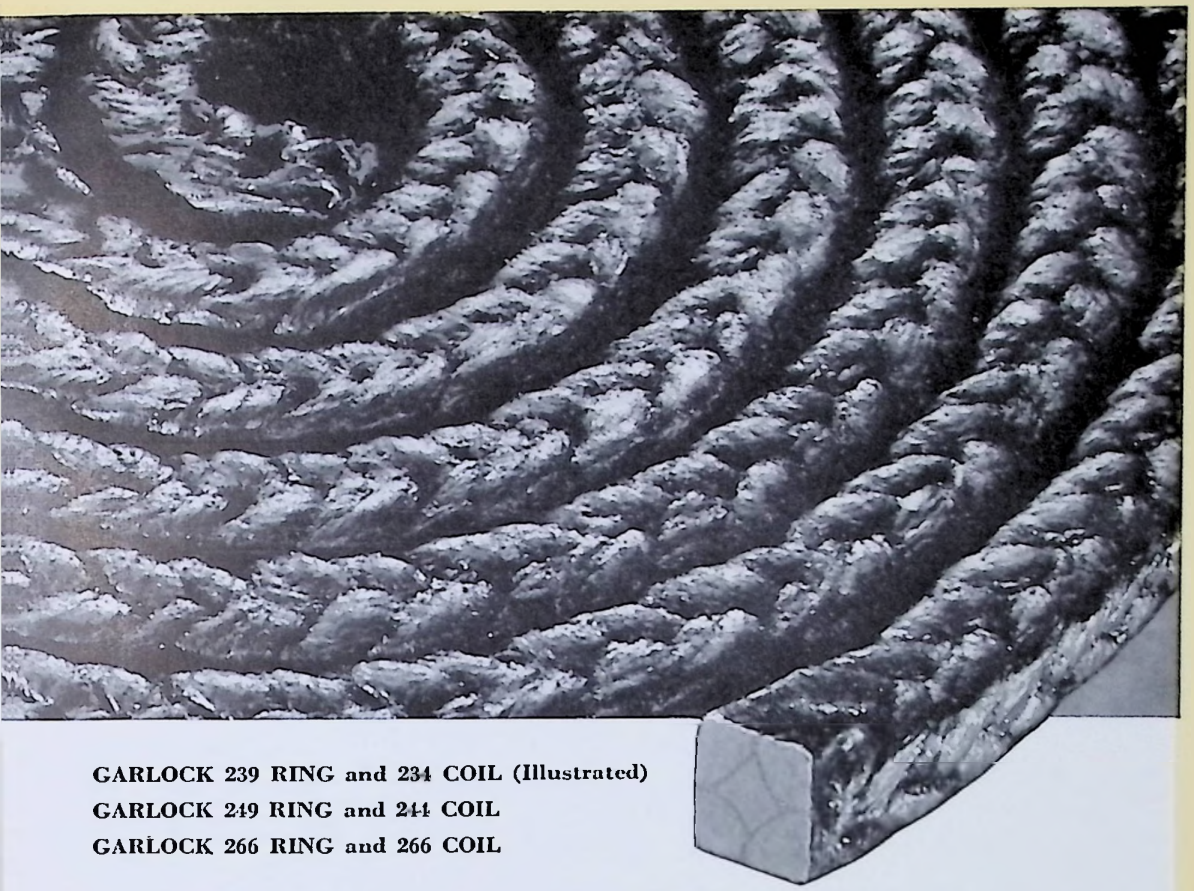
Packing Size	¼	5/16	3/8	7/16	½	9/16	5/8	11/16	¾	13/16	7/8	15/16	1"
Coils per box	6	4	4	4	4	3	3	2	2	1	1	1	1
Feet per box—approx.	75	50	50	50	50	37½	37½	25	25	12½	12½	12½	12½
Pounds per box—approx.	3¾	3½	5	7	9	8¼	10½	7½	10	5½	7	8	9

GARLOCK 357 Spiral

Packing Size	¼	5/16	3/8	7/16	½	9/16	5/8	11/16	¾	13/16	7/8	15/16	1"
Spirals per box	2	1	1	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	25	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½
Pounds per box—approx.	1⅝	¾	1¼	1¾	2¼	2¾	3½	3¾	5	5½	7	8	9

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 27 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/27

ROTOPAC Rotary Pump Packings



GARLOCK 239 RING and 234 COIL (Illustrated)
GARLOCK 249 RING and 244 COIL
GARLOCK 266 RING and 266 COIL

FOR...

Use against hot or cold water, alcohol and dilute aqueous solutions.

ON...

Shafts of centrifugal and rotary pumps.

General service packings for rotating shafts.

Construction—These rotary pump packings are braided from Garlock long-fibre asbestos yarn, impregnated throughout with a special, mineral-fat lubricant and graphite.

Types—Garlock 234 Coil and Garlock 239 Ring are made from plain yarn; Garlock 244 Coil and Garlock 249 Ring are made from wire-inserted yarn; and Garlock 266 Coil and Ring are made from plain yarn by a controlled-lubrication process which removes all excess lubricant.

Forms—Garlock 239 Rings (without wire); Garlock 249 Rings (with wire); and Garlock 266 Rings (controlled-lubrication) are supplied with square-cut joint in specified rod and stuffing box sizes.

Garlock 234 Coil (without wire); Garlock 244 Coil (with wire); and Garlock 266 Coil (controlled-lubrication) are manufactured in all sizes from 1/8" to 1 3/4" advancing by sixteenths. These materials are available in standard packages, as shown below, or in continuous lengths on reels.

Packing Size	1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
GARLOCK 234 Coil																					
Coils per box	*	*	5	5	4	3	3	3	3	3	3	3	1	1	1	1	1	1	1	1	1
Feet per box—approx.	99†	41†	120	100	116	72	66	60	51	45	42	26	24	22	20						
Pounds per box—approx.			5 1/4	6 1/4	10 3/4	8 1/2	11 1/4	12 1/2	13 1/4	13 1/2	11 3/4	10 1/2	11	11 1/4	11 3/4						
GARLOCK 244 Coil																					
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1						
Feet per box—approx.	76†	37†	120	100	116	72	66	60	51	45	42	26	24	22	20						
Pounds per box—approx.			6 1/2	7 1/2	12 1/2	10	12 1/2	15 1/2	15 3/4	16 1/4	17 1/4	12 3/4	13 1/2	11 1/2	16 1/2						
GARLOCK 266 Coil																					
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1						
Feet per box-approx.	80†	40†	120	100	116	72	66	60	51	45	42	26	24	22	20						
Pounds per box—approx.			5	6	10 1/4	8	10 3/4	12	12 3/4	13	14	10 1/4	10 1/2	10 3/4	11 1/4						

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 28 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/28

Lead Inserted Rotary Pump Packing

FOR...

Use against hot or cold water and dilute aqueous solutions (except those which attack metallic lead, such as alkaline solutions, acetic acid, etc.).

ON...

Shafts of centrifugal pumps, rotary pumps, and ammonia compressors and on valve stems.

A packing which withstands high gland loads without collapsing.

Construction—Pacific Semi-Metallic Packing is manufactured from Garlock, long-fibre asbestos yarn and soft metal strands, braided square. It is thoroughly lubricated with a mineral fat lubricant and receives a surface coating of graphite.

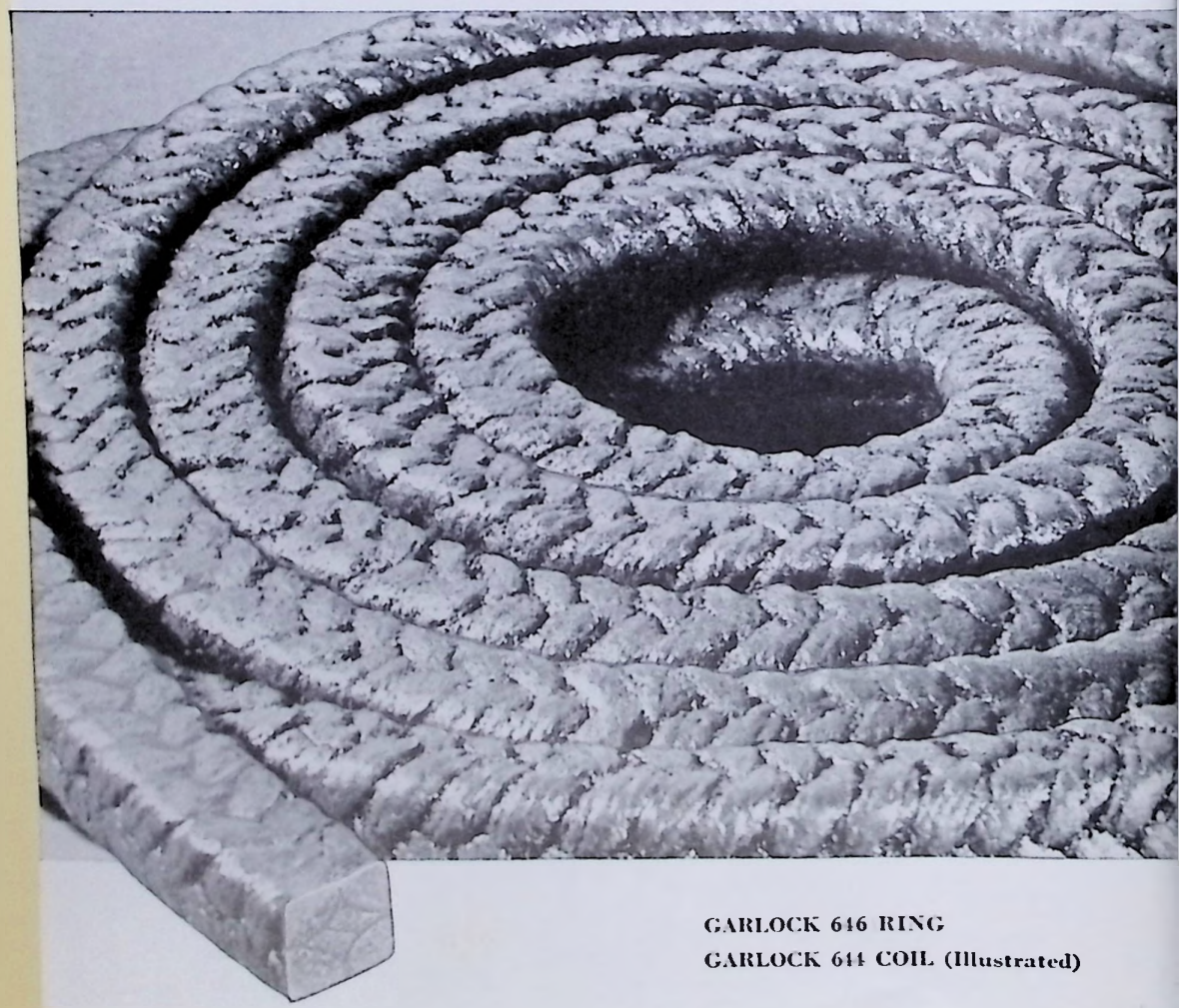
Forms—Garlock 646 Rings are supplied with square-cut joint, in specified rod and stuffing box sizes.

Garlock 644 Coil is manufactured in all packing sizes from 1/8" to 1 3/4", advancing by sixteenths. Standard packaging data on sizes up to 1" is shown below.

GARLOCK 644 Coil

Packing Size	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	1	1	1	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	34†	17†	50	45	39	36	30	24	22	19	17	15	15	15	15
Pounds per box—approx.			6	8	9¾	10¼	11½	10½	13	13¼	13½	13¾	16½	19¼	23½

*On 1, 2 or 5 lb. spools † Feet per pound—approx.



GARLOCK 646 RING
GARLOCK 644 COIL (Illustrated)

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 29 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/29

Thorndyke Rotary Pump Packing

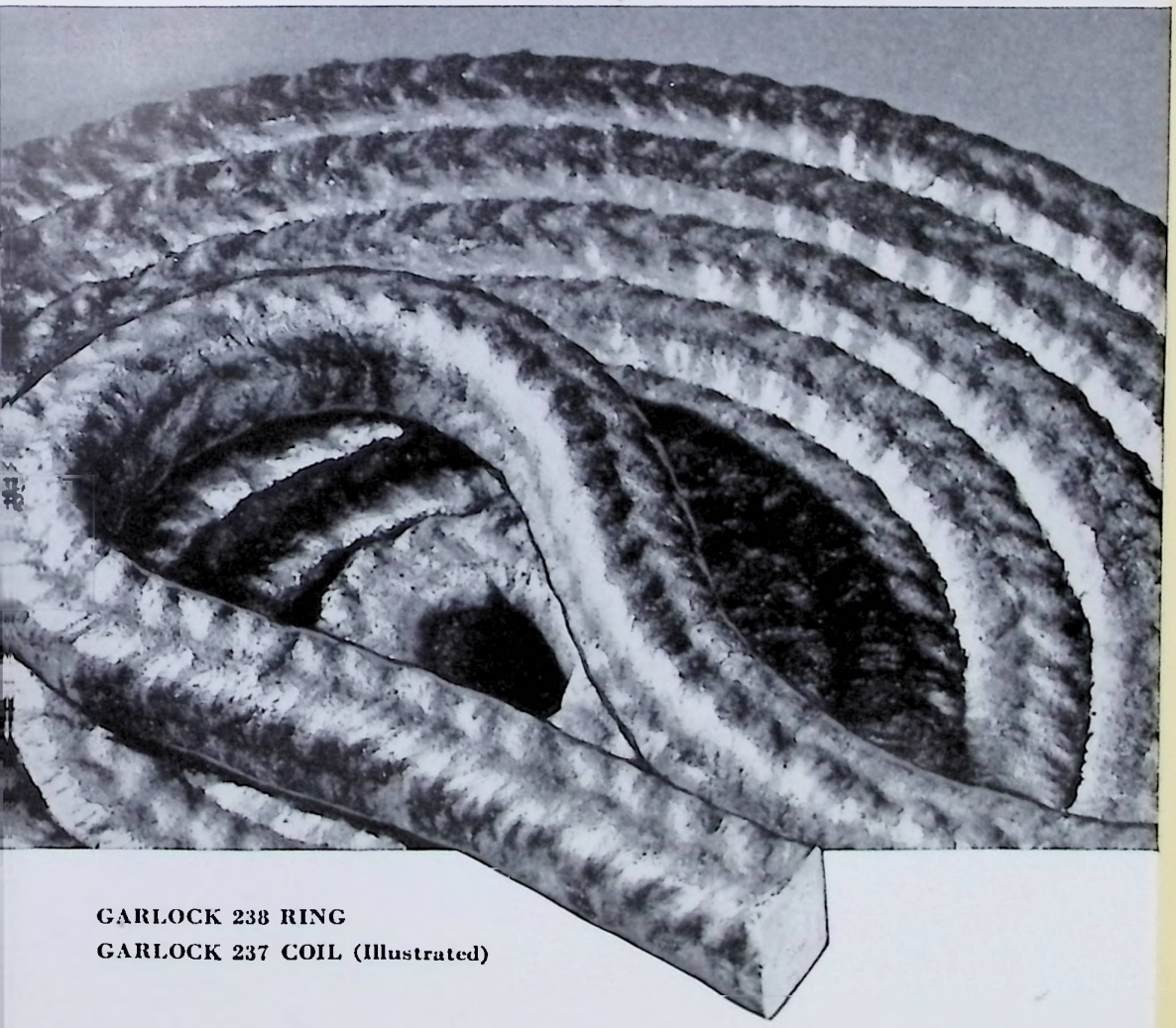
Construction—Thorndyke Packing is braided square from Garlock, long-fibre asbestos yarn. It is thoroughly lubricated throughout with a special glycerol- and soap-blended lubricant and graphite.

Forms—Garlock 238 Rings are furnished with square-cut joint in specified rod and stuffing box sizes. Garlock 237 Coil is manufactured in all packing sizes from 1/8" to 1 3/4" advancing by sixteenths. Standard packages for sizes up to 1" are shown below.

GARLOCK 237 Coil

Packing Size	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	73†	33†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.			6	6 3/4	12 3/4	10	12 1/2	13 3/4	14 1/4	14 1/2	16	12	12	12 1/2	13

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.



GARLOCK 238 RING
GARLOCK 237 COIL (Illustrated)

FOR...

Use against cold oil, gasoline, benzol, chlorinated solvents, esters, carbon-bisulphide, etc. (Not recommended for alcohol service.)

ON...

Shafts of centrifugal and rotary pumps. May also be used on rods of reciprocating pumps and on valve stems.

A good packing for general service on equipment handling solvents.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 30 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/30

Oil and Gasoline Packings

FOR...

Use against cold oils, gasoline, benzol, chlorinated solvents, esters, carbon bisulphide, etc. (Not recommended for alcohol.)

ON...

Valve stems and piston rods of reciprocating equipment.

FOR...

Use against hot oil at moderate rod or shaft speeds.

ON...

Shafts of centrifugal and rotary pumps; rods and plungers of reciprocating pumps; and on valve stems.

GARLOCK 257 COIL AND RING

Construction—Garlock 257 is braided from Garlock long-fibre asbestos yarn by the braid-over-braid method, square in cross section. It is thoroughly lubricated with a modified soap-fat lubricant and graphited throughout. The packing receives a special oxidizing treatment.

Forms—Garlock 257 Rings are furnished with square-cut joint in specified rod and stuffing box sizes.

Garlock 257 Coil is made in packing sizes from 1/8" to 1 5/8" inclusive advancing by sixteenths. Sizes up to 3/4" inclusive are packaged on spools as shown in the table below; larger sizes are packaged in boxes.

GARLOCK 176 COIL AND RING

Construction—Garlock 176 is of braid-over-braid construction, made from Garlock asbestos yarn with an asbestos rope center and formed square in cross section. It is bonded with a special rubber cement, receives a vulcanizing treatment and is surface-coated with graphite.

Forms—Garlock 176 Rings are supplied with a beveled joint in specified rod and stuffing box sizes.

Garlock 176 Coil is made in all packing sizes from 1/4" to 1", advancing by sixteenths. Standard packaging data is shown below.

GARLOCK 257 Coil

Packing Size	1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32	1/2	17/32	9/16	19/32	5/8	21/32	11/16	23/32	3/4
Feet per pound—approx.	100	35	24	15	11	8½	6	5	4½	4	3½										
Weight per spool—approx.	1, 2 or 5 lbs.					2 or 5 lbs.		5 lbs. only													

GARLOCK 176 Coil

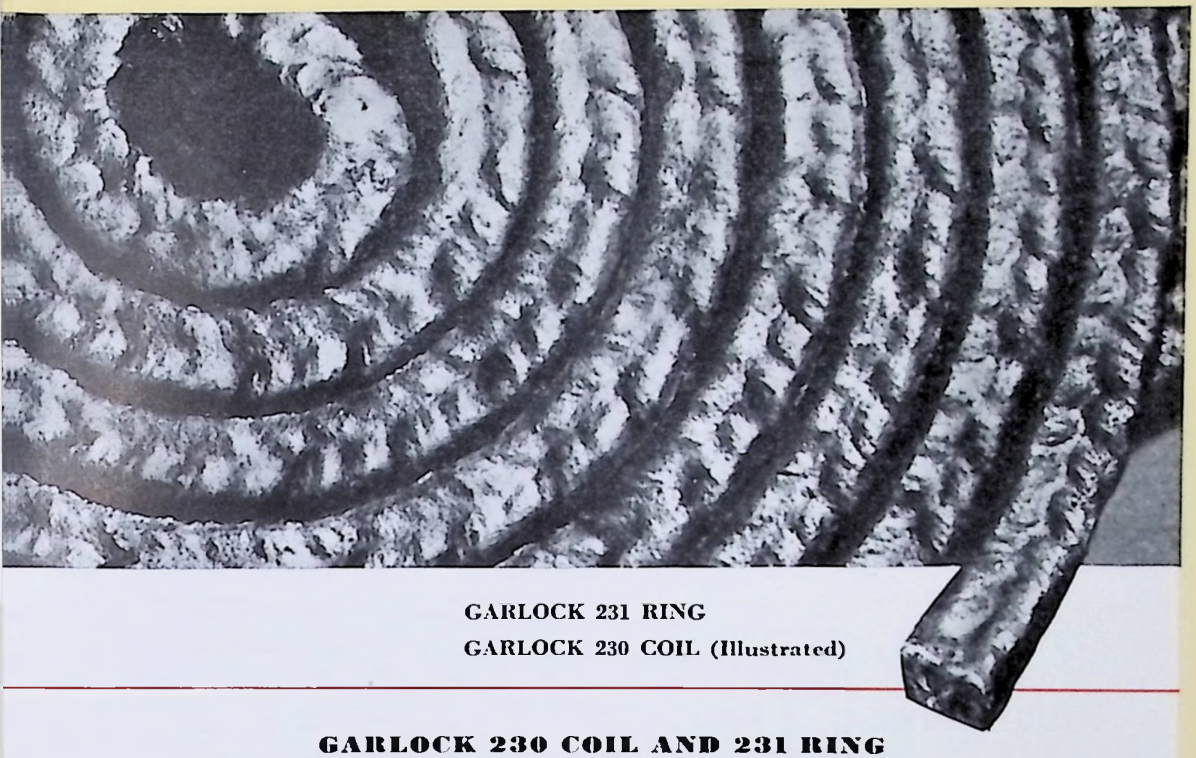
Packing Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.	7¼	7½	11½	9	11½	12	12½	12¾	13	9¼	10½	11	11½

GARLOCK 257 COIL (Illustrated)



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 31 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/31

Blue Asbestos Acid Packings



GARLOCK 231 RING
GARLOCK 230 COIL (Illustrated)

FOR...

Use against strong mineral acids.

ON...

Shafts of centrifugal and rotary pumps; reciprocating rods and valve stems.

Applied in a groove, these packings (untreated) are good gasketing materials.

GARLOCK 230 COIL AND 231 RING
GARLOCK 258 COIL AND 258 RING

Construction—These packings are braided square from pure, blue Cape asbestos yarn. Garlock 230 Coil and 231 Ring are thoroughly lubricated with a mineral fat lubricant and are externally graphited. Garlock 258 Coil and 258 Ring are thoroughly lubricated with a vegetable lubricant and are externally graphited.

Forms—Garlock 231 Ring and 258 Ring are supplied with square-cut joint in specified rod and stuffing box sizes.

Garlock 230 Coil and 258 Coil are made in sizes from 1/8" to 1 3/4" advancing by sixteenths. Standard packages for these materials in sizes up to 1" are shown in the table below.

GARLOCK 5414 COIL AND RING

Construction—Garlock 5414 is braided by the braid-over-braid method from pure, blue Cape asbestos, square in cross section. It is thoroughly lubricated with a blended mineral and animal-fat lubricant and is externally graphited.

Forms—Garlock 5414 Rings are supplied with square-cut joint in specified rod and stuffing box sizes.

Garlock 5414 Coil is made in all packing sizes from 1/8" to 1 5/8" advancing by sixteenths. Standard packages for sizes up to 1" are shown below.

GARLOCK 230 Coil and GARLOCK 258 Coil

Packing Size	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	80†	32†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.			5 1/4	6 1/4	10 3/4	8 1/2	11 1/4	12 1/2	13 1/4	13 1/2	14 3/4	10 1/2	11	11 1/2	12

GARLOCK 5414 Coil

Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	75†	35†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.			4 1/2	5 3/4	10 1/4	8	10 3/4	12	12 3/4	13	14 1/4	10 1/4	10 1/2	11	11 1/2

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 32 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/32



FOR...

Use against steam at low or medium temperature, hot or cold water and aqueous solutions (except strong mineral acids).

ON...

Valve stems and on small piston and valve rods.

A dependable valve stem packing.

GARLOCK 115 SQUARE-BRAIDED
GARLOCK 117 ROUND-TWISTED
GARLOCK 117 ROUND-BRAIDED
(Illustrated)

Beaver Packing

Construction—Garlock Beaver Packing is manufactured from Garlock, long-fibre asbestos yarn in round braided, round twisted and square braided types. These materials are thoroughly lubricated with a mineral-fat lubricant and graphited.

Forms—Garlock 117 Round Braided and Garlock 115 Square Braided Packings are available in rings with square-cut joints to specified inside and outside diameters. Garlock 117 Round Twisted Packing is not supplied in ring form. Garlock 117 is regularly made in sizes from $\frac{1}{16}$" to $\frac{3}{4}$" inclusive and Garlock 115 in sizes from $\frac{1}{8}$" to $\frac{3}{4}$" inclusive.

Standard packages for all three types are 1-pound, 2-pound and 5-pound spools as shown in the table below.

Packing Size	1/16	1/8	3/16	1/4	5/16	3/8	7/16	1/2	5/8	3/4	7/8	1
GARLOCK 117 Braided												
Feet per pound—approx.	280	110	45	26	17	13	9	7	6	5	4	3½
Weight per spool—approx.	1, 2 or 5 lbs.						2 or 5 lbs.		5 lbs. only			
GARLOCK 117 Twisted												
Feet per pound—approx.	300	100	40	26	17	13	10	8	7	6	4½	4
Weight per spool—approx.	1, 2 or 5 lbs.						2 or 5 lbs.		5 lbs. only			
GARLOCK 115 Braided												
Feet per pound—approx.		100	40	22	15	11	8	6	5	4	3½	3
Weight per spool—approx.	1, 2 or 5 lbs.						2 or 5 lbs.		5 lbs. only			

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 33 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/33

Alabestine Packing

Construction—Alabestine Packing is manufactured from Garlock long-fibre asbestos yarn, braided round. It is treated with a heat-resisting compound and receives a surface coating of graphite.

Forms—Garlock 17 is regularly supplied on 1-pound, 2-pound and 5-pound spools and in packing sizes from $\frac{1}{16}$" to $\frac{3}{4}$" as shown in the table below.

Garlock 17 Rings with square-cut joint are available in specified inside and outside diameters.

GARLOCK 17 Spool												
Packing Size	$\frac{1}{16}$	$\frac{1}{8}$	$\frac{3}{16}$	$\frac{1}{4}$	$\frac{5}{16}$	$\frac{3}{8}$	$\frac{7}{16}$	$\frac{1}{2}$	$\frac{9}{16}$	$\frac{5}{8}$	$\frac{11}{16}$	$\frac{3}{4}$
Feet per pound—approx.	325	140	65	40	30	20	15	12	9	7	6	5
Weight per spool—approx.	1, 2 or 5 lbs.						2 or 5 lbs.		5 lbs. only			

GARLOCK 17 SPOOL



FOR...

Use against steam at high pressures and temperatures up to 600° F.

ON...

Valve stems and on small piston and valve rods.

A dependable packing for valves in high temperature service.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 34 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/34

Asbestos Packings with Wire

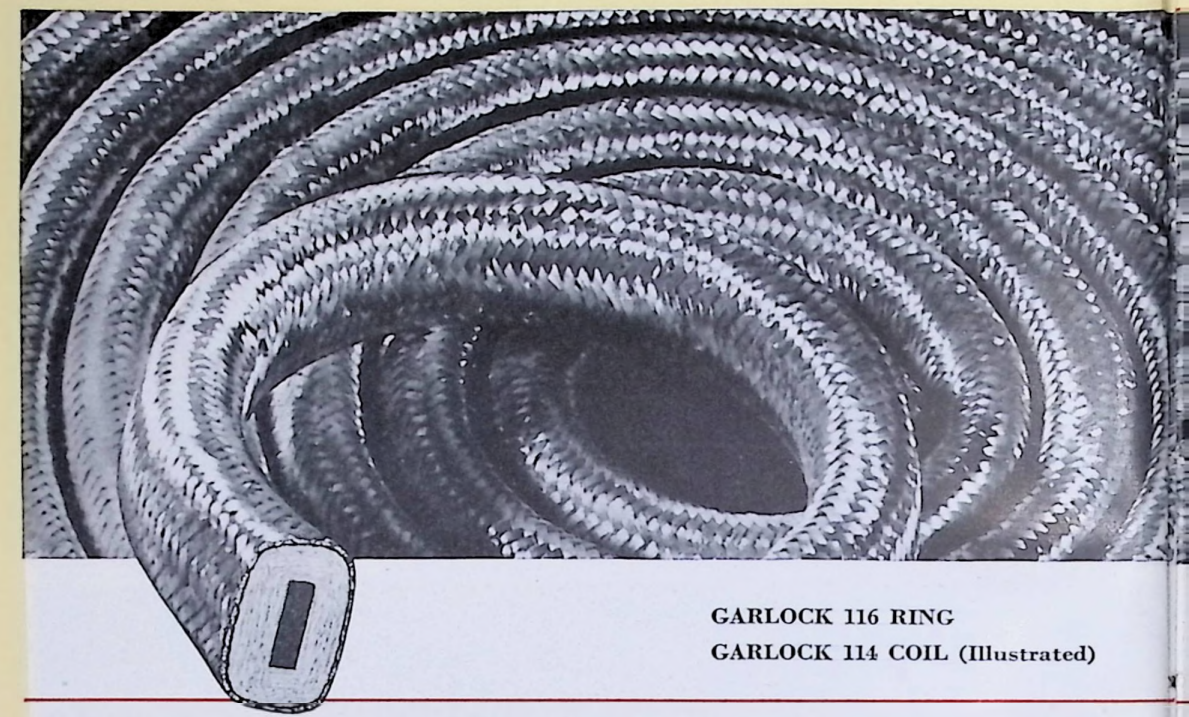
FOR...

Use against steam, air or gas at low or medium temperature.

ON...

Rods of engines exposed to the weather (such as marine deck engines) and on piston rods of gas engines.

Also used as end rings in stuffing boxes to prevent extrusion of other packings and as a groove packing or gasketing.



GARLOCK 116 RING
GARLOCK 114 COIL (Illustrated)

GARLOCK 114 COIL—116 RING

Construction—Garlock wire-wound packing is constructed of Garlock long-fibre Canadian asbestos yarn, braided over a rubber core, with a braided cover of copper wire, oval in cross section. It is treated internally with lubricant and graphite.

Forms—Garlock 116 Rings are supplied with square-cut joint in specified rod and stuffing box dimensions.

Garlock 114 Coil is manufactured in packing sizes from ¼″ to 1⅝″ advancing by sixteenths. Available in coil lengths or continuous lengths on reels. Packaging data on sizes up to 1″ is shown below.

GARLOCK 248 COIL—251 RING

Construction—Garlock Mill Packing is manufactured from Garlock long-fibre Canadian asbestos yarn with wire insertion, by the braid-over-braid method; it is square in cross section. The material is treated with a modified, marine-fat lubricant and receives a surface coating of graphite.

Forms—Garlock 251 Rings are supplied with beveled joint in specified rod and stuffing box dimensions.

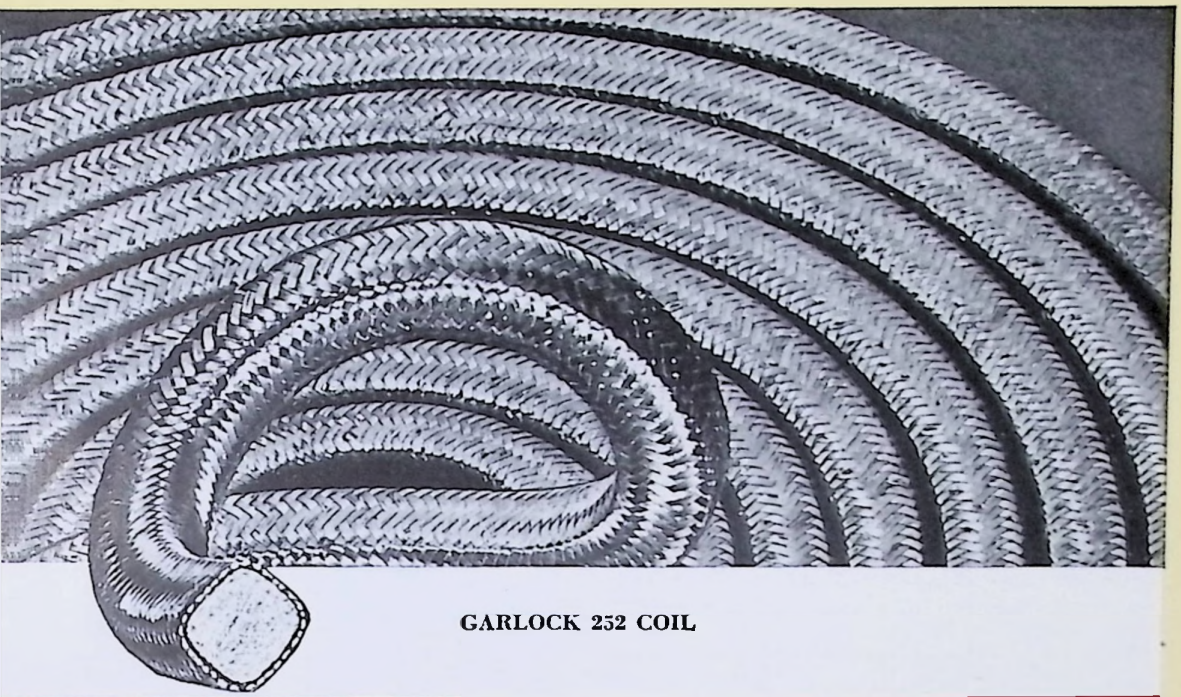
Garlock 248 Coil is produced in packing sizes from 3/16″ to 1⅝″ advancing by sixteenths and is available either in coil lengths in boxes or continuous lengths on reels. Standard packaging data on sizes up to 1″ is shown on the opposite page.

GARLOCK 114 Coil

Packing Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1″
Coils per box—endless	3	3	3	3	2	2	2	2	2	1	1	1	1
Feet per box—approx.	72	60	51	45	44	40	34	30	28	26	24	22	20
Pounds per box—approx.	6	5¾	8½	11¼	13½	13½	12¼	12½	14	14	13½	14¾	17½

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 35 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/35

Furnace Door Packings



GARLOCK 252 COIL

FOR...

Use against hot air and gases.

ON...

Furnace doors in steel mills, glass plants, blast furnaces, foundries, etc.

Garlock 252 is a firm material, usually preferred where doors are opened or joints are broken frequently.

Garlock 5246 is used when a somewhat softer material is desired.

GARLOCK 252 COIL

Construction—Garlock 252 is braided from long-fibre, wire-inserted, Garlock asbestos yarn by the braid-over-braid method and has a braided cover of copper wire. Formed square or rectangular in cross section. The material is unlubricated and otherwise untreated.

Form—Garlock 252 is manufactured in packing sizes from 1/4" to 1 5/8" advancing by sixteenths. It is regularly furnished in coil lengths as specified or in continuous lengths on reels.

GARLOCK 5246 COIL

Construction—Garlock 5246 is braided from long-fibre, wire-inserted, Garlock asbestos yarn by the braid-over-braid method, having a center core of twisted asbestos and a skeleton-braided copper wire cover. It is formed square or rectangular in cross section. The material is unlubricated and otherwise untreated.

Form—Garlock 5246 is manufactured in packing sizes from 3/8" to 1 5/8", advancing by sixteenths. It is regularly furnished in coil lengths as specified or in continuous lengths on reels.

GARLOCK 248 Coil

Packing Size	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	20†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.		6	7	12	9 1/2	12	13 1/4	13 1/2	14	15	11	12	13	14 1/2

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 36 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/36

Expansion Joint and Gas Generator Door Packings

FOR...
Use against steam, air or gases at temperatures up to 700°.

ON...
Expansion joints and as valve stem packing.

GARLOCK 256 COIL AND RING

Construction—Garlock 256 is braided square from wire-inserted, long-fibre Garlock asbestos yarn. It is impregnated throughout with a mineral lubricant but carries no excess lubrication. The material receives a surface coating of graphite.
Forms—Garlock 256 Rings are supplied with square-cut joint in specified inside and outside diameters.

Garlock 256 Coil is manufactured in packing sizes from 1/8" to 1 3/4" advancing by sixteenths. Standard packaging data on sizes up to 1" is shown in the table below.

FOR...
Use against high temperature air and gases at low or medium pressures.

ON...
Gas generator doors, Furnace doors, Exhaust pipes, etc.

GARLOCK 5008 COIL

Construction—Garlock 5008 contains a twisted asbestos rope center over which is braided a cover of Garlock long-fibre asbestos yarn. It is round in cross section. The material is unlubricated and ungraphited.

Form—Garlock 5008 is manufactured in sizes from 3/8" to 1 5/8" advancing by sixteenths. It is regularly furnished in coil form only, put up in continuous lengths on reels.

GARLOCK 256 Coil

Packing Size	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	76†	39†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.			5 3/4	6 1/2	11 1/4	9 1/4	11	12 3/4	13 1/4	14	15	11 1/2	12 1/2	13 1/4	15 1/4

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

Oxygen and Chlorine Valve Packings

FOR...
Use against oxygen.

ON...
Valve stems and other equipment handling oxygen.

GARLOCK 5603 COIL AND RING

Construction—Garlock 5603 is braided from 100% pure Canadian asbestos yarn by the braid-over-braid method. It is square in cross section. This material is free from lubrication and graphite and is furnished untreated to the user who may treat it to suit his requirements.

Forms—Garlock 5603 Rings are supplied with square cut joint in specified inside and outside diameters. Garlock 5603 Coil is manufactured in packing sizes from 1/8" to 1 5/8" advancing by sixteenths and is furnished in coil lengths as specified or in continuous lengths on reels.

FOR...
Use against chlorine.

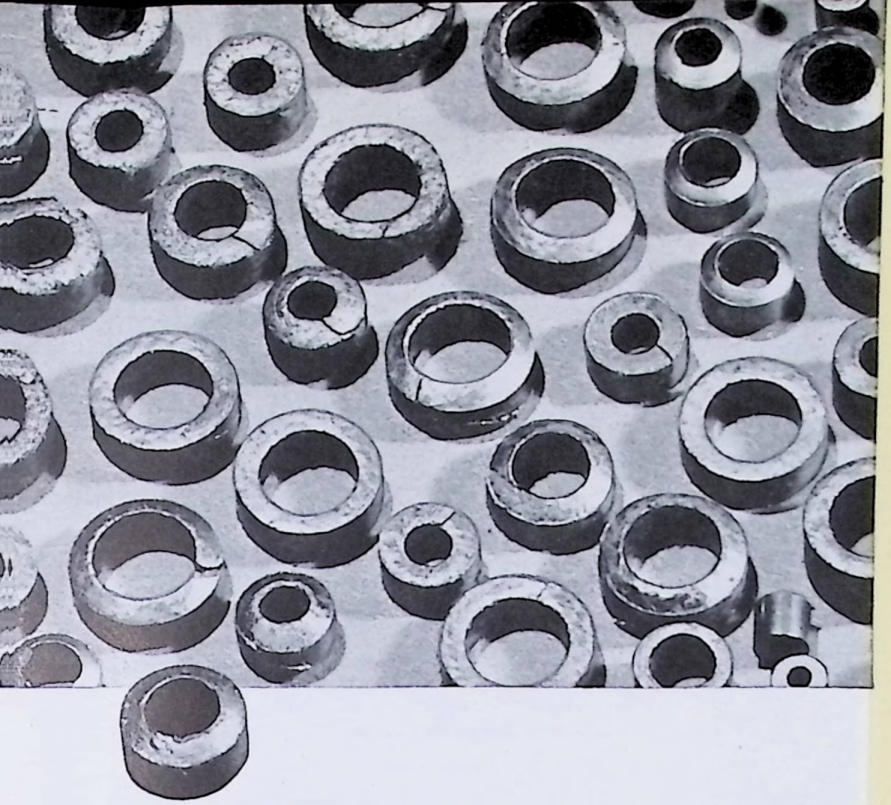
ON...
Valves of liquid chlorine containers.

GARLOCK 7130 RING

Construction—Garlock 7130 is a laminated or plied material made of Garlock asbestos cloth frictioned with a high-grade rubber cement, and finished with rubber covers. It is treated with a beeswax lubricant and is surface coated with graphite.

Form—Garlock 7130 is regularly supplied in ring form only. Rings are produced to specified inside and outside diameters, cut with a beveled joint, and are approximately square in cross section.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 37 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/37



Molded Valve Rings

Garlock 160, 161, 162, 163 and 166 Molded Valve Rings are specifically intended for production line usage where accurately sized and uniform packing rings are required for easy and high-speed assembly in equipment such as valves, faucets, steam traps and appliances and equipment of many kinds. All rings are molded to the size and shape specified by the customer. Production, generally, is in large quantities only. Orders for 500 rings or less of one size carry a special charge for machine setup time.

TABLE OF STANDARD MINIMUM AND MAXIMUM DIMENSIONS

GARLOCK 160, 161, 162 and 163 Rings

	Minimum	Maximum
Inside diameter	$\frac{3}{16}$"	$1\frac{1}{2}$"
Outside diameter	$\frac{3}{16}$"	$1\frac{3}{4}$"
Packing space (width)	$\frac{3}{16}$"	$\frac{5}{32}$"
Thickness (depth)	$\frac{1}{16}$"	$\frac{3}{4}$"

GARLOCK 166 Rings

	Minimum	Maximum
Inside diameter	$\frac{1}{8}$"	$\frac{31}{32}$"
Outside diameter	$\frac{3}{16}$"	$1\frac{3}{32}$"
Packing space (width)	$\frac{1}{4}$"	$\frac{1}{2}$"
Thickness (depth)	$\frac{1}{8}$"	$\frac{5}{8}$"

GARLOCK 160, 161, 162 and 163 Coil

Rect. Cross Section	Minimum	Maximum
Packing space (width)	$\frac{1}{16}$"	$\frac{3}{4}$"
Thickness (depth)	$\frac{3}{32}$"	$\frac{1}{2}$"

Coil usually packaged on 1-pound, 2-pound or 5-pound spools.

Notes:

1. Rings can be manufactured by special production methods in some sizes larger than the standard maximums indicated.
2. Coil form, without the lead core, can be produced in some sizes larger than the standard maximums indicated.

GARLOCK 160 RINGS

Service—Garlock 160 Rings are for use against steam at temperatures up to 600° F., on valve stems, faucets, small piston rods and valve rods and other small equipment and appliances.

Construction—Made of wire-inserted Garlock asbestos yarn, braided over a center core of perforated lead, and surface coated with a special rubber cement and graphite.

Forms—Rings are produced to specified size and shape within the size limitations shown in the table below. This same material is also available in coil form, square or rectangular in cross section, in the size range indicated below.

GARLOCK 161 RINGS

Service—Garlock 161 Rings are for use against cold water and alcohol, on valve stems, faucets, small piston rods and valve rods and other small equipment and appliances.

Construction—Made of wire-inserted Garlock asbestos yarn, braided over a center core of perforated lead, treated with paraffin and surface coated with graphite.

Forms—Rings are produced to specified size and shape within the size limitations shown in the table below. This same material is also available in coil form, square or rectangular in cross section, in the size range indicated below.

GARLOCK 162 RINGS

Service—Garlock 162 Rings are for use against cold oil, gasoline, benzol, chlorinated solvents, esters and carbon-bisulphide, on valve stems, faucets, small piston rods and valve rods and other small equipment and appliances.

Construction—Made of wire-inserted Garlock asbestos yarn, braided over a center core of perforated lead, treated with a blended glycerol and soap lubricant and surface coated with graphite.

Forms—Rings are produced to specified size and shape within the size limitations shown in the table below. This same material is also available in coil form, square or rectangular in cross section, in the size range indicated below.

GARLOCK 163 RINGS

Service—Garlock 163 Rings are for use against high or low pressure steam, water, alcohol and aqueous solutions other than strong mineral acids, on valve stems, faucets, small piston rods and valve rods and other small equipment and appliances.

Construction—Made of wire-inserted Garlock asbestos yarn, braided over a center core of perforated lead, impregnated with a mineral oil lubricant and surface coated with graphite.

Forms—Rings are produced to specified size and shape within the size limitations shown in the table below. This same material is also available in coil form, square or rectangular in cross section, in the size range indicated below.

GARLOCK 166 RINGS

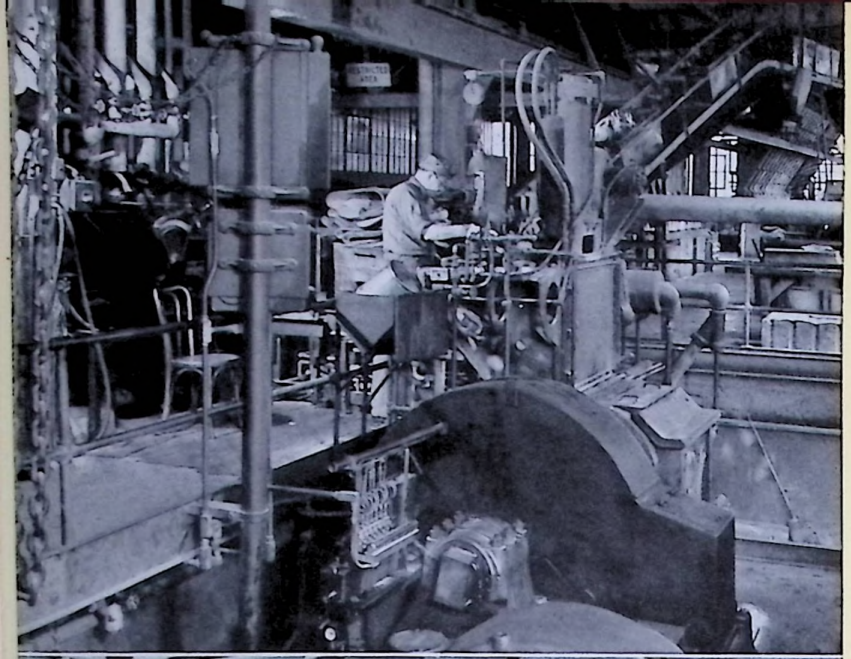
Service—Garlock 166 Rings are for use against steam or gases up to 600° F., hot or cold water, oils, solvents and aqueous solutions other than strong mineral acids, on valve stems, faucets, small piston and valve rods, electric refrigerators; gas, gasoline or kerosene lamps and stoves; automobile accessories and other equipment and appliances.

Construction—Molded from a special plastic compound containing asbestos fibre, synthetic rubber and graphite. Rings have an exceedingly smooth finish and receive no superficial surface treatment.

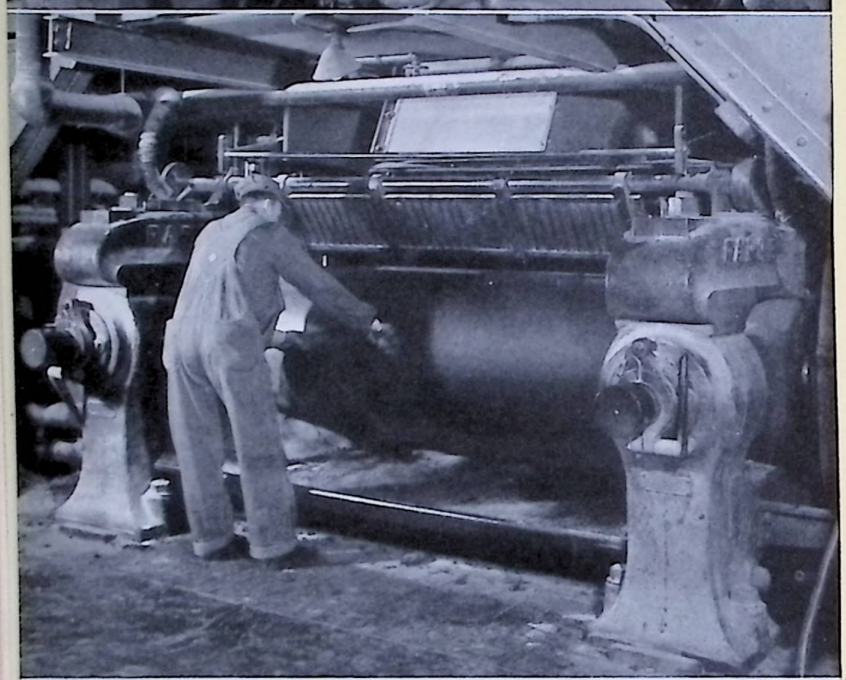
Forms—This material is available in ring form only, molded to specified size and shape, within the size limitations shown in the table below.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 38 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/38

DUCK



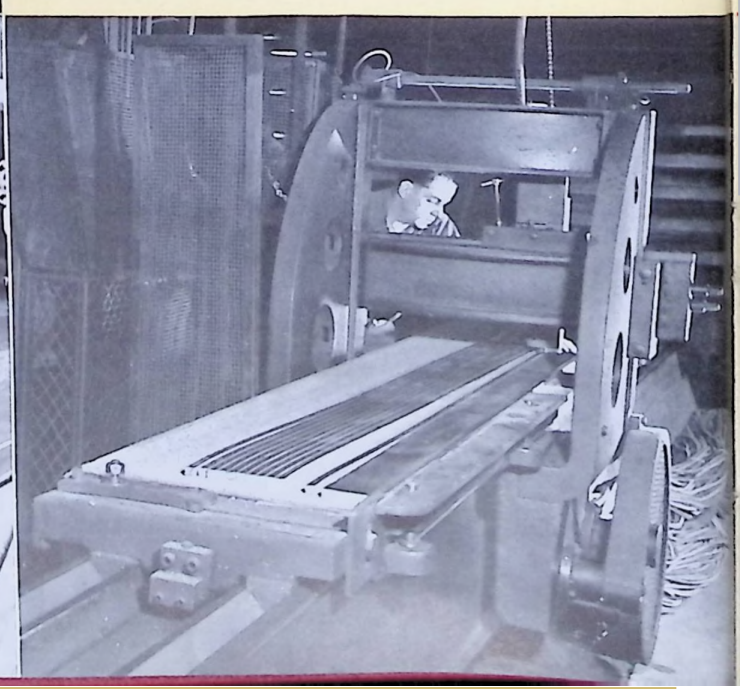
Banbury Mixing of
Rubber Compounds



Sheeting off Rubber
Compound from Banbury



Battery of Rubber
Cement Mixers



Cutting Cured Slab
into Strips

Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/39

AND RUBBER PACKINGS

	PAGE
Water and L.P. Steam Rod Packing	40
Ammonia Rod Packing	40
Sectional, Diagonal and Odd-Shape Rings	41
Water and L.P. Steam Rod Packing (*cross-expansion*)	42
Ammonia Rod Ring Packings	43
Water and L.P. Steam Rings (*metal insertion*)	44
Water and L.P. Steam Rings (*metal wedge*)	45
Water and L.P. Steam Packing (*rubber core*)	46
Water and L.P. Steam Packing (*hollow core*)	47
Hot or Cold Water Hydraulic Plunger Packing (*special*)	48
Hot or Cold Water Hydraulic Plunger Packing (*regular*)	49
Cold Water Hydraulic Plunger Packing	50
Hot or Cold Water Hydraulic Plunger Packing	50
Hot or Cold Water Rubber Packing	50

This index is for quick reference and indicates only the general type of each product in this section, and the service on which it is most commonly used. For complete information concerning any product please consult the catalog page indicated.

Note—Durometer hardnesses shown in this catalog refer to readings taken with a durometer calibrated and used in accordance with A.S.T.M. Specification D-676.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 40 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/40

Low Pressure Packings

GARLOCK 777 SPIRAL • GARLOCK 333 RING

FOR...

Hot or cold water and low pressure steam.

ON...

Piston and valve rods of steam engines and reciprocating pumps; valve stems; faucets; and rotating shafts at very slow speeds.

Construction—This low pressure packing is constructed of plies of closely-woven, heavy cotton duck, treated with a special Garlock rubber compound, and with thick top and bottom covers of rubber. The material is vulcanized in a press. It is treated with a mineral oil lubricant and externally graphited.

Forms—Garlock 333 Rings are furnished to specified rod and stuffing box sizes; regularly supplied with bevel-cut joint.

Garlock 777 Spiral is supplied in standard 12½-foot lengths and in packing sizes from ⅛" to 1¼" advancing by sixteenths; approximately square in cross section. Thicknesses are from ¼" to 1". Standard packages for sizes up to 1" are shown below.

GARLOCK 777 Spiral—GARLOCK 778 Spiral

Packing Size	⅛	3/16	¼	5/16	⅜	7/16	½	9/16	⅝	11/16	¾	13/16	⅞	15/16	1"
Spirals per box	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	50	37½	25	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½
Pounds per box—approx.	¾	¾	1⅜	⅞	1⅛	1⅜	1¾	2⅛	3	3¼	4½	4⅞	6⅛	6½	8

GARLOCK 778 SPIRAL (for ammonia)
GARLOCK 334 RING (for ammonia)

FOR...

Use against hot mixtures of anhydrous ammonia and oil.

ON...

Ammonia rods of steam-driven ammonia compressors and shafts of enclosed, crankcase type compressors.

Construction—Same as Garlock 777 and Garlock 333 (above), except this material is specially treated for ammonia service.

Forms—Same as Garlock 333 Rings and Garlock 777 Spiral above. See table above.



GARLOCK 777 SPIRAL
GARLOCK 778 SPIRAL
(for ammonia)

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 41 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/41

Low Pressure Ring Packings

GARLOCK 336
SECTIONAL-CUT RING

GARLOCK 550
DIAGONAL-CUT RING

Construction—These rings are constructed of plies of closely-woven, heavy cotton duck, treated with a special Garlock rubber compound and finished with thick top and bottom covers of rubber. They are treated with a mineral oil lubricant and externally graphited.

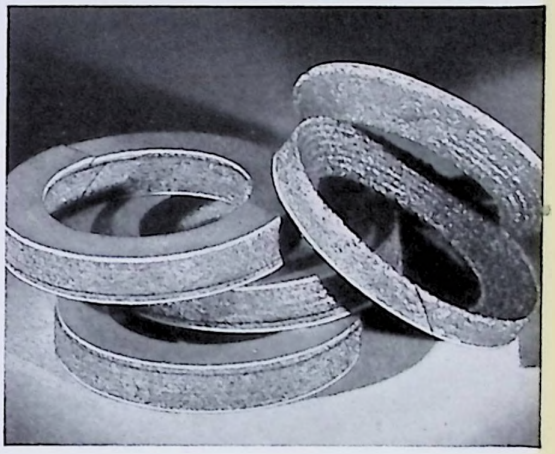
Each ring is individually cut into a male and female part (as illustrated). These two-piece rings are semi-automatic in action and operate with very light gland pressure. They usually are installed in combination with plain-cut rings (such as style 333).

Forms—Garlock 336 Sectional-cut and Garlock 550 Diagonal-cut Rings are supplied to specified rod and stuffing box dimensions and are regularly furnished with bevel-cut joint. Because of their two-piece construction these rings are not supplied for packing spaces less than $\frac{3}{8}$".

Rings are approximately square in cross-section. Standard thicknesses are from $\frac{3}{8}$" to 1".



GARLOCK 336 RING



GARLOCK 550 RING

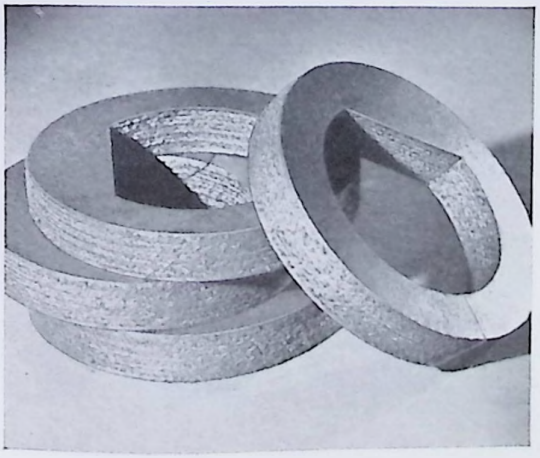
FOR...

Hot or cold water and low pressure steam.

ON...

Piston and valve rods of steam engines and reciprocating pumps.

Effective packings for installation where lateral rod motion or weave exists.



GARLOCK 339
ODD-SHAPE RING

Construction—These rings are cut from the same material as Garlock 336 and 550 Rings described above except Garlock 339 Rings are not sectional or diagonal cut.

Forms—Garlock 339 Rings are supplied to specified sizes and in odd-shapes as required.

Standard thicknesses are from $\frac{1}{4}$" to 1".

FOR...

Hot or cold water and low pressure steam.

ON...

Rods having flat-sides or shapes other than round.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 42 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/42

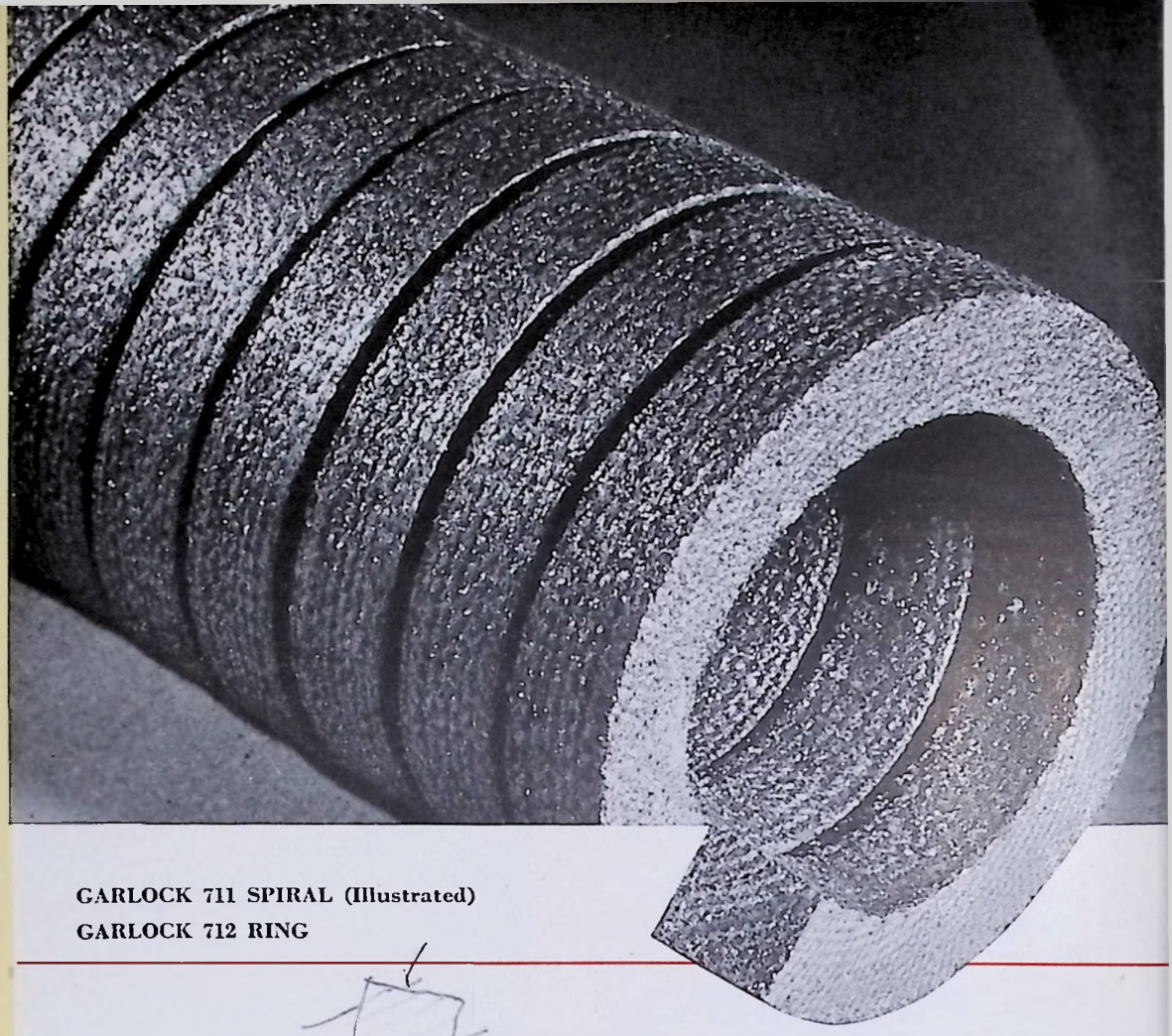
FOR...

Hot or cold water, low pressure steam, and hot mixtures of anhydrous ammonia.

ON...

Piston and valve rods of steam engines and reciprocating pumps; ammonia rods; and rotating shafts at very slow speeds.

An effective packing where lateral rod motion or weave exists.



GARLOCK 711 SPIRAL (Illustrated)
GARLOCK 712 RING

"Z" Spiral and Ring Packings

Construction—Garlock "Z" Spiral and ring packings are constructed of plies of closely-woven, heavy cotton duck, treated with a special Garlock rubber compound, laid-up diagonally and finished with heavy top and bottom covers of fabric and rubber. The material is treated with a mineral oil lubricant and externally graphited.

The diagonal construction produces a packing which operates with very light gland pressure.

Forms—Garlock 712 Rings are regularly supplied with bevel-cut joint, cut to fit specified rod and stuffing box sizes. Rings are approximately square in cross section.

Garlock 711 Spiral is furnished in standard 12½ foot lengths and in packing sizes from ⅛" to 1¼" advancing by sixteenths; approximately square in cross section except that minimum thickness is ¼" and maximum thickness is 1". Standard packages for sizes up to 1" shown below.

GARLOCK 711 Spiral

Packing Size	⅛	3/16	¼	5/16	⅜	7/16	½	9/16	⅝	11/16	¾	13/16	⅞	15/16	1"
Spirals per box	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	50	37½	25	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½
Pounds per box—approx.	1	1	⅜	½	1	1¼	1⅝	2	2¾	3¼	4	4½	5¼	5¾	7¼

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 43 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/43

Ammonia Ring Packings

GARLOCK 337
SECTIONAL-CUT RING
GARLOCK 556
DIAGONAL-CUT RING

Construction—These rings are constructed of plies of closely-woven, heavy cotton duck, treated with a special Garlock rubber compound and finished with thick rubber top and bottom covers. They are specially lubricated for service against ammonia and are externally graphited.

Each ring is individually cut into a male and female part. These two-piece rings are semi-automatic in action and operate with very light gland pressure. Sectional and diagonal cut rings are usually installed in combination with plain-cut rings (such as style 334).

Forms—Garlock 337 Sectional-cut and Garlock 556 Diagonal-cut Rings are supplied to specified rod and stuffing box dimensions and are regularly furnished with bevel-cut joint. Because of their two-piece construction these rings are not supplied for packing spaces less than 3/8".

Rings are approximately square in cross-section; standard thicknesses are from 3/8" to 1".

FOR...

Use against hot mixtures of anhydrous ammonia and oil.

ON...

Ammonia rods of steam-driven ammonia compressors and shafts of enclosed crankcase type ammonia compressors.

GARLOCK 314
METAL INSERTION RING
GARLOCK 317
SECTIONAL-CUT METAL INSERTION RING

Construction—These rings are constructed of plies of closely-woven, heavy cotton duck, treated with a special Garlock rubber compound; two insertions of soft metal sheet; and top and bottom covers of rubber. They are specially lubricated for service against ammonia and are externally graphited.

Garlock 314 and Garlock 317 Rings usually are installed in combination with plain rings such as Garlock 334 (described on page 40). Garlock 317 Sectional-cut Rings are semi-automatic in action and operate with very light gland pressure.

Forms—Garlock 314 and Garlock 317 Rings are supplied to specified rod and stuffing box dimensions and are regularly furnished with bevel-cut joint. Garlock 317 Sectional-cut Rings are not supplied for packing spaces less than 3/8". Approximate standard thicknesses are 3/8" and 1/2".

Effective packings where lateral rod motion or weave exists.

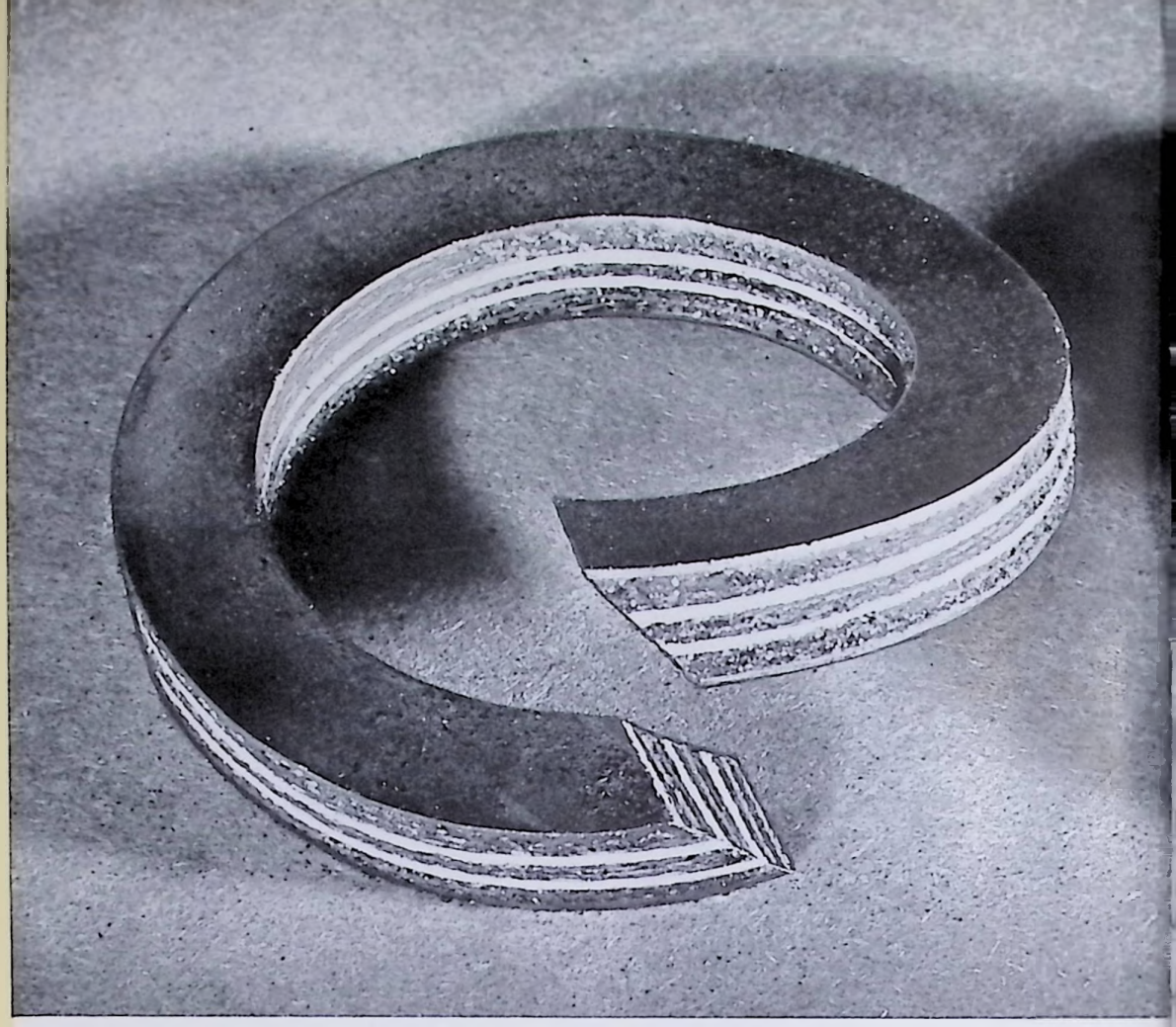
Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 44 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/44

FOR...

Hot or cold water and low temperature steam.

ON...

Piston and valve rods of steam engines and reciprocating pumps.



GARLOCK 313 RING

Metal Insertion

Garlock 313 is an effective bottom ring in a set where pressures are high or excessive clearance exists between the rod and stuffing box.

Garlock 316 is a good packing on installations where lateral rod motion or weave exists.

GARLOCK 313 RING
GARLOCK 316 SECTIONAL-CUT RING

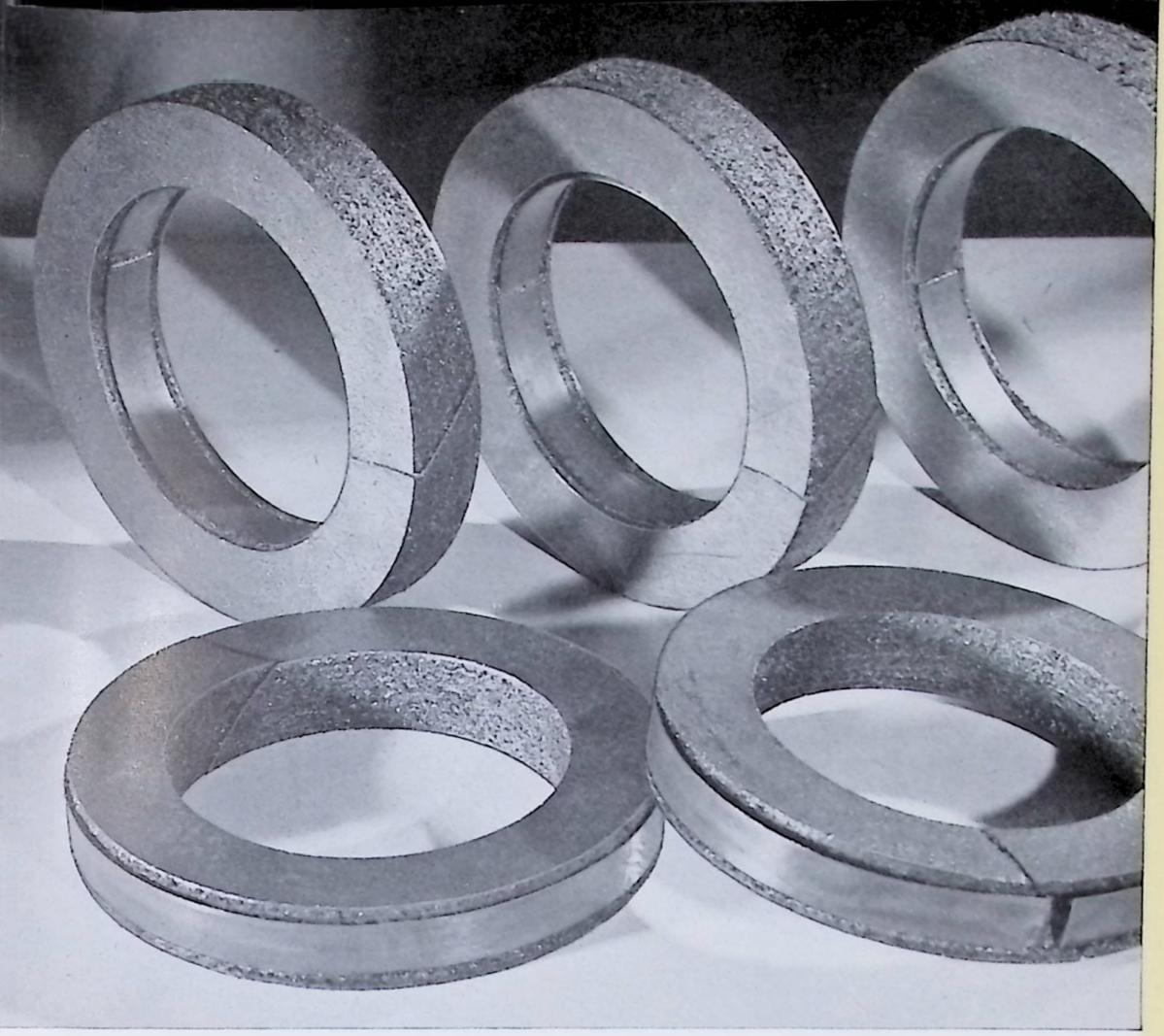
Construction—These rings are constructed of plies of closely-woven, heavy cotton duck treated with a special rubber compound and containing two inserted plies of soft metal sheet. The material is finished with rubber covers on top and bottom. It is lubricated with a mineral oil lubricant and externally graphited.

Garlock 313 Rings and rings of the semi-automatic type like Garlock 316 generally are installed in combination with rings of other types such as Garlock 333.

Forms—Garlock 313 Rings are supplied to specified rod and stuffing box sizes and are regularly furnished with bevel-cut joint. Standard thicknesses are $\frac{3}{8}$" and $\frac{1}{2}$" only.

Garlock 316 Sectional-cut Rings are supplied to specified rod and stuffing box sizes and are regularly furnished with bevel-cut joint. Because of their two-piece construction these rings are not made for packing spaces less than $\frac{3}{8}$". Standard thicknesses are $\frac{3}{8}$" and $\frac{1}{2}$".

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 45 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/45



GARLOCK 216 RING
GARLOCK 217 RING

Ring Packings

FOR...

Hot or cold water and low temperature steam.

ON...

Piston rods, valve rods and plungers of reciprocating pumps, usually in combination with other types of rings (such as style 333).

GARLOCK 216 INNER WEDGE RING
GARLOCK 217 OUTER WEDGE RING

Construction—Garlock 216 and 217 Rings are constructed of plies of closely-woven, heavy cotton duck treated with a special Garlock rubber compound and finished with thick rubber top and bottom covers. Rings are treated with a mineral oil lubricant and externally graphited.

Garlock 216 Ring has a soft-metal triangular wedge inserted in a groove on the inner wearing surface of the ring.

Garlock 217 Ring has a soft-metal triangular wedge inserted in a groove on the outer circumference of the ring. These rings are intended only for use on inside packed pump pistons or plungers.

Forms—Garlock 216 and 217 Rings are supplied to specified rod and stuffing box or cylinder diameters and are regularly furnished with bevel-cut joint.

These rings are approximately square in cross-section and are not made for packing spaces less than $\frac{3}{8}$″.

Standard thicknesses are from $\frac{1}{2}$″ to 1″ inclusive, advancing by eighths.

Garlock 216 is a good packing for plungers of outside-packed pumps.

Garlock 217 is designed for use on pistons of inside packed pumps.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 46 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/46

Ideal Packing

FOR...

Hot or cold water and low pressure steam.

ON...

Piston and valve rods of high-speed engines and rods of reciprocating pumps.

Construction—Ideal packing contains a round core of resilient rubber around which is wrapped a special cotton duck, frictioned with a Garlock rubber compound. The material is treated with a modified glycerol lubricant and externally graphited.

Forms—Garlock 255 Rings are regularly furnished with bevel-cut joint and are supplied to fit specified rod and stuffing box dimensions.

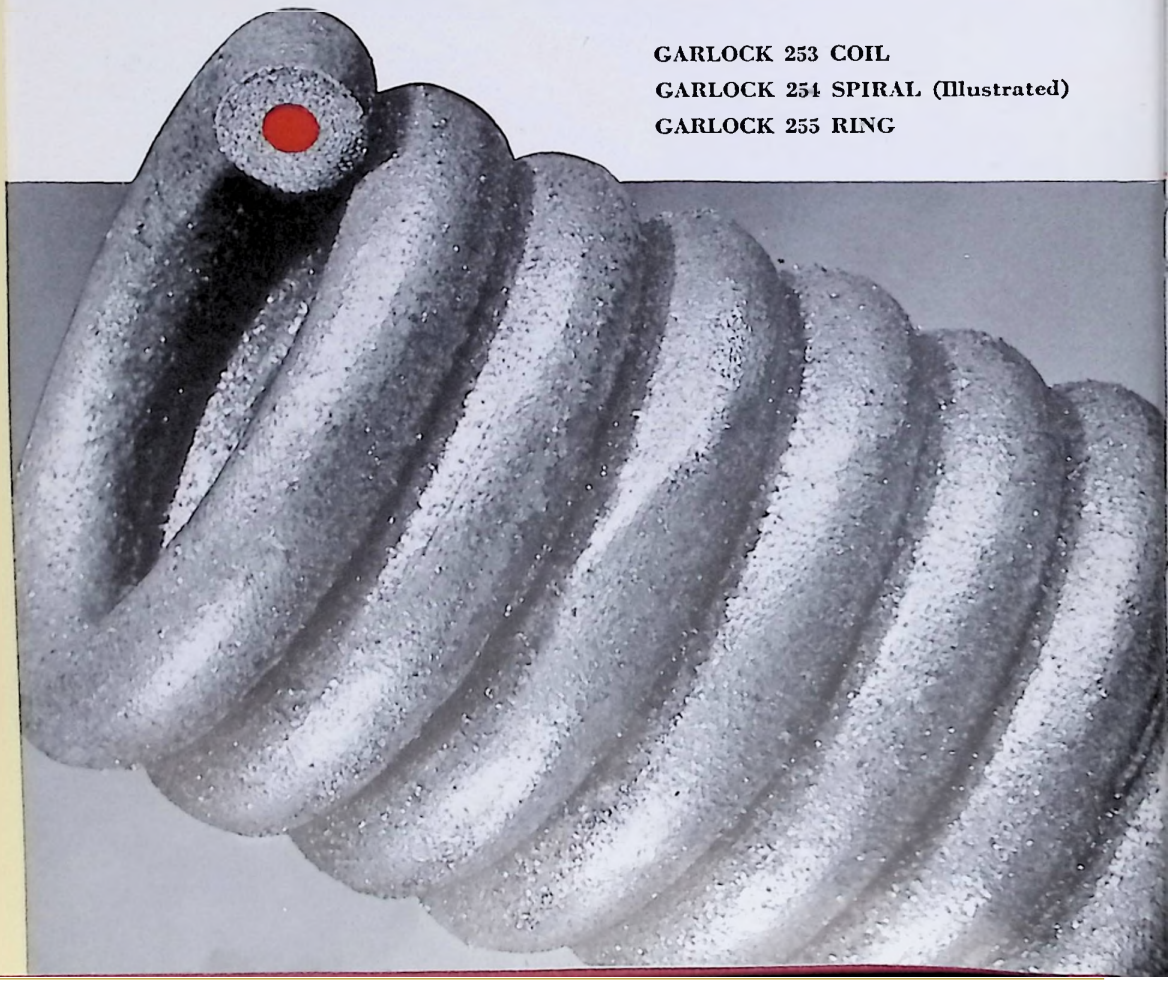
Garlock 253 Coil and Garlock 254 Spiral are furnished in standard 12½" foot lengths and in packing sizes from 3/16" to 1½" advancing by sixteenths. Standard packages for sizes up to 1" inclusive are shown below.

GARLOCK 253 Coil

Packing Size	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	6	6	4	4	4	4	3	3	2	2	1	1	1	1
Feet per box—approx.	75	75	50	50	50	50	37½	37½	25	25	12½	12½	12½	12½
Pounds per box—approx.	1⅛	1⅞	2½	3	3½	5	5¼	6¾	5¼	6½	3¾	4¼	5	6

GARLOCK 254 Spiral

Packing Size	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Spirals per box	3	2	1	1	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	37½	25	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½
Pounds per box—approx.	½	⅝	⅝	¾	⅞	1¼	1¾	2¼	2⅝	3¼	3¾	4¼	5	6

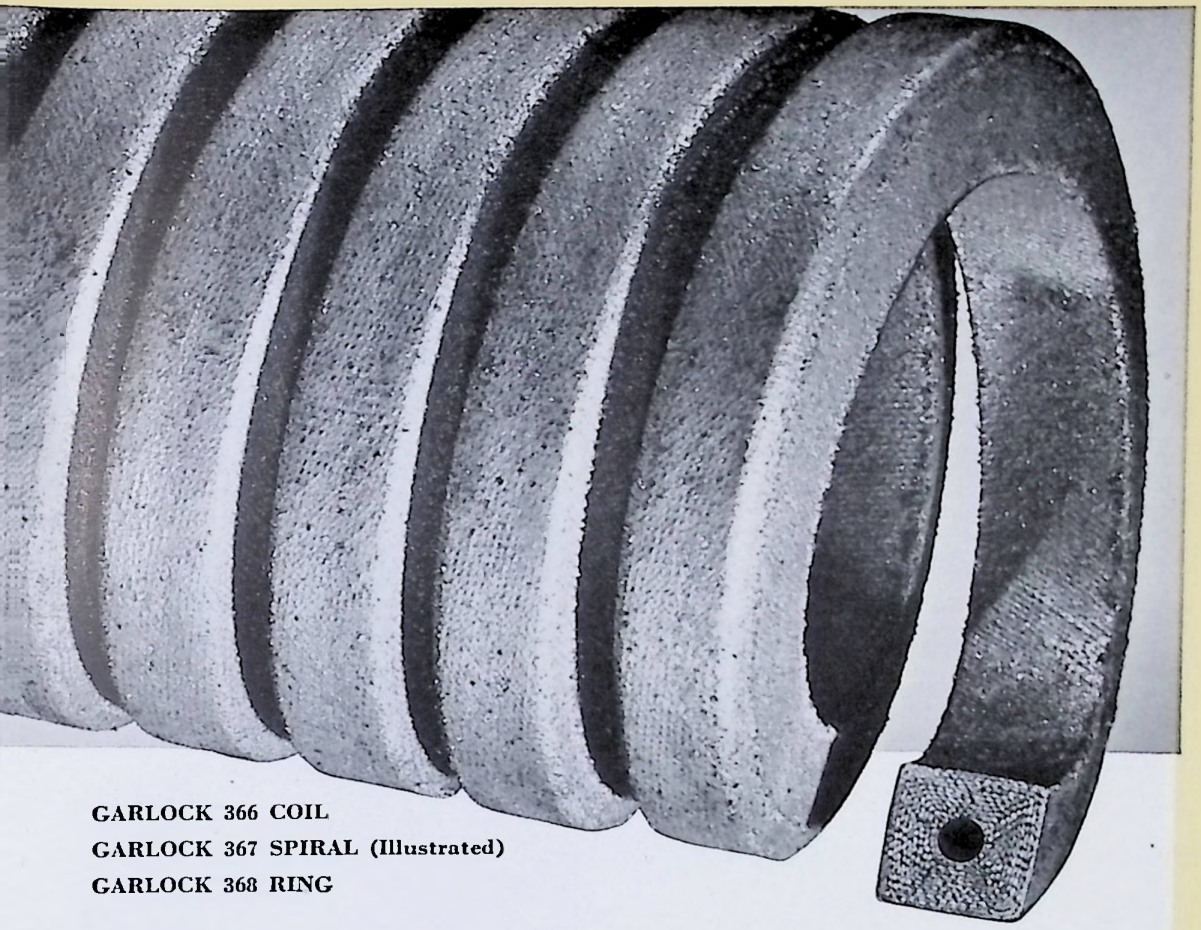


GARLOCK 253 COIL
GARLOCK 254 SPIRAL (Illustrated)
GARLOCK 255 RING

The round cross-section of this material allows for reasonable expansion of the packing without seizing the rod or binding.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 47 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/47

"O" Center Packing



GARLOCK 366 COIL
GARLOCK 367 SPIRAL (Illustrated)
GARLOCK 368 RING

FOR...

Hot or cold water and low pressure steam.

ON...

Steam hammer pistons; plungers of outside-packed pumps; elevator plungers; and piston rods of steam engines.

Construction—Garlock "O" Center Packing is constructed of a special cotton duck, frictioned with a Garlock rubber compound and formed with a round, hollow center. The material is molded square in cross-section, treated with a modified glycerol lubricant and externally graphited.

Forms—Garlock 368 Rings are regularly furnished with bevel-cut joint and are supplied to specified rod and stuffing box dimensions.

Garlock 366 Coil and Garlock 367 Spiral are furnished in standard 12½ foot lengths and in all packing sizes from ¼" to 1½" advancing by sixteenths. Standard packages for sizes up to 1" are shown below.

The hollow center in this packing allows for expansion and compensates for lateral rod motion or weave.

GARLOCK 366 Coil

Packing Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	6	4	4	4	4	3	3	2	2	1	1	1	1
Feet per box—approx.	75	50	50	50	50	37½	37½	25	25	12½	12½	12½	12½
Pounds per box—approx.	2¼	2¾	3¾	5	6	6	7⅞	6½	7½	4¼	4¾	5½	6½

GARLOCK 367 Spiral

Packing Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Spirals per box	2	1	1	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	25	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½
Pounds per box—approx.	¾	¾	1	1¼	1½	2	2⅝	3¼	3¾	4¼	4¾	5½	6½

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 48 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/48

Special Hydraulic Packing

FOR...

Hot or cold water.

ON...

Pistons or plungers of inside packed pumps.

Also used as anti-extrusion end rings in combination with other packings on rod packing installations.

Construction—Garlock Special Hydraulic Packing is constructed of plies of fine, cotton fabric treated with a special Garlock rubber compound and finished with muslin top and bottom covers. The material is unlubricated and ungraphited.

Regular cure, which is suitable for most applications is supplied unless otherwise specified. For some hot water services, however, rock-hard cure is desirable and will be furnished if specified.

Forms—Garlock 261 Rings are furnished in specified inside and outside diameters and are regularly supplied with step-cut joint but are also available with bevel-cut or butt joint. If solid rings are required specify Garlock 260.

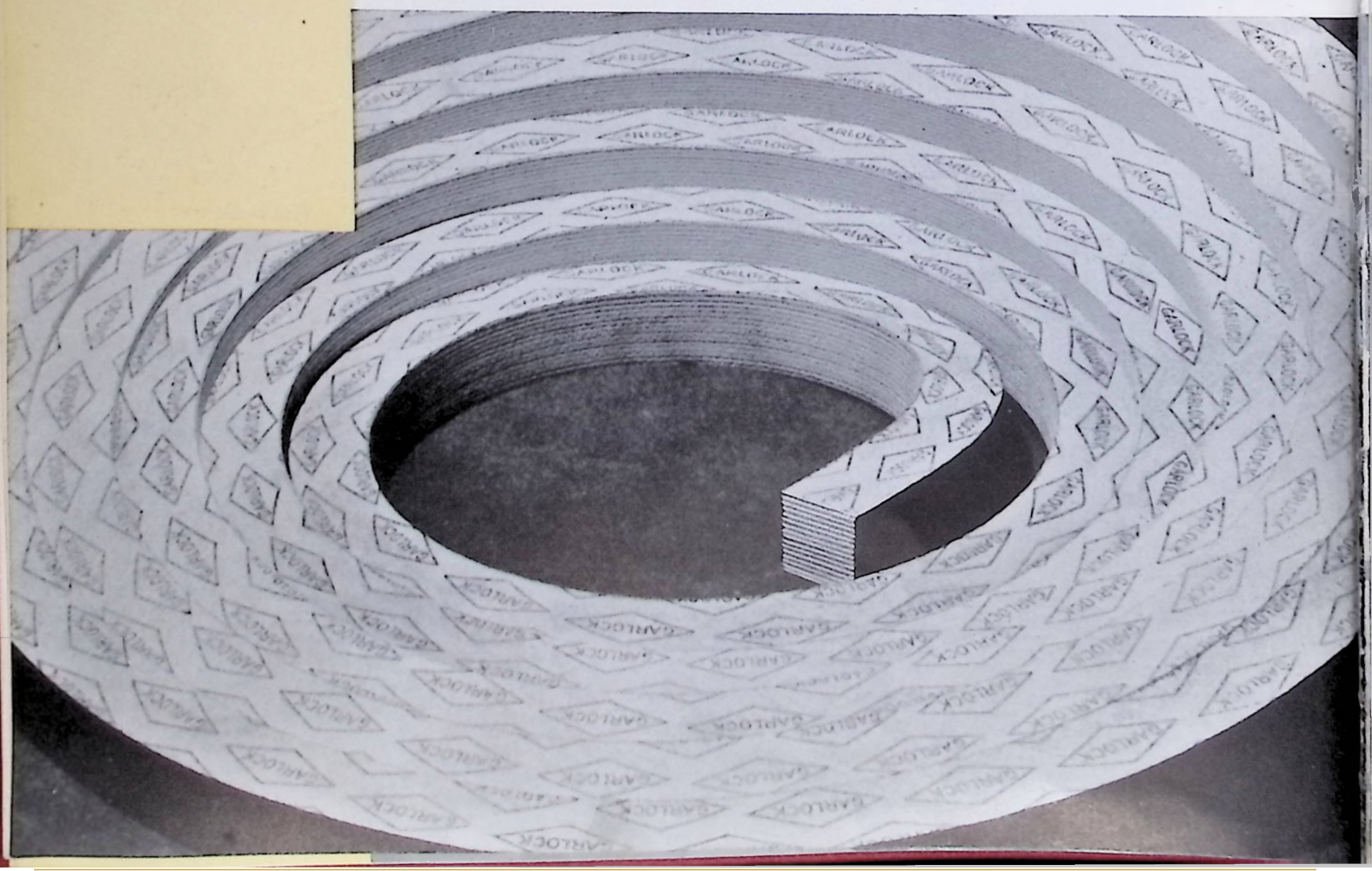
Garlock 262 Coil is furnished in standard 15-foot lengths, square or rectangular in cross section. Regular thicknesses are from ¼″ to 1¼″ advancing by eighths. Standard packing sizes are from ⅛″ to 1¼″ advancing by sixteenths. Packaging data for sizes up to 1″ are shown below.

GARLOCK 262 Coil

Packing Size	⅛	3/16	¼	5/16	⅜	7/16	½	9/16	⅝	11/16	¾	13/16	⅞	15/16	1″
Coils per box	8	4	4	3	3	2	2	2	2	2	2	1	1	1	1
Feet per box—approx.	120	60	60	45	45	30	30	30	30	30	30	15	15	15	15
Pounds per box—approx.	2½	2	2¾	3⅝	4½	4⅝	5⅜	7½	8¼	11¼	12	7¼	8	9¾	10½

GARLOCK 260 RING (Solid) **GARLOCK 261 RING**

GARLOCK 262 COIL (Illustrated)



Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/49

Regular Hydraulic Packing

Construction—Garlock 33 Hydraulic Coil Packing is constructed of plies of lightweight cotton duck treated with a special Garlock rubber compound and finished with duck covers. It is unlubricated and ungraphited.

The material is available either with regular cure which is suitable for most applications, or with rock-hard cure which is desired for some hot water installations.

Form—Garlock 33 is regularly furnished in coil form only, approximately square in cross-section. Standard length of coil is 15 feet and standard thicknesses are from ¼" to 1¼" advancing by eighths. Packing sizes are from ⅛" to 1¼" advancing by sixteenths. Packaging data on sizes up to 1" are shown below.

FOR...

Hot or cold water.

ON...

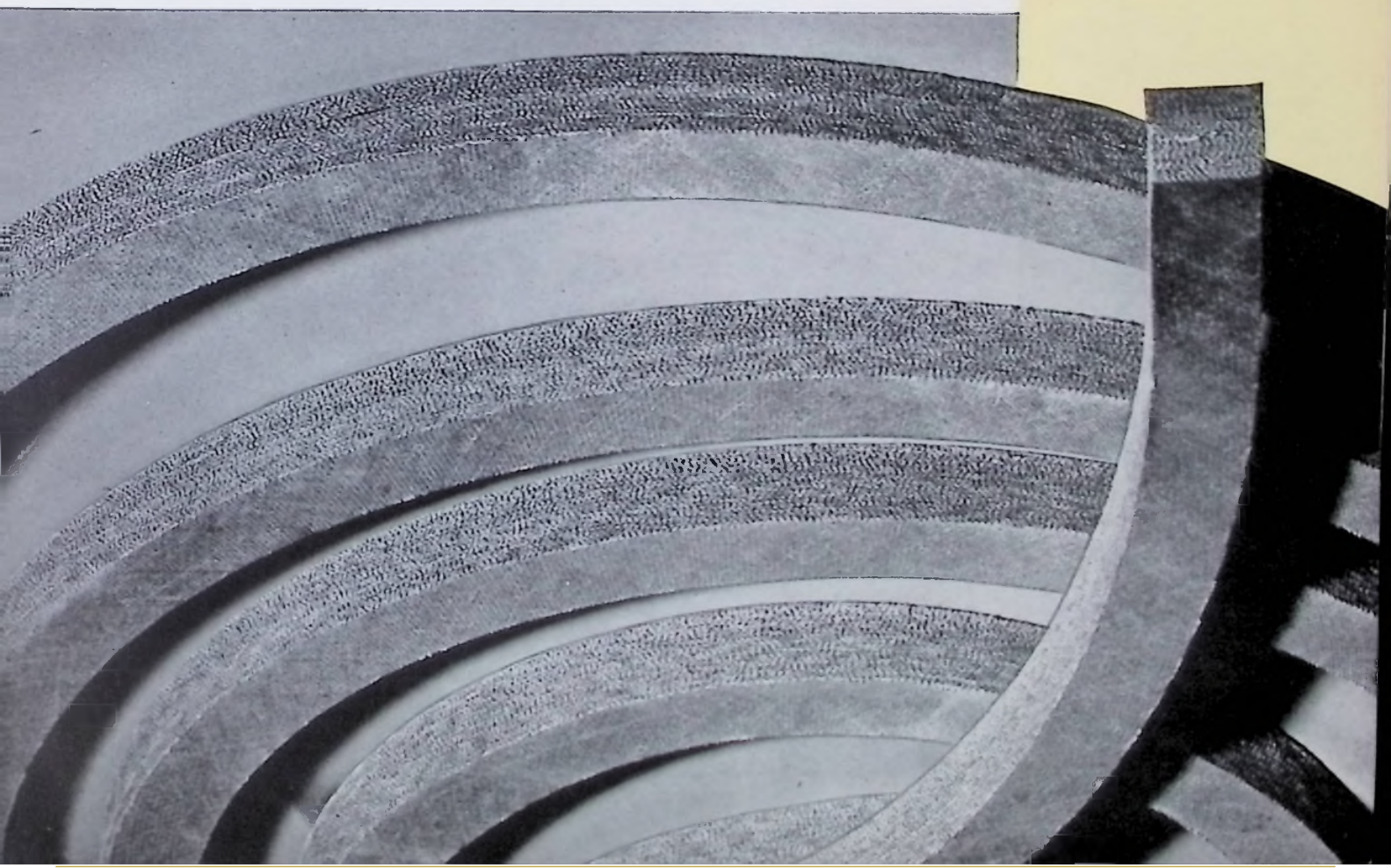
Pistons or plungers of inside packed pumps.

A good hydraulic packing.

GARLOCK 33 Coil

Packing Size	⅛	5/32	¼	7/32	⅜	9/32	5/16	11/32	⅜	13/32	7/16	15/32	½	9/16	1"
Coils per box	8	4	4	3	3	2	2	2	2	2	2	1	1	1	1
Feet per box—approx.	120	60	60	45	45	30	30	30	30	30	30	15	15	15	15
Pounds per box—approx.	2	1¼	1½	2¾	3	2¾	3⅜	4¼	5	6¾	7½	4½	5¼	7¼	8

GARLOCK 33 COIL



Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/50

Hydraulic Packings

FOR...

Cold water.

ON...

Pistons or plungers of inside packed pumps.

FOR...

Hot or cold water.

ON...

Plungers of outside-packed pumps, elevators, accumulators and on other heavy hydraulic services. Frequently used as an end ring in combination with flax rings.

GARLOCK 38 COIL

Construction—Garlock 38 Coil is constructed of plies of lightweight cotton duck treated with a Garlock rubber compound and finished with duck top and bottom covers. It is unlubricated and ungraphited.
Forms—Garlock 38 Hydraulic Packing is regularly furnished in coil form only. Coils are 15-feet long and are approximately square in cross section.

Standard thicknesses are from 1/4" to 1 1/4" advancing by eighths; standard packing sizes are from 1/8" to 1 1/4" advancing by sixteenths. Packaging data on sizes up to 1" are shown below.

GARLOCK 7636 COIL

Construction—Garlock 7636 Coil is constructed of plies of heavy cotton duck treated with a Garlock rubber compound and finished with duck top and bottom covers. It is unlubricated and ungraphited.
Forms—Garlock 7636 Hydraulic Packing is regularly furnished in coil form only. Standard coils are 15-feet long and are approximately square in cross section. Standard thicknesses are from 1/4" to 1 1/4" advancing by eighths; standard packing sizes are from 1/4" to 1 1/4" advancing by sixteenths. Packaging data on sizes up to 1" are shown below.

GARLOCK 38 Coil

Packing Size	1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32	1"
Coils per box	8	4	4	3	3	2	2	2	2	2	2	1	1	1	1
Feet per box—approx.	120	60	60	45	45	30	30	30	30	30	30	15	15	15	15
Pounds per box—approx.	2	1 1/4	1 1/2	2 3/8	3 1/8	2 3/8	3 1/4	4 1/2	5 1/4	7	7 3/4	4 3/4	5 1/2	7 1/2	8 1/4

GARLOCK 7636 Coil

Packing Size	1/4	7/32	3/16	5/32	1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32	1"
Coils per box	4	3	3	2	2	2	2	2	2	1	1	1	1
Feet per box—approx.	60	45	45	30	30	30	30	30	30	15	15	15	15
Pounds per box—approx.	1 1/2	2 1/4	3	2 1/4	3	4 1/4	4 3/4	6	6 1/2	4 1/4	4 1/2	5 1/2	5 3/4

Rubber Packing

Construction—Garlock 94 Coil and Garlock 95 Rings are medium soft rubber packings made from a special Garlock rubber compound. The material has good aging qualities and is tough and resilient.
Forms—Garlock 95 Rings are furnished to any specified rod and stuffing box dimensions. Rings are supplied either solid or cut open as specified.

Garlock 94 Coil is regularly supplied square in cross-section and in any size from 1/8" to 2" advancing by sixteenths. Can also be supplied in round or rectangular cross section. Standard coil is 12 1/2 feet long but can be produced in continuous lengths. Packaging data on sizes up to 1" are shown below.

GARLOCK 94 Coil

Packing Size	1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32	1"
Coils per box	6	6	6	4	4	4	4	3	3	2	2	1	1	1	1
Feet per box—approx.	75	75	75	50	50	50	50	37 1/2	37 1/2	25	25	12 1/2	12 1/2	12 1/2	12 1/2
Pounds per box—approx.	1 1/8	1 3/4	2 5/8	2 5/8	3 3/8	5	7	6 1/2	8 1/4	6 3/4	8 1/4	4 3/4	5 1/2	6 1/4	7

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 51 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/51



FOR...

Hot or cold water, aqueous solutions and ammonia gas.

ON...

Reciprocating rods of pumps or compressors as a wiper ring and on rotary or centrifugal pump shafts to exclude dirt. Generally used in combination with other styles of packing.

Used in the Marine trade as a porthole rubber.

GARLOCK 94 COIL
(Illustrated)
GARLOCK 95 RING

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 52 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/52

FLAX, JUTE,



Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/53

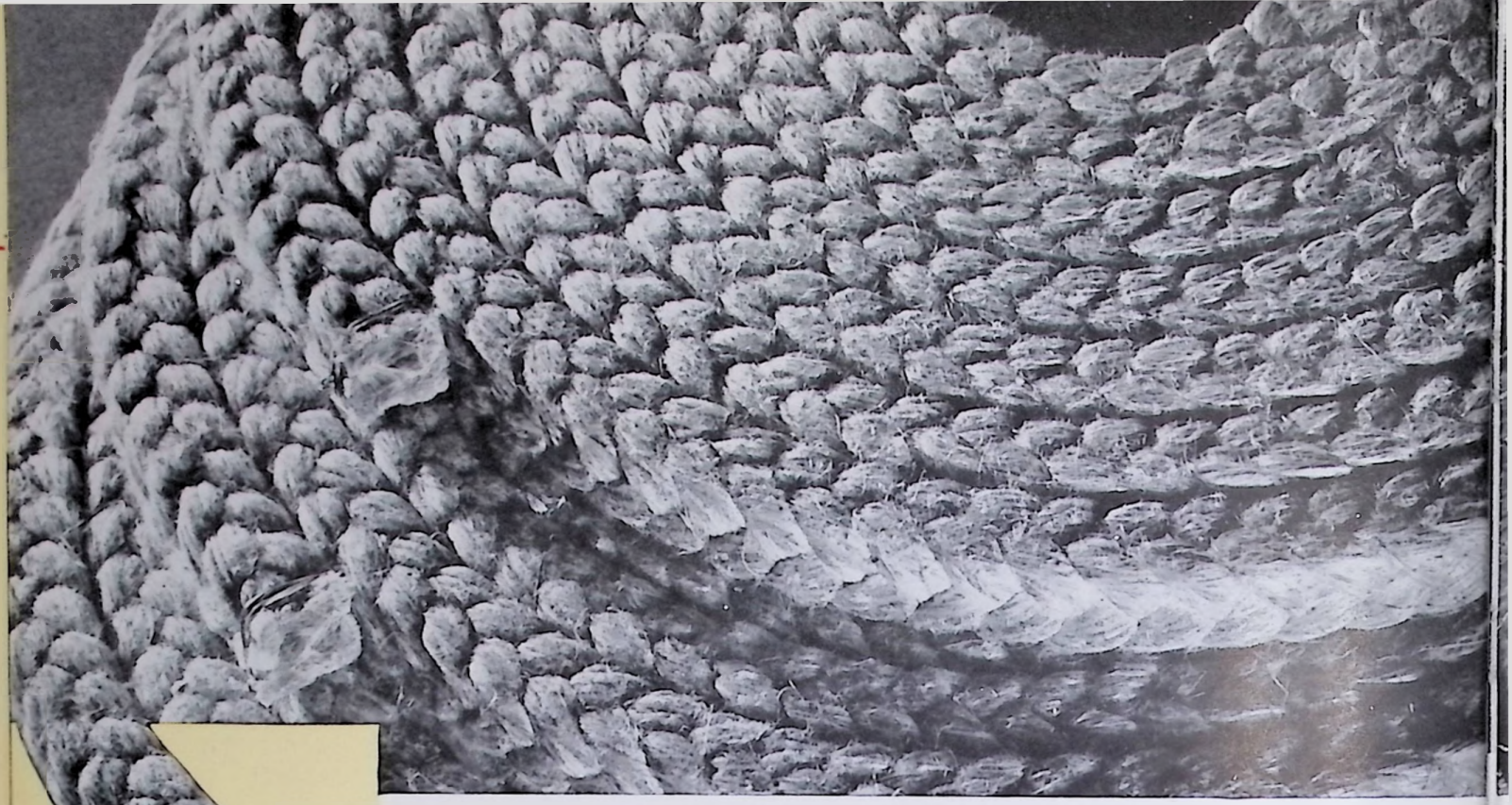
COTTON, and RAYON PACKINGS

	PAGE
Hard Braided Flax—Highest Grade (*cold water*)	54
Medium Braided Flax—Highest Grade (*cold water*)	54
Very Soft Braided Flax—Highest Grade (*cold water*)	54
Graphited Braided Flax—Highest Grade (*cold water*)	54
Medium Braided WPH Flax—Highest Grade (*hydraulic*)	55
Soft Braided WPH Flax—Highest Grade (*hydraulic*)	55
Very Soft Braided WPH Flax—Highest Grade (*hydraulic*)	55
High Pressure Braided Flax—Highest Grade (*hydraulic*)	56
Hard Braided Flax—High Grade (*cold water*)	57
Medium Braided Flax—High Grade (*cold water*)	57
Very Soft Braided Flax—High Grade (*cold water*)	57
Graphited Braided Flax—High Grade (*cold water*)	57
Hard Braided Jute (*cold water*)	58
Medium Braided Jute (*cold water*)	58
Soft Braided Jute (*cold water*)	58
Graphited Braided Jute (*cold water*)	58
Soft Braided Flax and Jute (*cold water*)	59
Medium Braided Flax and Jute (*cold water*)	59
Graphited Braided Flax and Jute (*cold water*)	59
Rubber Back Flax (*cold water*)	60
Braided Cotton (*cold water*)	61
Braided Rayon (*hydraulic*)	61
Braided Rayon (*cold water*)	61



This index is for quick reference and indicates only the general type of each product and the service on which it is most commonly used. For complete information concerning any product please consult the catalog page indicated.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 54 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/54



GARLOCK 25 COIL (Hard)
GARLOCK 26 COIL (Regular)
GARLOCK 27 COIL (Very Soft)
GARLOCK 36 COIL (Graphited)

Gold Brand Flax Packings

FOR...

Cold water and hydraulic service at medium or low pressures.

ON...

Rods or outside packed plungers of reciprocating pumps; hydraulic equipment; shafts of centrifugal and rotary pumps; stern glands of ships; and valve stems.

Construction—Gold Brand Flax Packing is braided from the highest grade, long-fibre imported flax roving, free from tow and short fibres.

Garlock 25 is treated with a modified paraffine lubricant and is relatively hard.

Garlock 26 is treated with a blended paraffine and marine fat lubricant and is of medium hardness.

Garlock 27 is treated with a blended paraffine and marine fat lubricant and is very soft.

Garlock 36 is treated with a modified marine fat lubricant and graphite.

Forms—Garlock 25, 26, 27 and 36 Rings are supplied with butt or square-cut joint and in any specified rod and stuffing box sizes.

Coil forms of these materials are approximately square in cross-section and are regularly produced in all sizes from 1/8" to 2" advancing by sixteenths.

Garlock 25, 26, 27 and 36 Coil is available either in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 25, 26 or 27 Coil

Packing Size	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	115†	50†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.			4 1/4	5	8 1/2	6 3/4	8	9	10 1/4	10 3/4	12	8 1/4	8 3/4	9 1/2	9 3/4

GARLOCK 36 Coil

Packing Size	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	105†	45†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.			4 1/2	5 1/4	9	7 1/4	8 1/2	9 1/2	10 3/4	11 1/4	12 1/2	8 3/4	9 1/4	10	10 1/4

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 55 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/55



GARLOCK 90 COIL GARLOCK 92 SPIRAL
GARLOCK 99 RING

Waterproof Hydraulic Flax Packings

Construction—This material is braided from the longest fibre, imported flax roving and is free from tow and short fibres.

It is thoroughly impregnated with a modified marine fat and graphite lubricant.

In addition to the regular braid this material is also produced in soft and very soft densities. If soft density is desired add the letter "S" to the style number, thus: 90S, 92S or 99S; for very soft density specify "VS."

Forms—Garlock 99 Rings are supplied with square-cut or butt joint, to specified rod and stuffing box dimensions.

Garlock 90 Coil is approximately square in cross-section and is regularly produced in all sizes from 1/8" to 2" advancing by sixteenths. It is available in standard box quantities, as shown in the table below, or in continuous lengths on reels.

Garlock 92 Spiral is packaged as shown in the table below.

GARLOCK 90, 90S or 90VS Coil

Packing Size	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	105†	45†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.			4½	5¼	9	7¼	8½	9½	10¾	11¼	12½	8¾	9¼	10	10¼

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

GARLOCK 92, 92S or 92VS Spiral

Packing Size	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Spirals per box	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	96	60	28	13	12	11½	11	9½	10¾	10	9	9	8½	9½	9
Pounds per box—approx.	1	1¼	1	⅝	⅞	1⅜	1⅝	1½	2¼	2½	2⅝	3	3¼	4¼	4½

FOR...

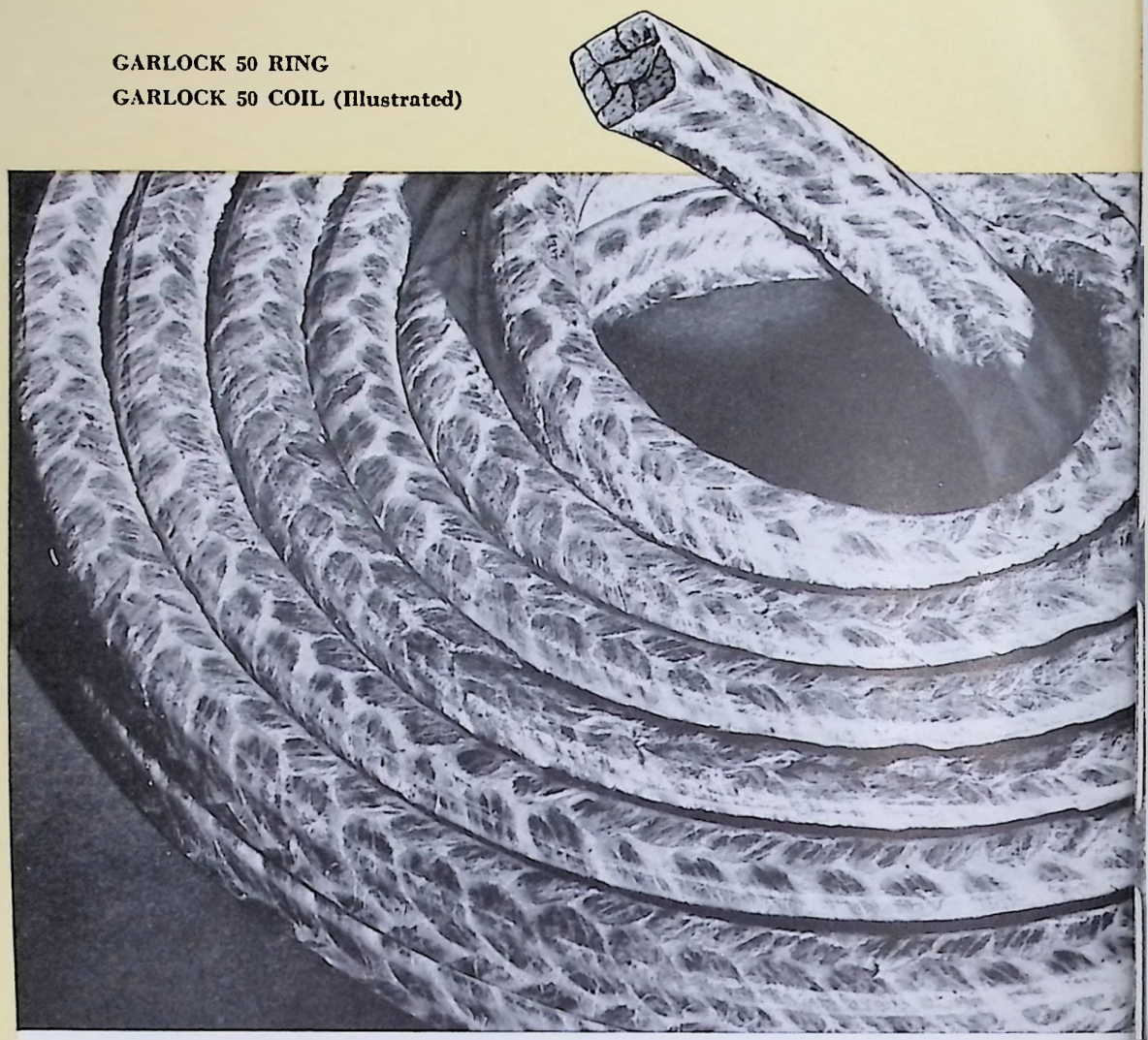
Heavy hydraulic service against cold water.

ON...

Plungers or rods of elevators; accumulators; hydraulic presses; rams; outside packed pumps; and other hydraulic equipment.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 56 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/56

GARLOCK 50 RING
GARLOCK 50 COIL (Illustrated)



FOR...

Heavy hydraulic and high pressure, cold water service.

ON...

Rams, plungers or rods of accumulators, hydraulic presses, elevators or outside packed pumps.

This material does not discolor liquids and, therefore, is particularly suitable for use in food plants and paper mills.

High Pressure Flax Packing

Construction—Garlock 50 High Pressure Flax is braided from the longest fibre, imported flax roving and is free from tow and short fibres. It is thoroughly impregnated with a special modified, marine fat lubricant.

Forms—Garlock 50 Rings are supplied with square-cut or butt joint and in any specified rod and stuffing box sizes.

Garlock 50 Coil is approximately square in cross-section and is regularly produced in all sizes from 1/8" to 2" advancing by sixteenths.

It is available either in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 50 Coil

Packing Size	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	105†	45†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.			4 1/2	5 1/4	9	7 1/4	8 1/2	9 1/2	10 3/4	11 1/4	12 1/2	8 3/4	9 1/4	10	10 1/4

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 57 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/57

Silver Brand Flax Packings



Construction—Silver Brand Flax Packing is braided from an excellent grade of long-fibre flax roving.

Garlock 30 is treated with a modified paraffine lubricant and is relatively hard.

Garlock 31 is treated with a blended paraffine and marine fat lubricant and is of medium hardness.

Garlock 32 is treated with a blended paraffine and marine fat lubricant and is very soft.

Garlock 131 is treated with a modified marine fat lubricant and graphite.

Forms—Garlock 30, 31, 32 and 131 Rings are supplied with square-cut or butt joint and in any specified rod and stuffing box sizes.

Coil forms of these materials are approximately square in cross-section and are regularly produced in all sizes from 1/8" to 2" advancing by sixteenths.

Garlock 30, 31, 32 and 131 Coil is available in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 30, 31 or 32 Coil

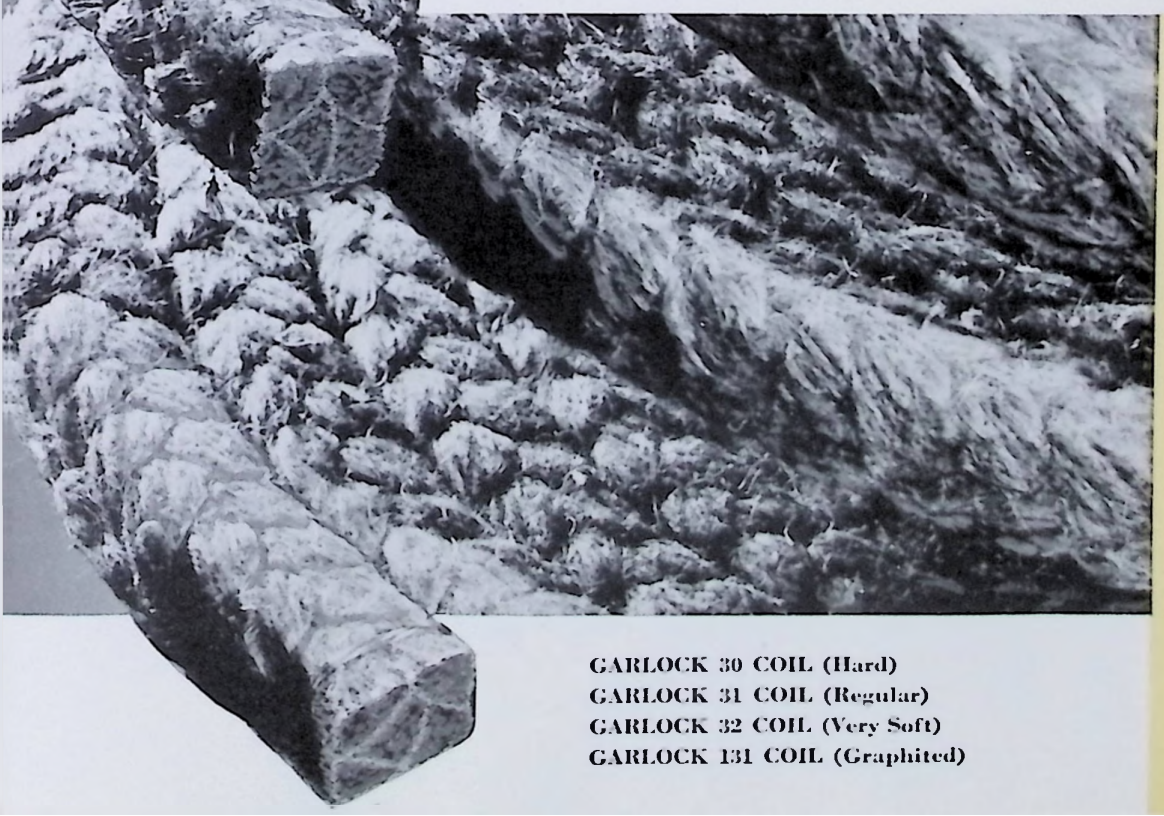
Packing Size	1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	3	1	1	1	1	1	1	1	1	1
Feet per box—approx.	115†	50†	120	100	116	72	66	60	51	45	42	26	24	22	20						
Pounds per box—approx.			4 1/4	5	8 1/2	6 3/4	8	9	10 1/4	10 3/4	12	8 1/4	8 3/4	9 1/2	9 3/4						

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

GARLOCK 131 Coil

Packing Size	1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	3	1	1	1	1	1	1	1	1	1
Feet per box—approx.	105†	45†	120	100	116	72	66	60	51	45	42	26	24	22	20						
Pounds per box—approx.			4 1/2	5 1/4	9	7 1/4	8 1/2	9 1/2	10 3/4	11 1/4	12 1/2	8 3/4	9 1/4	10	10 1/4						

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.



GARLOCK 30 COIL (Hard)
GARLOCK 31 COIL (Regular)
GARLOCK 32 COIL (Very Soft)
GARLOCK 131 COIL (Graphited)

FOR...

Cold water service at medium or low pressures.

ON...

Rods or outside packed plungers of reciprocating pumps; hydraulic equipment; shafts of centrifugal and rotary pumps; stern glands of ships; and valve stems.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 58 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/58

Lake Brand Jute Packing

FOR...

Cold water service at medium or low pressures.

ON...

Rods and outside packed plungers of reciprocating pumps; stern glands of ships; and valve stems.

Construction—Garlock Lake Brand Jute Packings are braided from high grade jute fibre and are free from short fibres.

Garlock 34 is treated with paraffin and is a hard material.

Garlock 35 is treated with a mineral oil, paraffin and marine fat lubricant and is of medium hardness.

Garlock 52 is treated with a petrolatum lubricant and receives a surface coating of graphite.

Garlock 535 is treated with a mineral oil, paraffin and marine fat lubricant and is a soft material.

Forms—Garlock 34, 35, 52 and 535 Rings are supplied with a square-cut or butt joint and in specified rod and stuffing box sizes.

Coil forms of these materials are approximately square in cross-section and are regularly manufactured in all sizes from 1/8" to 2" advancing by sixteenths.

These materials are available either in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 34 and 35 Coil

Packing Size	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	120†	55†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.			4	4¾	8	6½	7½	8½	9¾	10¼	11½	7¾	8¼	9	9¼

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

GARLOCK 52 Coil

Packing Size	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	105†	45†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.			4½	5¼	9	7¼	8½	9½	10¾	11¼	12½	8¾	9¼	10	10¼

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

GARLOCK 535 Coil

Packing Size	1/8	3/16	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	125†	60†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.			3¾	4¼	7½	6	7	8	9	9½	10½	7¼	7¾	8¼	8½

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.



GARLOCK 34 COIL—Hard
GARLOCK 35 COIL—Regular
GARLOCK 52 COIL—Graphited
GARLOCK 535 COIL—Soft

Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/59



GARLOCK 42 COIL—Soft GARLOCK 43 COIL—Regular
GARLOCK 53 COIL—Graphited

Ocean Brand Blended Flax Packing



Construction—Garlock Ocean Brand Flax is constructed of a good grade of flax roving, braided with jute corners and centers.

Garlock 42 is thoroughly impregnated and heavily treated with a mineral oil, paraffin and marine fat lubricant and is a soft packing.

Garlock 43 is treated with a mineral oil, paraffin and marine fat lubricant and is of medium hardness.

Garlock 53 is treated with a petrolatum lubricant and is surface graphited.

Forms—Garlock 42, 43 and 53 Rings are supplied with square-cut or butt joint, and in any specified rod and stuffing box sizes.

Coil forms of Garlock 42, 43 and 53 are approximately square in cross-section and are regularly manufactured in all sizes from 1/8" to 2" advancing by sixteenths.

These materials are available either in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 42 or 43 Coil

Packing Size	1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	115†	50†	120	100	116	72	66	60	51	45	42	26	24	22	20	18	16	15	14	13	12
Pounds per box—approx.			4 1/4	5	8 1/2	6 3/4	8	9	10 1/4	10 3/4	12	8 1/4	8 3/4	9 1/2	9 3/4	10	10 1/2	11	11 1/2	12	12 1/2

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

GARLOCK 53 Coil

Packing Size	1/8	5/32	3/16	7/32	1/4	9/32	5/16	11/32	3/8	13/32	7/16	15/32	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	105†	45†	120	100	116	72	66	60	51	45	42	26	24	22	20	18	16	15	14	13	12
Pounds per box—approx.			4 1/2	5 1/4	9	7 1/4	8 1/2	9 1/2	10 3/4	11 1/4	12 1/2	8 3/4	9 1/4	10	10 1/4	10 3/4	11 1/4	11 3/4	12 1/4	12 3/4	13 1/4

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

FOR...

Cold water service at medium or low pressures.

ON...

Rods or outside packed plungers of reciprocating pumps; shafts of centrifugal and rotary pumps; stern glands of ships; and valve stems.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 60 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/60



GARLOCK 83 Coil—Lubricated
GARLOCK 183 Ring—Lubricated
GARLOCK 93 Coil—Dry (Illustrated)
GARLOCK 193 Ring—Dry

Rubber Back Flax Packings

FOR...

Cold water at high pressures.

ON...

Plungers or rods of elevators; accumulators; hydraulic presses; rams; outside packed pumps; and other hydraulic equipment, especially where rod weave or vibration exists.

Construction—Garlock Rubber Back Flax Packing is made of braided, long-fibre flax roving, bonded to a resilient back or cushion made of a high-grade, Garlock rubber compound.

Garlock 83 Coil and 183 Rings are treated with a modified, marine-fat lubricant and surface coated with graphite.

Garlock 93 Coil and 193 Rings are unlubricated and ungraphited.

Forms—Garlock 183 and 193 Rings are supplied with square-cut or butt joint, in specified rod and stuffing box sizes.

Garlock 83 and 93 Coil is approximately square in cross-section and is regularly manufactured in all sizes from 1/4" to 2" advancing by sixteenths. Coils are 12½ feet long. Standard packages for sizes from 1/4" to 1" are shown below.

GARLOCK 83 Coil

Packing Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	6	4	4	4	4	3	3	2	2	1	1	1	1
Feet per box—approx.	75	50	50	50	50	37½	37½	25	25	12½	12½	12½	12½
Pounds per box—approx.	2½	2½	3½	4¾	6	5½	6¾	5½	6¾	4	4¾	5½	6¼

GARLOCK 93 Coil

Packing Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	6	4	4	4	4	3	3	2	2	1	1	1	1
Feet per box—approx.	75	50	50	50	50	37½	37½	25	25	12½	12½	12½	12½
Pounds per box—approx.	2	2	2¾	4	5	4½	5½	4½	5½	3¼	3½	4	4¾

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 61 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/61

Cotton and Rayon Packings

GARLOCK 66 BRAIDED COTTON

Construction—Garlock 66 is braided of high-grade cotton yarn. It is thoroughly impregnated with a petrolatum lubricant and is externally graphited.

Forms—Garlock 66 Rings are supplied with square-cut or butt joint, in specified rod and stuffing box sizes.

Garlock 66 Coil is approximately square in cross-section and is regularly produced in all sizes from 1/8" to 2" advancing by sixteenths. It is available either in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 66 Coil

Packing Size	3/16	7/32	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	140†	50†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.			4	4 3/4	8	7 1/4	8 1/2	9 1/2	10 1/4	10 3/4	12	9	9 1/2	9 3/4	10

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

FOR...

Hot or cold water, alcohol or dilute aqueous solutions.

ON...

Rods and shafts of reciprocating, centrifugal or rotary pumps.

GARLOCK 57 BRAIDED RAYON

Construction—Garlock 57 is braided from rayon tow and is thoroughly impregnated with a modified marine fat and graphite lubricant.

Forms—Garlock 57 Rings are supplied with square-cut or butt joint, in specified rod and stuffing box sizes.

Garlock 57 Coil is approximately square in cross-section and is regularly produced in all sizes from 3/16" to 2" advancing by sixteenths. It is available either in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 57 Coil

Packing Size	7/32	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	45†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.		4 1/2	5 1/4	9	7 1/4	8 1/2	9 1/2	10 3/4	11 1/4	12 1/2	8 3/4	9 1/4	10	10 1/4

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

FOR...

Heavy hydraulic service against cold water.

ON...

Plungers or rods of elevators; accumulators; hydraulic presses; rams; outside packed pumps and other hydraulic equipment.

GARLOCK 58 BRAIDED RAYON

Construction—Garlock 58 is braided from rayon tow and is thoroughly lubricated with a blended marine fat and paraffin lubricant.

Forms—Garlock 57 Rings are supplied with square-cut or butt joint, in specified rod and stuffing box sizes.

Garlock 57 Coil is approximately square in cross-section and is regularly produced in all sizes from 3/16" to 2" advancing by sixteenths.

It is available either in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 58 Coil

Packing Size	7/32	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	*	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	50†	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.		4 1/4	5	8 1/2	6 3/4	8	9	10 1/4	10 3/4	12	8 1/4	8 3/4	9 1/2	9 3/4

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

FOR...

Use against cold water and dilute aqueous solutions at medium or low pressures.

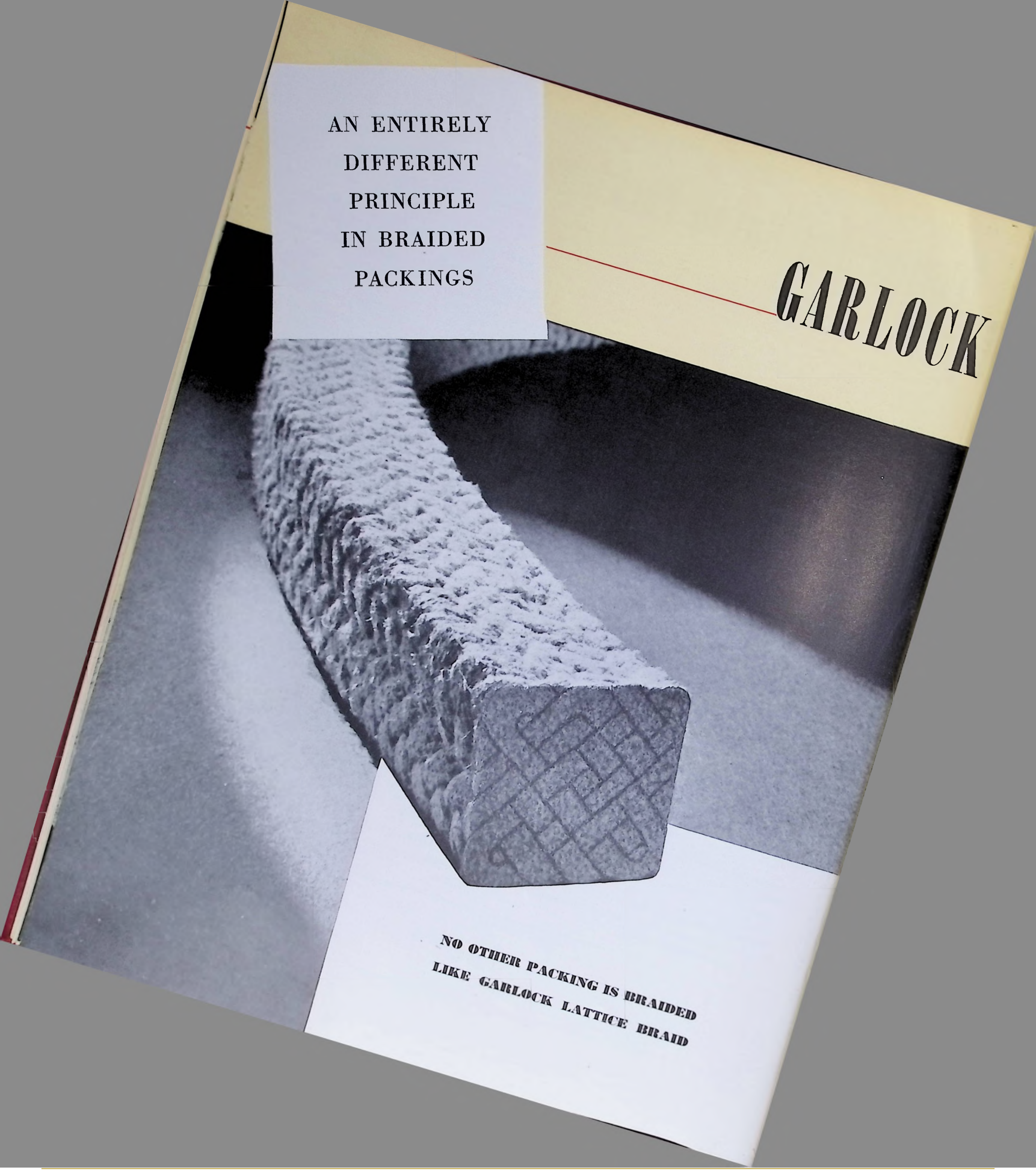
ON...

Rods or outside packed plungers of reciprocating pumps; shafts of centrifugal or rotary pumps, stern glands of ships and valve stems.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 62 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/62

AN ENTIRELY
DIFFERENT
PRINCIPLE
IN BRAIDED
PACKINGS

GARLOCK



NO OTHER PACKING IS BRAIDED
LIKE GARLOCK LATTICE BRAID

Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/63

LATTICE-BRAID PACKINGS

(PATENTED)

	PAGE
Rotary Pump Packing (*asbestos*)	67
Steam Rod Packing (*asbestos-controlled lubrication*)	67
Heavy Duty Steam Rod Packing (*asbestos with wire*)	68
Rotary Pump Packing (*asbestos*)	69
Acid Packing (*blue asbestos*)	70
Cold Water Packing (*flax*)	71
Hydraulic Packing (*WPH flax*)	72
Rotary Pump Packing (*cotton*)	73

This index is for quick reference and indicates only the general type of each product and the service on which it is most commonly used. For complete information concerning any product please consult the catalog page indicated.

Garlock Lattice-Braid Packings, made of asbestos, flax or cotton, give superior performance on many kinds of equipment and under widely diversified service conditions.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 64 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/64

An Outstanding Improvement in Braided Packing

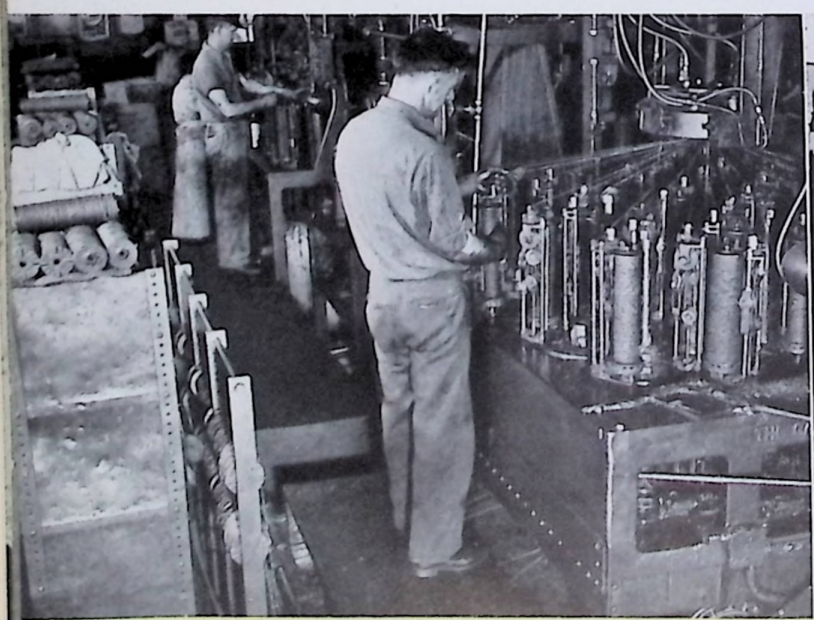
The introduction of Garlock patented Lattice-Braid Packings brought to industry an entirely new line of braided packing materials. The result of many years of experimental and development work, Garlock Lattice Braid represents a definite forward step in braided packing construction.

Lattice-Braid is distinctly different—a patented material built on an entirely new principle. The special machines which were designed and built for the manufacture of these braided materials are used exclusively for producing Garlock Lattice-Braid. These packings cannot be made on braiders of any other type and the superiority of Lattice-Braid materials is due to the distinctive construction or braiding pattern produced by these special machines, found only in the Garlock plant.

This lattice-linked construction of Garlock Lattice-Braid Packing makes each braiding strand an integral part of the whole packing structure. The difference between this and the ordinary braided packing constructions is illustrated and described on the opposite page. The exclusive features of Lattice-Braid and the resulting benefits to users of that material are outlined on page 66. Briefly summarized these are:

1. Unified Structure Giving Greater Strength—all braiding strands are strongly lattice-linked together.
2. No Disintegration of Material—regardless of wear Lattice-Braid has no loose strands.
3. Infrequent Gland Adjustment—flexibility and controlled porosity impart a semi-automatic pressure action.
4. Unusual Flexibility—large packing sizes can be formed, without distortion, into rings to fit small rods.

Garlock Lattice-Braid Packings are available in coils or rings in several types which are fully described on the succeeding pages.



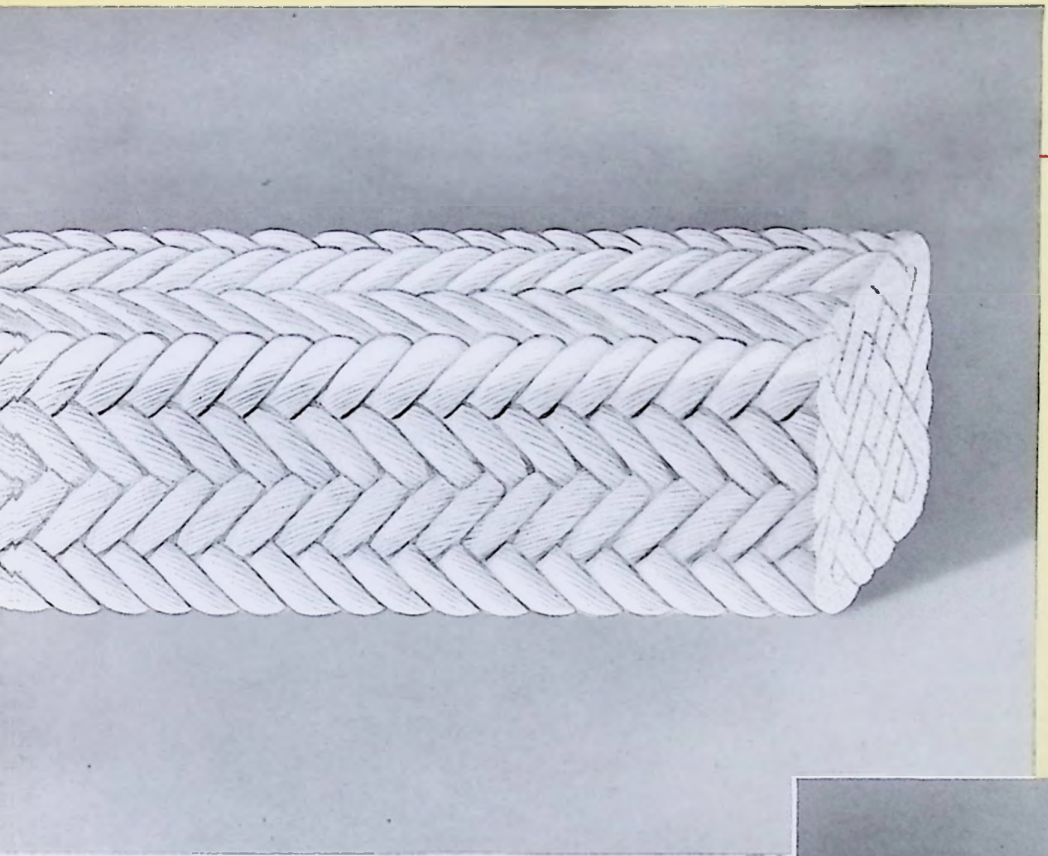
Special Braiding Machines Producing Garlock Lattice-Braid Packings



Garlock Lattice-Braid Packing is taken off the Braiding Machines on Reels

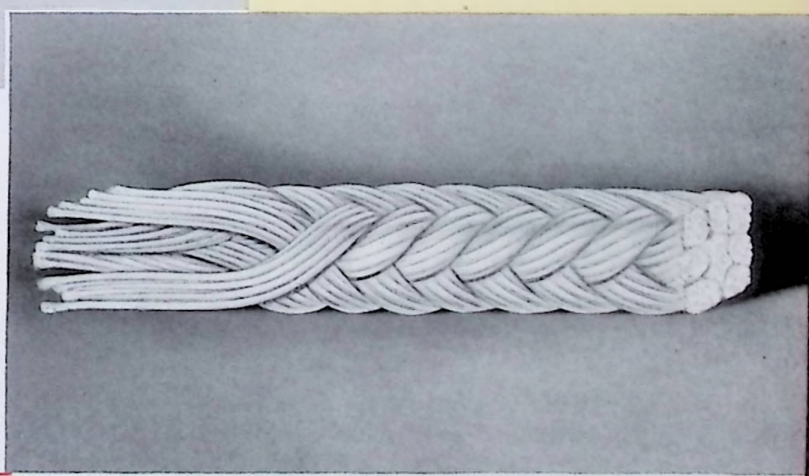
Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 65 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/65

How Garlock Lattice-Braid Packing Differs from Ordinary Braided Packing



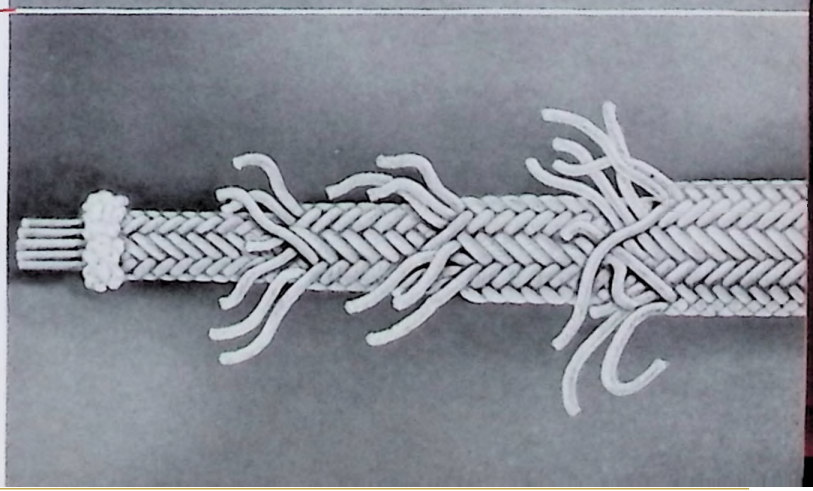
Lattice-Braid

In Garlock Lattice-Braid *every braiding strand* passes diagonally *through* the body of the packing at an angle of approximately 45°. This makes a completely unified structure. It is braided *internally* as well as externally. Every braided strand contributes to the strength of the entire mass.



Ordinary square or flax braid

In square braided packings each strand merely passes over and under other strands running in the opposite general direction. No strands pass entirely through the packing. No single strand is linked with all the other strands. There is no unified structure as in Lattice-Braid.



Ordinary round or braid-over-braid

In the braid-over-braid method (sometimes called cover-on-cover) the packing is built-up to the required size by braiding one or more covers around a center core. Each cover is entirely separate from the core and the other covers. With no structural bond the finished material is far from an integral unit.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 66 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/66

Exclusive Advantages of Lattice-Braid Packings

Longer Service

In service, all packings are subject to wear on the surface contacting the moving rod. Eventually the strands of ordinary braided packing will wear through on the working surface. When this occurs such braided packings immediately go to pieces and become worthless because the structure of the packing itself is destroyed.

With Garlock Lattice-Braid packings such disintegration cannot happen because the structural design of Lattice-Braid holds the integral strands together as a *single* unit even when the material is worn far beyond the serviceable limits of wear possible with ordinary braided packings. Lattice-Braid Packings, therefore, are more economical because they last longer.

Flexibility Prevents Internal Stresses

The braided structure of Lattice-Braid imparts a flexibility not obtainable with any other braided packing. Lattice-Braid packings of large sizes can be formed into rings around rods of small diameter without distortion of the packing. This is possible because every braiding strand in Lattice-Braid passes diagonally through the packing. These diagonally braided strands, when formed into a ring, readily compress to allow for the shortening of the face forming the inside diameter of the ring. The cross-sectional shape or size of the packing is never distorted. In a like manner the strands along the outside of the ring readily adjust themselves to this elongated face.

All this adjustment is accomplished without imposing any strain on the individual strands. When Lattice-Braid packings are formed into rings, therefore, no destructive, internal stresses are set up in the packing structure.

Controlled Porosity, Built-In

On many applications for which braided packings are most suitable, *controlled* porosity is essential for satisfactory service. This ability of a packing to absorb some of the liquid against which it is packing is a most desirable characteristic because frequently the liquid itself provides a lubricating film between the packing and the rod or shaft. The degree of porosity, however, must be controlled because, if carried to excess, leakage cannot be prevented.

Ordinary braided packings usually pass through three successive stages during their service life:

1. When first applied they do not leak but, because the packing is operating under heavy gland pressure, both the packing and the shaft may wear rapidly.
2. Next follows a period when the packing performs satisfactorily. A portion of the original lubricant has been lost and as a result the packing becomes slightly porous and absorbs some of the liquid against which it is packing.
3. The final stage in the life of ordinary braided packings is reached when, through further loss of the lubricant, the packing becomes exceedingly porous. At this stage, in order to prevent leakage, it becomes necessary to exert extra heavy gland pressure and to squeeze the packing tightly to fill the space in the stuffing box. This extreme gland pressure is bad because it not only destroys the fibre of the packing but it may result in friction and wear on the shaft.

With Garlock Lattice-Braid packings porosity is built into the structure of the packing. The amount or degree of porosity is *pre-determined* and remains in the structure throughout the life of the packing. Where high pressures are encountered the controlled porosity of Lattice-Braid is most important. Ordinary soft braided non-integrated packings depend upon a hard, lubricating treatment to make them suitable for use against high hydraulic pressures. With Lattice-Braid the integrated structure of the packing itself, regardless of the lubrication treatment, is capable of absorbing the pressure without breaking down the packing and without setting up interfacial pressure, or friction, between the packing and the rod or shaft.

Semi-Automatic Action

The controlled porosity of Lattice-Braid construction imparts to the material a semi-automatic action. This is brought about by a combination of the mechanical gland pressure on the packing and the fluid pressure confined by the packing.

The mechanical pressure is greatest on the ring next to the gland. This is reduced progressively until it reaches the last ring (in the bottom of the stuffing box) on which the mechanical pressure is the lightest. The inherent porosity of these several rings is in direct proportion to the mechanical pressure exerted on the rings. In other words the porosity of the top ring (next to the gland) is the least and the porosity of the bottom ring is the greatest.

In service the bottom ring, which has the maximum porosity, is penetrated by the fluid pressure. This ring acts somewhat as a filter pad, reducing the pressure greatly, but allowing some of it to penetrate to the next adjacent ring. This continues progressively from ring to ring, the penetration decreasing as the porosity of the ring is decreased by mechanical pressure, until it reaches the ring in the stuffing box which contacts the gland and on which the mechanical pressure is greatest. Thus, this fluid pressure causes an automatic hydraulic action on these Lattice-Braid rings. Experience has proved that when packings of the correct size have been properly fitted in the stuffing box and the gland properly adjusted, further adjustment is rarely, if ever, necessary until the life of the packing is gone and new packing is required.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 67 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/67

Lattice-Braid Asbestos Packing

GARLOCK 730 COIL AND RING

Construction—Garlock 730 Lattice Braid Packing is made from long-fibre asbestos yarn by the patented lattice-braid process.

The material is impregnated with a special blended vegetable oil, marine oil, marine fat and graphite lubricant and receives a final treatment of mineral oil and graphite.

Forms—Garlock 730 Rings are supplied with square-cut or butt joint and in specified rod and stuffing box sizes.

Garlock 730 Coil is approximately square in cross section and is regularly produced in sizes from ¼" to 1½" advancing by sixteenths. Coil form is available either in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 730 Coil													
Packing Size	¼	5/16	3/8	7/16	½	9/16	5/8	11/16	¾	13/16	7/8	15/16	1"
Coils per box	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.	5¼	6½	11½	10	12¼	13¾	14¼	15¼	16½	12	12½	12¾	13
GARLOCK 731 Coil													
Coils per box	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.	4¾	5½	10½	8¾	11¼	12	13¼	14¼	15½	11	11½	11¾	12

FOR...

Use against hot or cold water and dilute aqueous solutions at medium to high pressures.

ON...

Shafts of centrifugal and rotary pumps and on valve stems.

A relatively firm packing.

GARLOCK 731 COIL AND RING

Construction—Garlock 731 Lattice-Braid Packing is manufactured from long-fibre asbestos yarn by the patented lattice-braid process described on page 64.

This packing is impregnated with a blended vegetable oil, marine oil, marine-fat and graphite lubricant by a controlled lubrication process which removes all excess lubricant; it is externally graphited.

Forms—Garlock 731 Rings are supplied with square-cut or butt joint and in specified rod and stuffing box sizes.

Garlock 731 Coil is approximately square in cross section and is regularly produced in sizes from ¼" to 1½" advancing by sixteenths. Coil form is available either in standard box quantities as shown in the table above or in continuous lengths on reels.

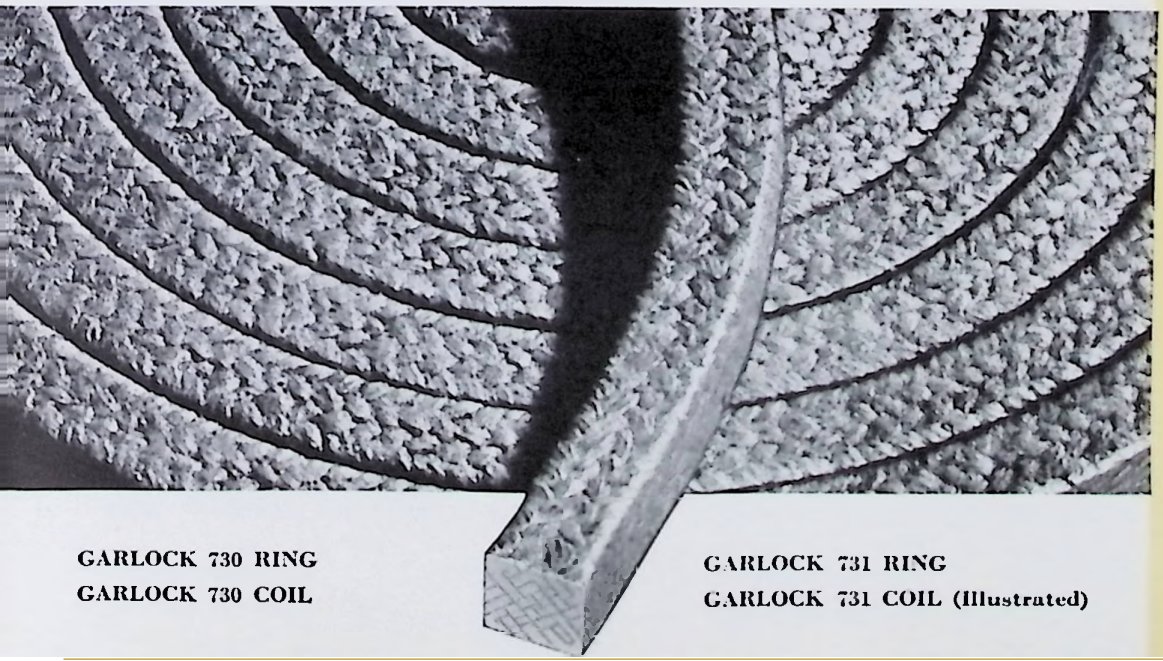
FOR...

Use against steam, gases, water and dilute aqueous solutions at temperatures up to 700° F.

ON...

Piston and valve rods of engines and pumps; expansion joints and valve stems.

Contains no excess lubrication.



GARLOCK 730 RING
GARLOCK 730 COIL

GARLOCK 731 RING
GARLOCK 731 COIL (Illustrated)

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 68 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/68



GARLOCK 732 RING GARLOCK 732 COIL (Illustrated)

Lattice-Braid Asbestos—Wire Inserted

FOR...

Heavy duty service against steam, oil, gases, water and dilute aqueous solutions at temperatures up to 700° F.

ON...

Expansion joints; piston and valve rods of engines and pumps; valve stems; and rotary shafts.

Construction—Garlock 732 Lattice-Braid Packing is manufactured from long-fibre, wire-inserted asbestos yarn by the patented lattice-braid process described on page 64. The material is reinforced with copper-wire strands braided into the packing and running diagonally in both directions from corner to corner.

This material is impregnated with a blended vegetable oil, marine oil, marine-fat and graphite lubricant by a controlled lubrication process which removes all excess lubrication. It is surface-coated with graphite.

Forms—Garlock 732 Rings are supplied with square-cut or butt joint, in specified rod and stuffing box sizes.

Garlock 732 Coil is approximately square in cross-section and is regularly produced in sizes from ¼" to 1½" advancing by sixteenths.

Coil form is available either in standard box quantities as shown in the table below or in continuous lengths on reels.

GARLOCK 732 Coil

Packing Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	2	1	1	1	1	1	1	1	1	1	1	1	1
Feet per box—approx.	50	41	39	36	30	24	22	19	17	15	15	15	15
Pounds per box—approx.	3¾	4½	8¼	9½	10½	10	10½	10	9¾	9½	11¾	12¾	11¾

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 69 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/69

Lattice-Braid Asbestos Packing

Construction—Garlock 733 Lattice-Braid Packing is manufactured from long fibre asbestos yarn by the patented lattice-braid process described on page 64.

The material is thoroughly lubricated with a mineral-fat lubricant and graphite and is surface-coated with graphite.

Garlock 733 is also available without lubrication and without graphite.

Forms—Garlock 733 Rings are supplied with square-cut or butt joint, in specified rod and stuffing box sizes.

Garlock 733 Coil is approximately square in cross section and is regularly produced in sizes from 1/4" to 1 1/2" advancing by sixteenths. Coil form is available either in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 733 Coil

Packing Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.	5	5 3/4	10 3/4	9	11 1/2	12 1/4	13 1/2	14 1/2	15 3/4	11 1/4	11 3/4	12	12 1/4

FOR...

Use against hot or cold water, alcohol and dilute aqueous solutions at medium or low pressures.

ON...

Shafts of centrifugal and rotary pumps and on valve stems.

A relatively soft packing.

GARLOCK 733 RING **GARLOCK 733 COIL (Illustrated)**



Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/70

Lattice-Braid Blue Asbestos Packing

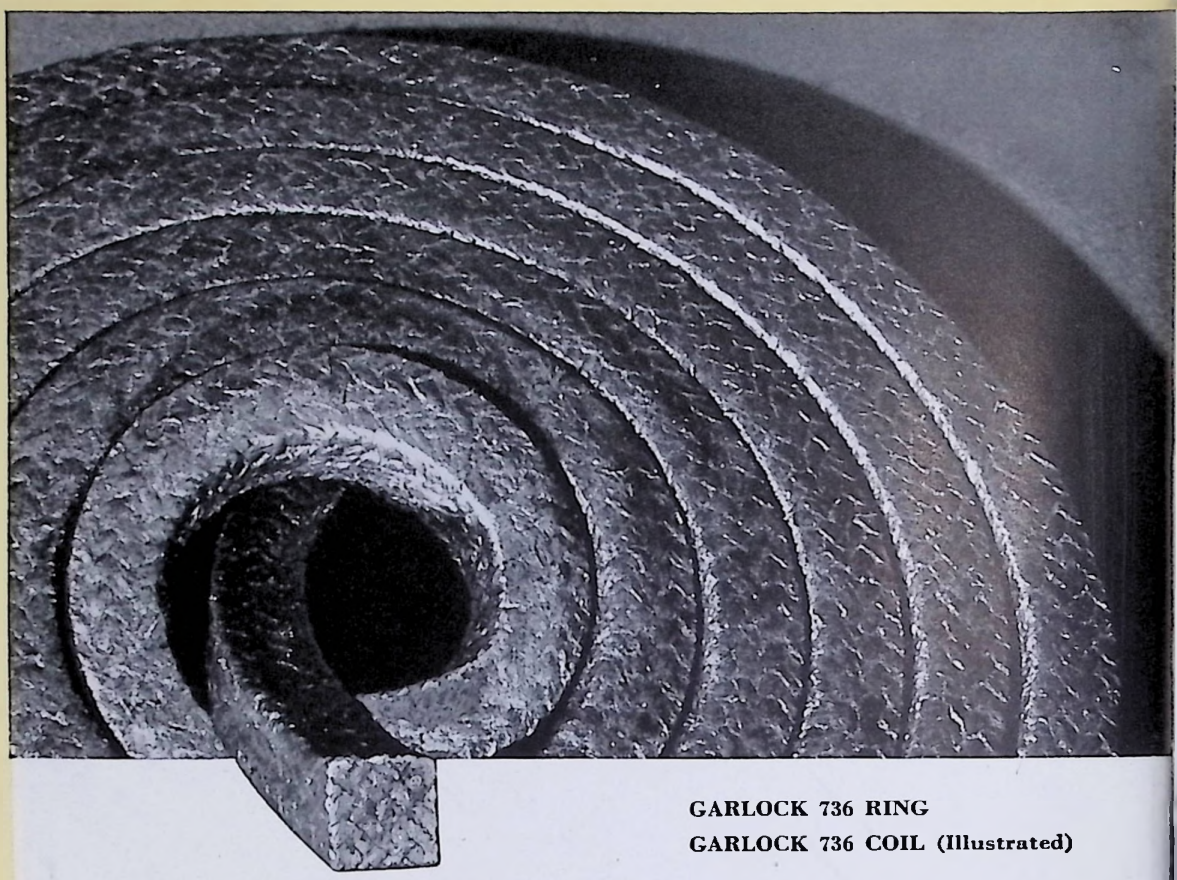
FOR...

Use against concentrated mineral acids.

ON...

Shafts of centrifugal and rotary pumps; reciprocating pump rods; and valve stems.





GARLOCK 736 RING
GARLOCK 736 COIL (Illustrated)

Construction—Garlock 736 Lattice-Braid Packing is manufactured from pure, African blue asbestos yarn by the patented lattice-braid process described on page 64.

It is thoroughly lubricated with an acid-proof lubricant and graphite and receives a final surface coating of graphite.

Forms—Garlock 736 Rings are supplied with square-cut or butt joints, in specified rod and stuffing box sizes.

Garlock 736 Coil is approximately square in cross-section and is regularly produced in sizes from $\frac{5}{16}$" to $1\frac{1}{2}$" advancing by sixteenths. Coil form is available either in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 736 COIL

Packing Size	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.	8	11½	10	11¼	12½	14¾	17	17½	12¾	13½	14½	15

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
Published by AsbestosClaims.Law
ACL Doc 21280 · Page 71 of 228
asbestosclaims.law/library/21280/71

Lattice-Braid Flax Packing

Construction—Garlock 740 Lattice-Braid Packing is manufactured from the highest grade, long-fibre imported flax roving by the patented lattice-braid process described on page 64.

The material is thoroughly treated with a blended paraffin and marine-fat lubricant.

Forms—Garlock 740 Rings are supplied with square-cut or butt joint, in specified rod and stuffing box sizes.

Garlock 740 Coil is approximately square in cross-section and is regularly produced in sizes from 1/4" to 1 1/2" advancing by sixteenths. Coil form is available either in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 740 Coil

Packing Size	1/4	5/16	3/8	7/16	1/2	9/16	5/8	11/16	3/4	13/16	7/8	15/16	1"
Coils per box	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.	5	5 3/4	9 1/2	7 1/4	8 3/4	9 3/4	10 1/2	11	12	8 3/4	9 1/4	10	10 1/2

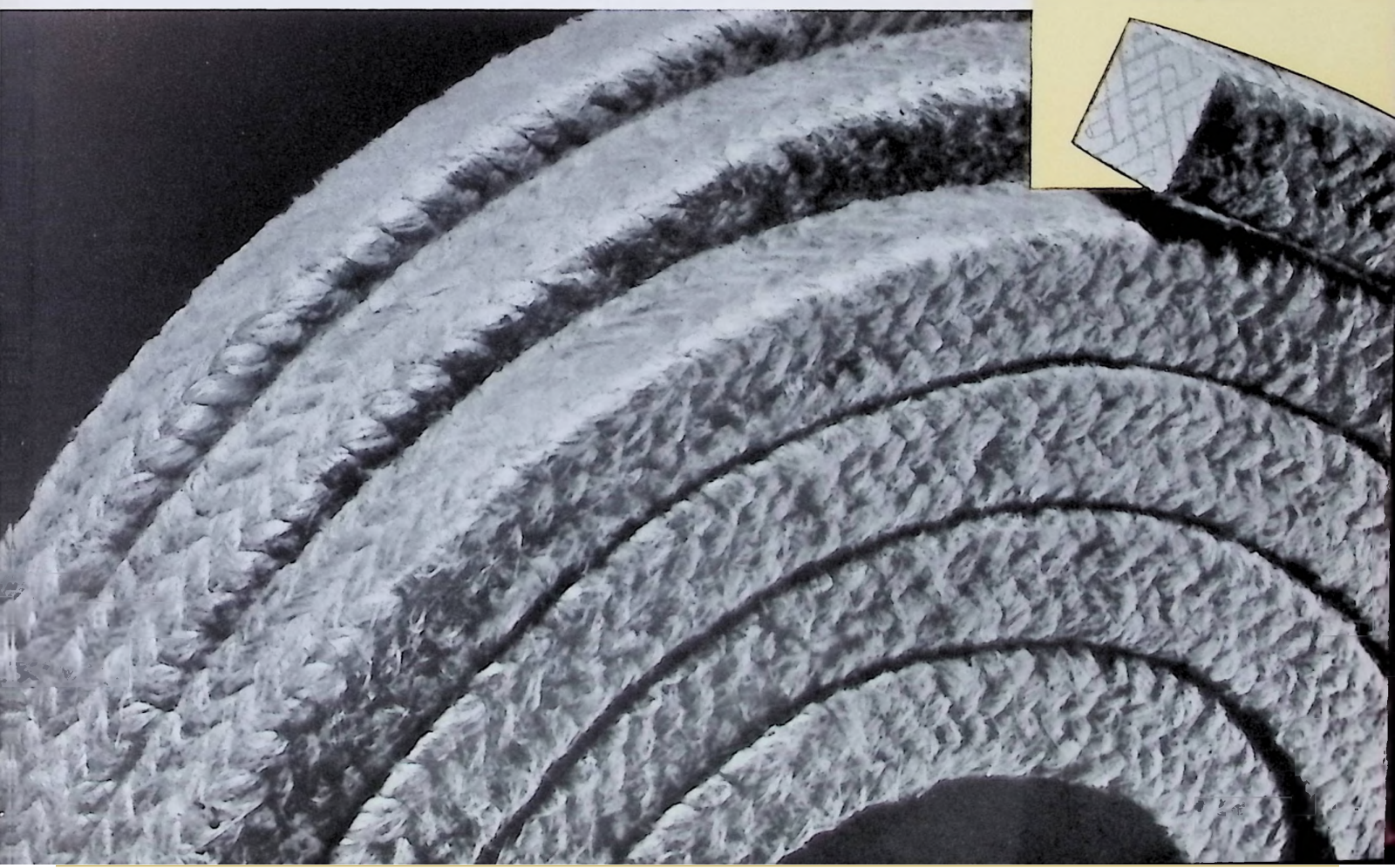
FOR...

Use against cold water and dilute aqueous solutions at medium or low pressures.

ON...

Rods or outside packed plungers of reciprocating pumps; rotary and centrifugal pump shafts; stern glands of ships; and valve stems.

GARLOCK 740 RING **GARLOCK 740 COIL (Illustrated)**



Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/72

Lattice-Braid WPH Flax Packing

FOR...

Heavy hydraulic service against cold water.

ON...

Plungers or rods of elevators; accumulators; hydraulic presses; rams; outside packed pumps; and other hydraulic equipment.

Construction—Garlock 745 Lattice-Braid Packing is manufactured from the longest-fibre, imported flax roving by the patented lattice-braid process described on page 64. It is thoroughly lubricated with a modified marine-fat lubricant and graphite.

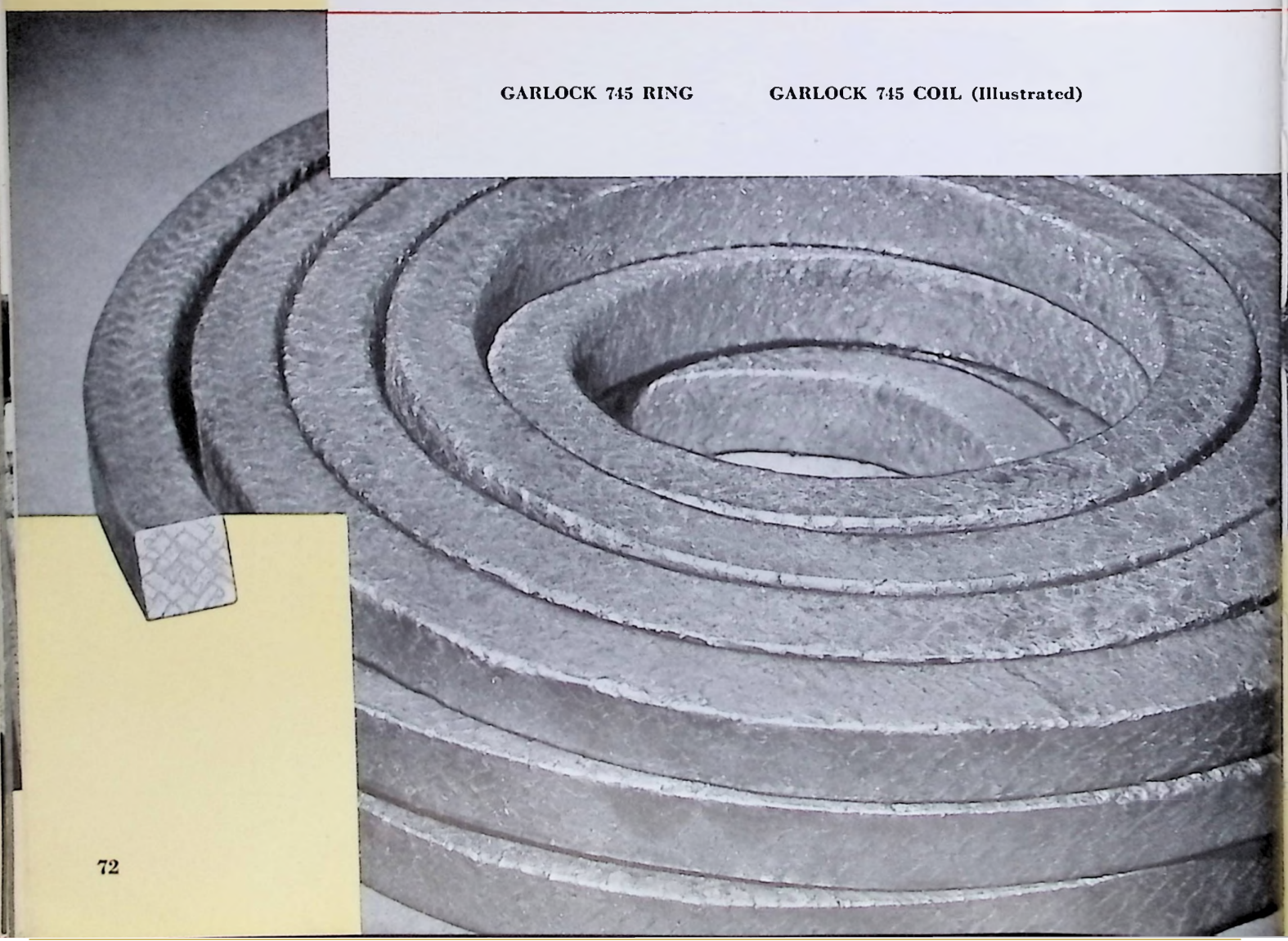
Forms—Garlock 745 Rings are supplied with square-cut or butt joint and in specified rod and stuffing box sizes.

Garlock 745 Coil is approximately square in cross-section and is regularly produced in sizes from ¼" to 1½" advancing by sixteenths. Coil form is available either in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 745 Coil

Packing Size	¼	5/16	3/8	7/16	½	9/16	5/8	11/16	¾	13/16	⅞	15/16	1"
Coils per box	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.	5¼	6	10	7¾	9¼	10¼	11	11½	12½	9¼	9¾	10½	11

GARLOCK 745 RING **GARLOCK 745 COIL (Illustrated)**



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 73 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/73

Lattice-Braid Cotton Packing

Construction—Garlock 751 Lattice-Braid Packing is manufactured from high-grade cotton yarn by the patented lattice-braid process described on page 64.

The material is thoroughly impregnated with a vegetable oil and marine-fat lubricant and graphite and is externally graphited.

Forms—Garlock 751 Rings are supplied with square-cut or butt joint and in specified rod and stuffing box sizes.

Garlock 751 Coil is approximately square in cross-section and is regularly produced in sizes from ¼" to 1½" advancing by sixteenths. It is available either in standard box quantities as shown below or in continuous lengths on reels.

GARLOCK 751 Coil

Packing Size	¼	5/16	3/8	7/16	½	9/16	5/8	11/16	¾	13/16	7/8	15/16	1"
Coils per box	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box—approx.	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box—approx.	4	4½	8½	6½	8½	9½	10½	10½	11½	8¾	9½	10	10½

FOR...

Use against hot or cold water and dilute aqueous solutions.

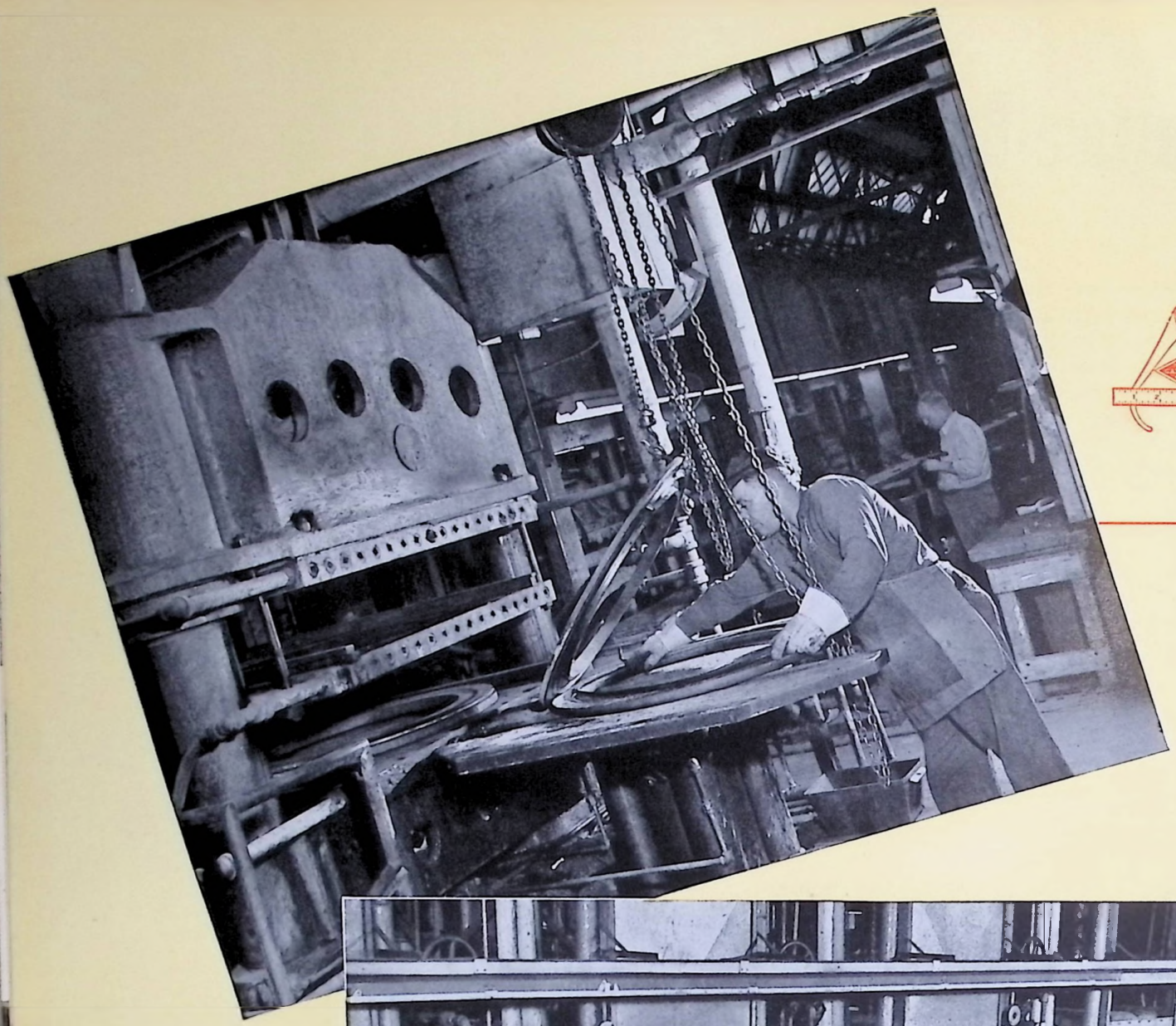
ON...

Rods or shafts of centrifugal, rotary or reciprocating pumps and on valve stems.

GARLOCK 751 RING GARLOCK 751 COIL (Illustrated)



Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/74



Removing a Chevron ring of large diameter from the mold.



A portion of one of the batteries of presses in which Chevron rings are produced.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 75 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/75

CHEVRON PACKINGS

PAGE

DUCK AND RUBBER CHEVRON (*hydraulic*) . . 79

DUCK AND NEOPRENE CHEVRON (*cold oil*) . . 80

ASBESTOS AND RUBBER CHEVRON (*steam*) . . 80

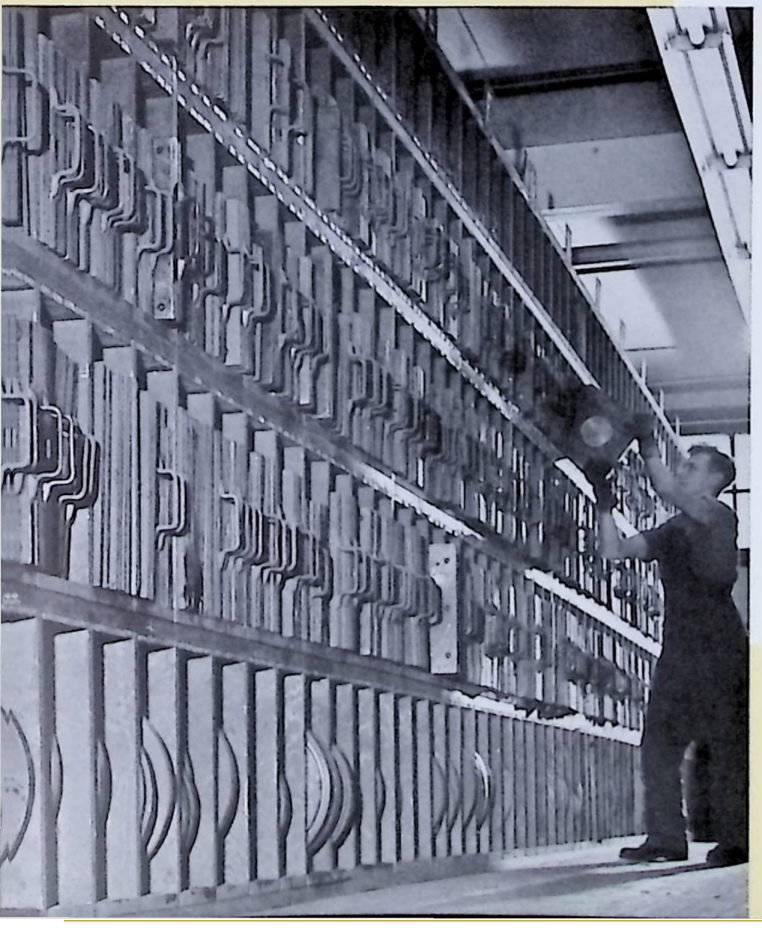
ASBESTOS AND NEOPRENE CHEVRON (*hot oil*) 80

RUBBER AND ASBESTOS FIBRE CHEVRON (*cold oil*) 81

DUCK AND RUBBER CHEVRON (*heavy hydraulic*) 81

DUCK AND RUBBER WHITE CHEVRON (*food equipment*) 81

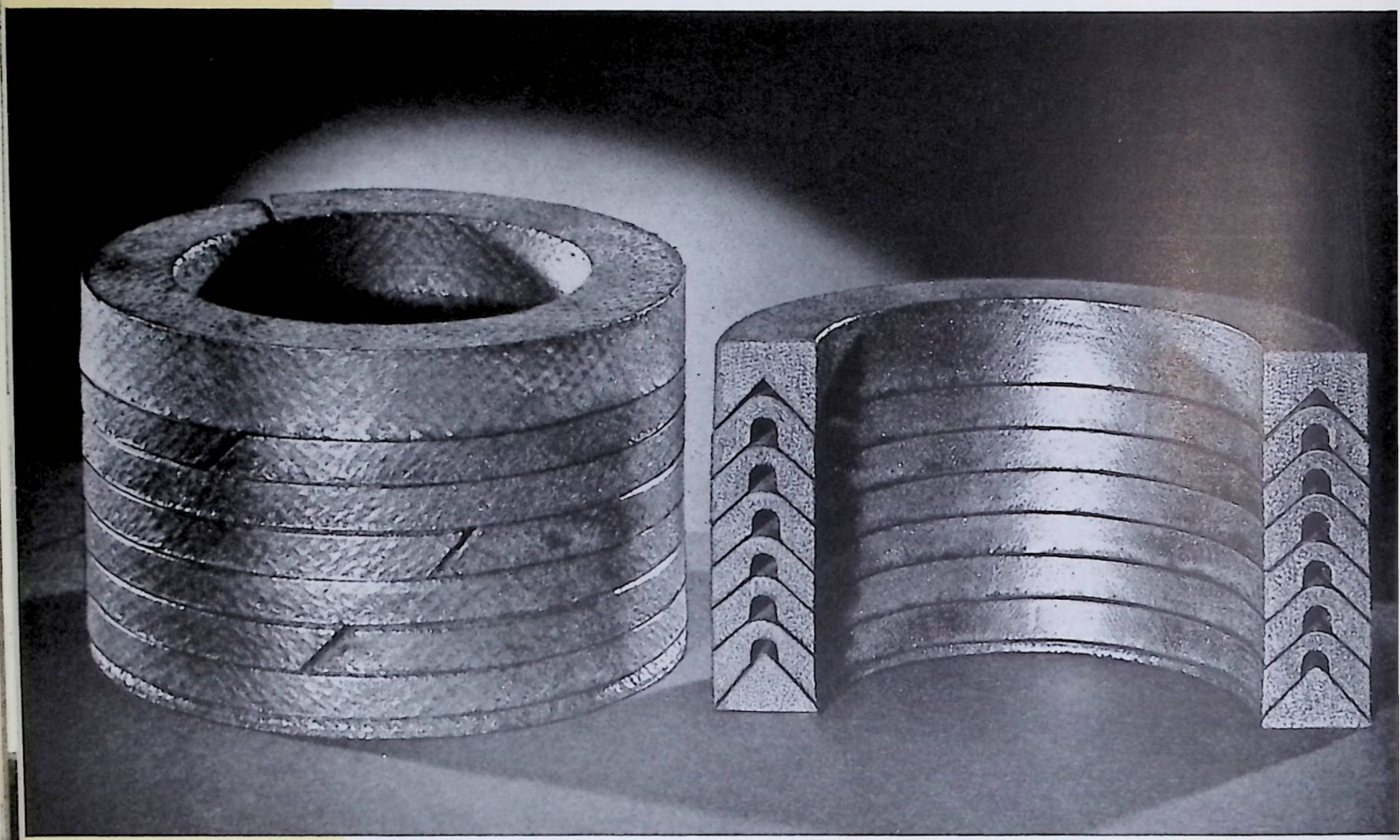
Molds are available for producing Chevron rings in thousands of different sizes.



"IF IT ISN'T GARLOCK IT ISN'T CHEVRON"

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 76 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/76

Garlock Chevron Packings



THE GREATER THE PRESSURE
. . . . THE TIGHTER IT PACKS

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 77 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/77

● Garlock Chevron Packing is truly an automatic packing. The distinctive and exclusive hinge-like shape of Chevron packing makes it extremely sensitive to pressure changes. On the power stroke or with increasing pressures Chevron rings automatically tighten and prevent leakage; on the return stroke or with diminishing pressures the packing eases off, permitting free operation of the rod and reducing friction to a minimum.

Chevron packing is manufactured in ring form only and usually is supplied in complete sets. A set of Chevron consists of a top adapter ring, a bottom adapter ring and a sufficient number of Chevron rings to make a set of the required depth. Adapter rings are supplied to fit beveled glands and stuffing boxes when so ordered.

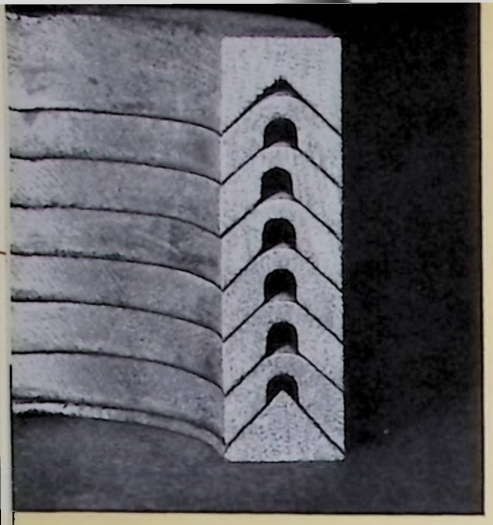
The Chevron shape into which these rings are molded permits nesting of the rings, thus making it possible to apply a greater number of Chevron rings in a stuffing box of a given depth than can be installed if packings of conventional types are used. This is a distinct advantage in the case of shallow stuffing boxes and particularly so if pressures are high. For example, on an installation where the packing space is 5/8" the nominal total depth of a set of Chevron containing five Chevron rings is only 2 1/8" whereas five rings of conventional, square cross-section packing to fit 5/8" packing space would measure 3 1/8" in depth. Also, where unusually deep stuffing boxes have been provided the depth of the boxes frequently can be reduced when Chevron is used, thus effecting a saving in the amount of packing required.

In general, it is recommended that a minimum of three Chevron rings be used in each set. The nominal total depth of a set of Chevron packing consisting of three Chevron rings with regular top and bottom adapters and the increased depth required for each additional Chevron ring is shown below. Please note that this table shows only a few of the most common packing sizes whereas Chevron is available in practically all rod and stuffing box sizes.

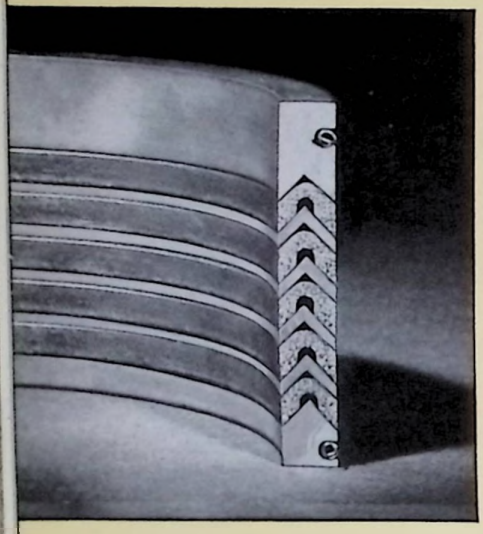
PACKING SPACE	NOMINAL TOTAL DEPTH OF SET WITH THREE CHEVRON RINGS	INCREASE IN DEPTH FOR EACH ADDITIONAL CHEVRON RING
1/4"	41/64"	7/64"
5/16"	57/64"	11/64"
3/8"	1"	3/16"
7/16"	1 13/64"	15/64"
1/2"	1 29/64"	15/64"
9/16"	1 23/64"	15/64"
5/8"	1 9/16"	9/32"
3/4"	1 53/64"	21/64"
7/8"	2 1/8"	3/8"
1"	2 11/32"	13/32"

As pressures increase it is desirable to increase both the depth and the radial width of the packing space but because of the many variables in any packing installation no inflexible formula for determining these dimensions can be prepared. From tabulated results of many Chevron installations over a period of many years, however, it has been possible to compile general recommendations applicable to average service conditions. That infor-

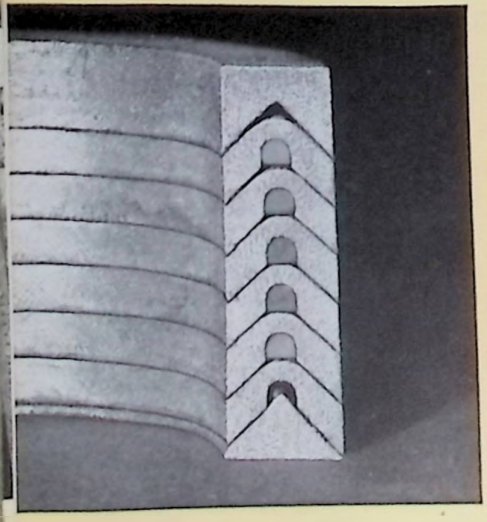
Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 78 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/78



Typical Set of Chevron Packing



Chevron Packing with Metal Separators and Metal End Rings



Chevron Packing with "D" Shaped Filler Rings

DIAMETER OF ROD OR RAM	PRESSURES UP TO 1000 LBS.			PRESSURES FROM 1000 TO 2000 LBS.			PRESSURES FROM 2000 TO 4000 LBS.			PRESSURES FROM 4000 TO 6000 LBS.		
	Packing Space	*Number of Chevron Rings*	*Nominal Depth of Set*	*Packing Space*	*Number of Chevron Rings*	*Nominal Depth of Set*	*Packing Space*	*Number of Chevron Rings*	*Nominal Depth of Set*	*Packing Space*	*Number of Chevron Rings*	*Nominal Depth of Set*
1″ to 3″	$\frac{3}{8}$″	3	1″	$\frac{3}{8}$″	4	$1\frac{3}{16}$″	$\frac{1}{2}$″	5	$1\frac{49}{64}$″	$\frac{1}{2}$″	6	2″
3″ to 8″	$\frac{1}{2}$″	3	$1\frac{19}{64}$″	$\frac{1}{2}$″	4	$1\frac{17}{32}$″	$\frac{5}{8}$″	5	$2\frac{1}{8}$″	$\frac{5}{8}$″	6	$2\frac{13}{32}$″
8″ to 14″	$\frac{5}{8}$″	3	$1\frac{9}{16}$″	$\frac{5}{8}$″	4	$1\frac{27}{32}$″	$\frac{3}{4}$″	5	$2\frac{31}{64}$″	$\frac{3}{4}$″	6	$2\frac{13}{16}$″
14″ to 24″	$\frac{3}{4}$″	3	$1\frac{53}{64}$″	$\frac{3}{4}$″	4	$2\frac{5}{32}$″	$\frac{3}{4}$″	5	$2\frac{31}{64}$″	$\frac{3}{4}$″	6	$2\frac{13}{16}$″
24″ and up	$\frac{7}{8}$″	3	$2\frac{1}{8}$″	$\frac{7}{8}$″	4	$2\frac{1}{2}$″	$\frac{7}{8}$″	5	$2\frac{7}{8}$″	$\frac{7}{8}$″	6	$3\frac{1}{4}$″

mation which is shown in the table above is for the general guidance only of Chevron packing users and should not be interpreted to mean that a satisfactory Chevron installation cannot be made with packings smaller or larger than the sizes indicated or that a lesser or greater number of Chevron rings cannot be used.

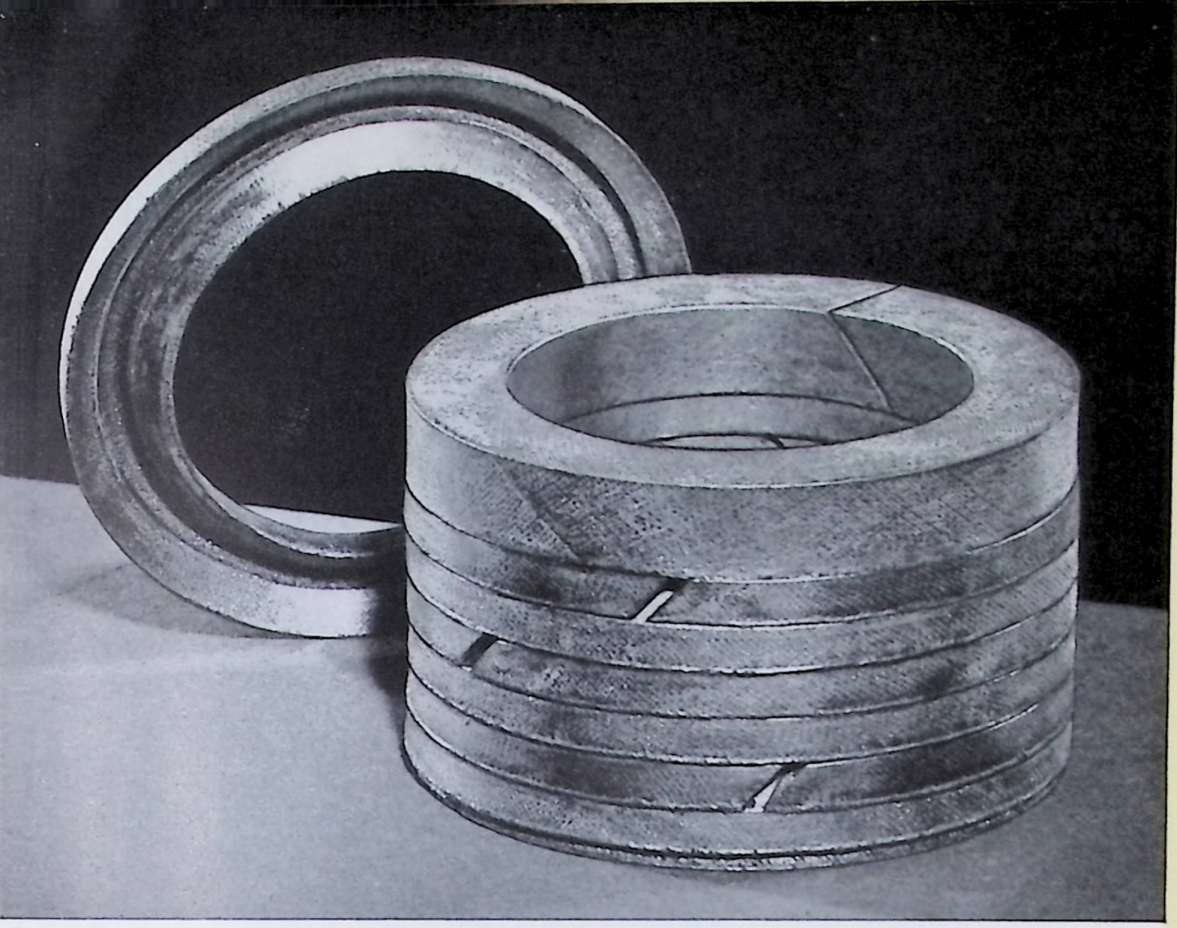
Chevron packing is particularly effective on equipment requiring the packing to operate against pressures from both directions. On such applications some of the Chevron rings are installed facing in one direction and the remainder facing in the opposite direction with an additional adapter ring in the middle of the set between these two series of rings.

When used against pressures in excess of 3000 pounds per square inch it frequently is desirable—depending upon surrounding conditions—to provide means for reinforcing Chevron packing to prevent undue distortion from the extreme pressure. Metal end rings instead of the regular fabric end rings; metal separators between the Chevron rings; and "D" shaped filler rings applied in the void at the apex of each Chevron ring all serve to prevent distortion of the packing and at the same time preserve the automatic action which derives from the hinge-like shape of Chevron. Complete operating data on these high-pressure installations should be furnished to insure that the most suitable Chevron set will be supplied. If metal end rings are used or if metal separators are used between the Chevron rings, the total depth of Chevron sets is somewhat in excess of the nominal depths shown in the foregoing tables.

Chevron packing operates with very light gland pressure. When applying Chevron each ring of packing should be inserted separately in the stuffing box and seated firmly against the adjacent ring. When all rings are installed the gland should be drawn up lightly and the equipment operated with the gland just tight enough to prevent leakage through the packing. Excessive gland pressure prevents the packing from functioning automatically and shortens the serviceable life of the packing.

Chevron packing is regularly manufactured in several types each of which is designed for a specific class of service. Descriptions of these different Chevron packings appear on the pages following.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 79 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/79



Garlock 430 Chevron Packing

Construction—Garlock 430 Chevron is made of a special cotton duck and a Garlock rubber compound. Each Chevron ring is molded individually into the distinctive Chevron shape. Top and bottom end or adapter rings made of the same materials are supplied with each set of Chevron rings unless otherwise specified. These rings are treated externally with a special mineral lubricant and graphite.

Form—Garlock 430 Chevron packing is made in ring form only and usually is supplied in complete sets. Each set consists of one top adapter (T ring), one bottom adapter (B ring) and a sufficient number of Chevron rings (C rings) to provide a set of the required depth. Rings are regularly cut open with a bevelled joint. Molds are available for producing Chevron in practically any rod and stuffing box sizes.

FOR...

Hot or cold water and neutral or alkaline aqueous solution at any pressure

ON...

Reciprocating rods, rams or plungers of pumps, elevators, accumulators, presses or other hydraulic equipment and on valve stems.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 80 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/80

Garlock 431 Chevron Packing

FOR...
Warm or cold oils or solvents at any pressure.

ON...
Reciprocating rods, rams or plungers of pumps, elevators, accumulators, presses or other hydraulic equipment.

Construction—Garlock 431 Chevron is made of a special cotton duck with an oil-resistant Neoprene compound. Each Chevron ring is molded individually into the distinctive Chevron shape. Top and bottom end or adapter rings made of the same materials are supplied with each set of Chevron unless otherwise specified. These rings are treated externally with a special mineral lubricant and graphite.

Form—Garlock 431 Chevron packing is made in ring form only and usually is supplied in complete sets. Each set consists of one top adapter (T ring), one bottom adapter (B ring) and a sufficient number of Chevron rings (C rings) to provide a set of the required depth. Rings are regularly cut open with a bevelled joint. Molds are available for producing Chevron in practically any rod and stuffing box sizes.

Garlock 530 Chevron Packing

FOR...
Steam, air or gas at high pressures and at temperatures up to 600° F.

ON...
Reciprocating rods of pumps, engines or compressors operating against steam, gas or air, and on valve stems.

A fine packing for locomotive throttles

Construction—Garlock 530 Chevron is made of a special Garlock asbestos cloth and a high-grade rubber compound. Each Chevron ring is molded individually into the distinctive Chevron shape. Top and bottom end or adapter rings made of the same materials are supplied with each set of Chevron unless otherwise specified. These rings are treated externally with a special mineral lubricant and graphite.

Form—Garlock 530 Chevron is made in ring form only and usually is supplied in complete sets. Each set consists of one top adapter (T ring), one bottom adapter (B ring) and a sufficient number of Chevron rings (C rings) to provide a set of the required depth. Rings are regularly cut open with a bevelled joint. Molds are available for producing Chevron in practically any rod and stuffing box sizes.

Garlock 531 Chevron Packing

FOR...
Hot oils at high pressures and at temperatures up to 300° F.

ON...
Reciprocating rods of pumps or other equipment in hot oil service.

Construction—Garlock 531 Chevron is made of a special Garlock asbestos cloth and an oil-resisting Neoprene compound. Each Chevron ring is molded individually into the distinctive Chevron shape. Top and bottom end or adapter rings made of the same materials are supplied with each set of Chevron unless otherwise specified. These rings are treated externally with a special mineral lubricant and graphite.

Form—Garlock 531 Chevron is made in ring form only and usually is supplied in complete sets. Each set consists of one top adapter (T ring), one bottom adapter (B ring) and a sufficient number of Chevron rings (C rings) to provide a set of the required depth. Rings are regularly cut open with a bevelled joint. Molds are available for producing Chevron in practically any rod and stuffing box sizes.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 81 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/81

Garlock 7815 Chevron Packing

Construction—Garlock 7815 Chevron is made of a special Garlock rubber compound containing asbestos fibre. Each Chevron ring is molded into the distinctive Chevron shape. After molding, the wearing lip of each ring receives a special, sand-paper finish. Top and bottom adapter rings of the same construction as those supplied with Garlock 431 Chevron (described on page 80) are supplied with each set unless otherwise specified. This material is furnished unlubricated.

Form—Garlock 7815 Chevron packing is made in ring form only and usually is supplied in complete sets. Each set consists of one top adapter (T ring), one bottom adapter (B ring) and a sufficient number of Chevron rings (C rings) to provide a set of the required depth. Rings are regularly cut open with a beveled joint. Molds are available for producing Chevron packing in practically any rod and stuffing box sizes.

FOR...

Warm or cold oil at any pressure.

ON...

Hydraulic applications on machine tools, presses or other equipment.

A Chevron packing which maintains unusually close contact with the rod and operates with low friction.

Garlock 7857 Chevron Packing

Construction—Garlock 7857 Chevron is made of a special cotton duck and a Garlock rubber compound. Each ring is molded individually into the distinctive Chevron shape. Top and bottom end or adapter rings made of the same materials are supplied with each set of Chevron rings unless otherwise specified. These rings are treated externally with a special mineral lubricant and graphite.

Form—Garlock 7857 Chevron packing is made in ring form only and usually is supplied in complete sets. Each set consists of one top adapter (T ring), one bottom adapter (B ring) and a sufficient number of Chevron rings (C rings) to provide a set of the required depth. Rings are regularly cut open with a beveled joint. Molds are available for producing Chevron packing in practically any rod and stuffing box sizes.

FOR...

Hot or cold oil or water at high pressures.

ON...

Reciprocating rods, rams or plungers of pumps, elevators, presses, accumulators and other heavy duty hydraulic equipment.

Garlock 8051 Chevron Packing

Construction—Garlock 8051 Chevron is made of a special cotton duck with a white, rubber compound. Each Chevron ring is molded individually into the distinctive Chevron shape. Top and bottom adapter rings made of the same materials are supplied with each set unless otherwise specified. Garlock 8051 is furnished unlubricated.

Form—Garlock 8051 Chevron packing is made in ring form only and usually is supplied in complete sets. Each set consists of one top adapter (T ring), one bottom adapter (B ring) and a sufficient number of Chevron rings (C rings) to provide a set of the required depth. Rings are regularly cut open with a beveled joint. Molds are available for producing Chevron packing in practically any rod and stuffing box sizes.

FOR...

Medium or low temperature food process solutions or liquid foodstuffs at any pressure.

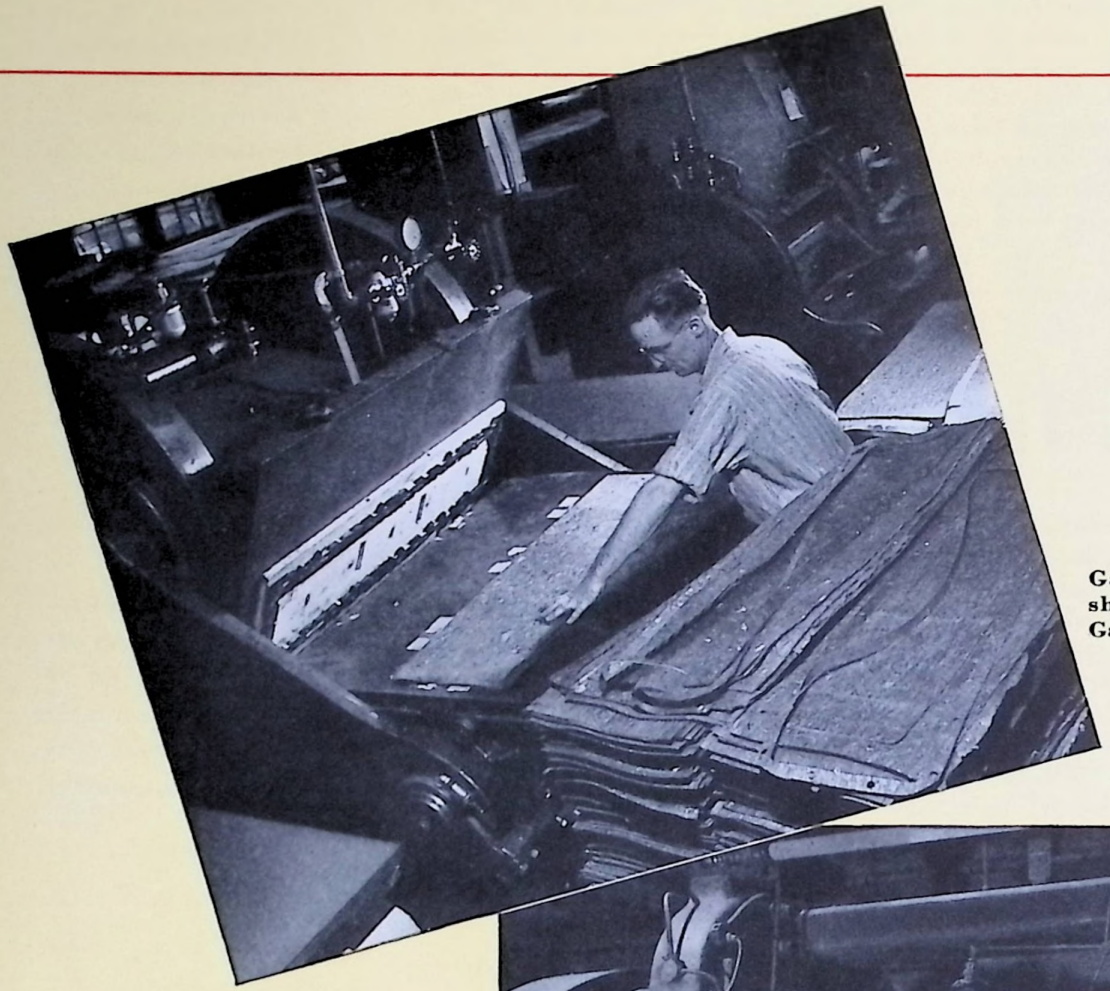
ON...

Homogenizers, viscolizers, pumps or other food processing equipment.

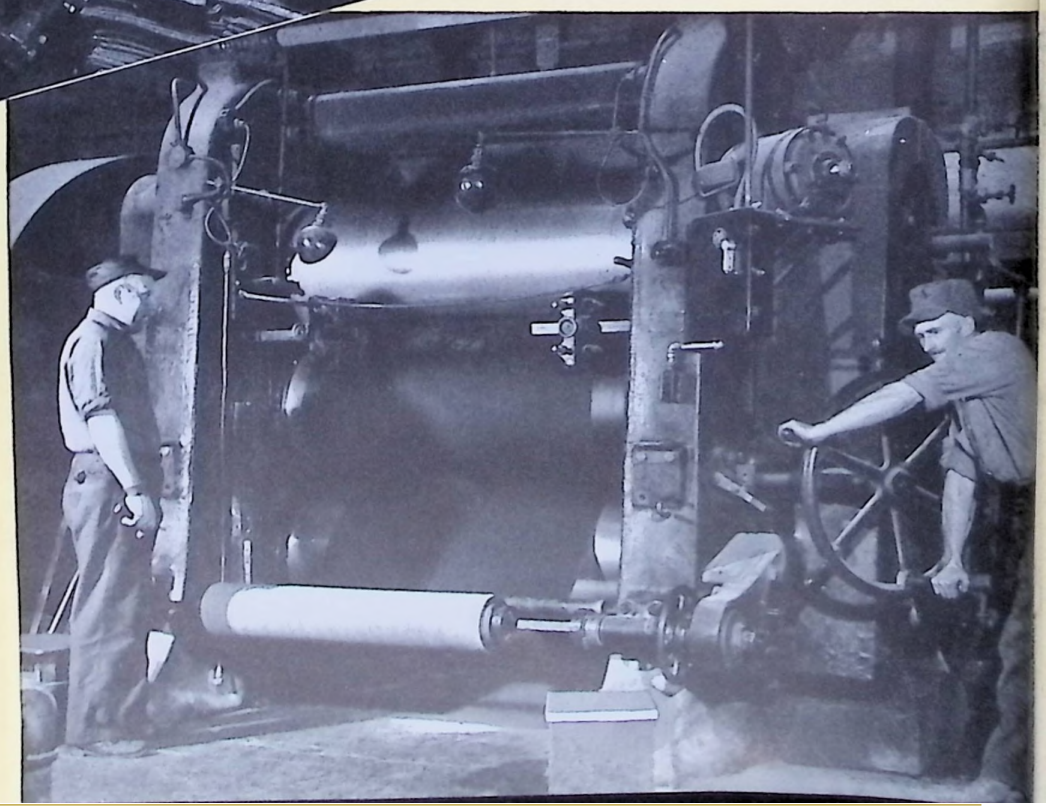
A white Chevron—easy to clean.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 82 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/82

SHEET PACKINGS, GASKETS



Gaskets of all sizes and shapes are cut from Garlock sheet packings.



Frictioning or coating cloth with Garlock rubber compound.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 83 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/83

AND DIAPHRAGMS

	PAGE
Compression Characteristics of Flat Gaskets	84
Compressed Asbestos Sheets	85-86
Compressed Blue Asbestos Sheet	87
Neoprene Compressed Asbestos Sheet	87
Woven Asbestos Sheets	88
Red Rubber Sheet	89
Wire Inserted Red Rubber Sheet	90
Duck Inserted Rubber Sheet	91
Black Rubber Sheets	92
Soft Rubber Sheets	93
Cloth Inserted Rubber Sheets	94
Neoprene Rubber Sheets	95
Buna-N Rubber Sheets	96
Cork-Fibre Sheet	97
Guardian Gaskets	98
Folded Asbestos Gaskets	99
Water Tube Boiler Gaskets	100
Woven Asbestos Gasketings	101
Neoprene Woven Asbestos Gasketings	102
Woven Asbestos and Braided Cotton Gasketings	103
Round Red Rubber Gasketings	104
Rubber Diaphragm Sheets	105-106-107
Thiokol Rubber Diaphragm Sheets	108
Neoprene Rubber Diaphragm Sheets	109

Note—Durometer hardnesses shown in this catalog refer to readings taken with a durometer calibrated and used in accordance with A.S.T.M. Specification D-676.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 84 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/84

GASKETS *FOR FLANGED JOINTS*

• Leaks in bolted flange joints gasketed with flat gaskets frequently are caused by insufficient bolt pressure. It is important, therefore, to employ sufficient bolts of ample size. In determining the number and size of bolts a safe rule is to provide a residual unit gasket load equal to five to ten times the internal pressure after deducting the relieving effect of the internal pressure.

The gasket used on a bolted joint should have a flange sufficiently wide to support the original bolt load before deducting for the internal pressure. Crushing strength of gaskets varies with temperatures, gasket thickness and gasket material. Upon receipt of complete data relating to any specific application we will supply approximate values for the crushing strength of gaskets therefor.

Compression characteristics of the several types of Garlock materials commonly used for gasketing flat, flanged joints are shown in the table below. These results were determined in cold compression tests on discs having a surface area of one square inch except that a gasket $3\frac{1}{2}'' \times 4\frac{1}{2}''$ was tested in the case of the spirally-wound, asbestos and metal gasket. Tests were conducted on materials in the thicknesses indicated in the table.

The compression or percent reduction in the thickness of a gasket is related in a considerable degree to the friction between the flanges and the gasket. Higher compressions at all loads usually are obtained if the flanges are very smooth or lubricated; if narrow gaskets are used; if thick gaskets are used; or if high temperatures exist. Also, the percentage of permanent set may be increased with higher temperatures and greater length of time under load.

COMPRESSION CHARACTERISTICS OF MATERIALS COMMONLY USED FOR FLAT FLANGE GASKETS

Material	Representative Garlock Styles	Common Thickness (inches)	Percent Reduction in Thickness			Percent Permanent set at 10,000 lbs.
			500 lbs. Pressure	2,000 lbs. Pressure	10,000 lbs. Pressure	
Rubber Sheet—Plain	22-91-353-7790	$\frac{1}{16}''$	8	14	37	10
Rubber Sheet—Cloth Inserted	19	$\frac{1}{16}''$	4	7	33	16
Cork-Fibre Sheet	660	$\frac{1}{16}''$	57	69	78	58
Asbestos Cloth—Rubberized	604-605-625	$\frac{1}{4}''$	11	22	34	31
Asbestos Sheet—Compressed	900-7021-7228	$\frac{1}{16}''$	1	10	16	6
Asbestos and Metal—Spirally Wound	555	$\frac{3}{16}''$	3	4	11	9

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 85 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/85

Compressed Asbestos Sheet

Construction—Garlock 900 Compressed Asbestos Sheet Packing is made of long fibre Canadian asbestos and a special Garlock rubber compound, bonded under pressure and vulcanized into a homogeneous structure. This sheet is strongly resistant to plastic flow under heavy bolt load but is sufficiently compressible to compensate for reasonable unevenness or irregularities in the surfaces of flanged joints.

Form—Garlock 900 in sheet form is available in the thicknesses and sheet sizes indicated in the table below. Gaskets in any size or any shape, cut from this sheet, are produced to the customer's specifications. These cut gaskets are styled Garlock 950.

If graphited sheet packing is desired specify Garlock 901 and if graphited, cut gaskets are desired specify Garlock 951.

GARLOCK 900 and GARLOCK 901
Approximate Weight per Sheet—Pounds

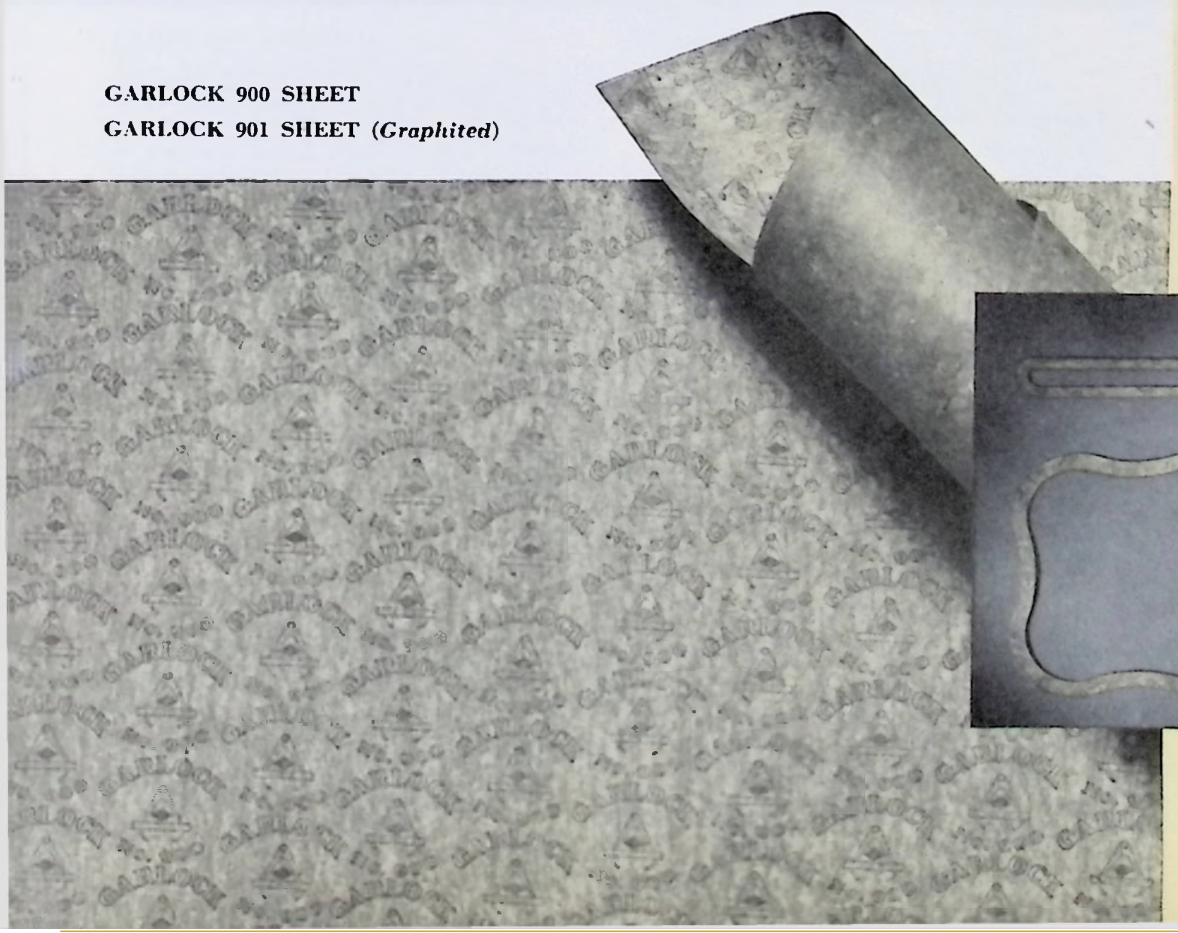
Standard Sheet Sizes	Standard Thicknesses						
	1/64"	1/32"	1/16"	3/32"	3/16"	1/8"	1/4"
40" x 40"	1½	2¾	5¾	8½	11½	17	23
40" x 60"	2¼	4¼	8½	12¾	17	25½	34
40" x 80"	3	5¾	11½	17	23	34	46
40" x 120"	4½	8½	17	25½	34	51	68
60" x 60"	3¼	6½	12¾	19¼	25½	38½	51
60" x 80"	4½	8½	17	25½	34	51	68
60" x 120"	6½	12¾	25½	38½	51	77	103
80" x 80"	5¾	11½	23	34	46	68	92
80" x 120"	8½	17	34	51	68	103	137
120" x 120"	12¾	25½	51	77	103	154	205

FOR...

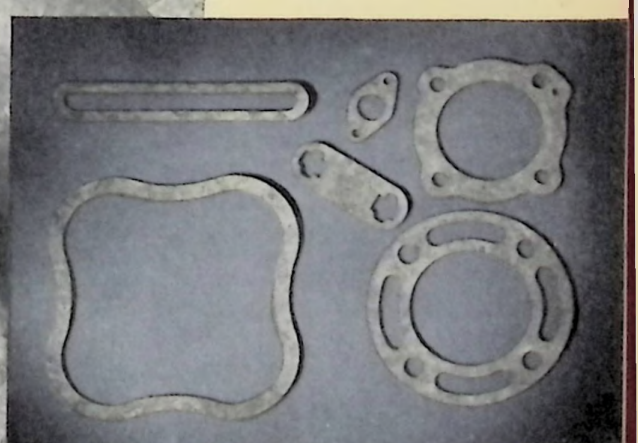
Gasketing at temperatures up to approximately 700° F, against steam, gas, air and other services except those involving extremely hot oil, organic solvents or strong mineral acids.

ON...

Pipe flanges, boiler manholes and handholes, and gasketed joints on steam engines, compressors, internal combustion engines, pumps or other equipment.



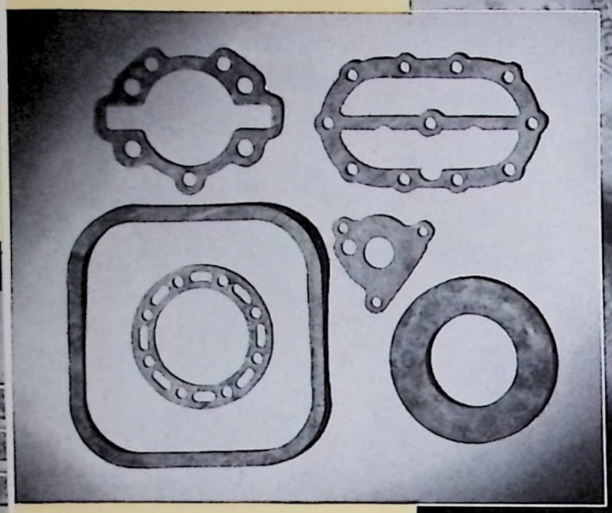
GARLOCK 900 SHEET
GARLOCK 901 SHEET (*Graphited*)



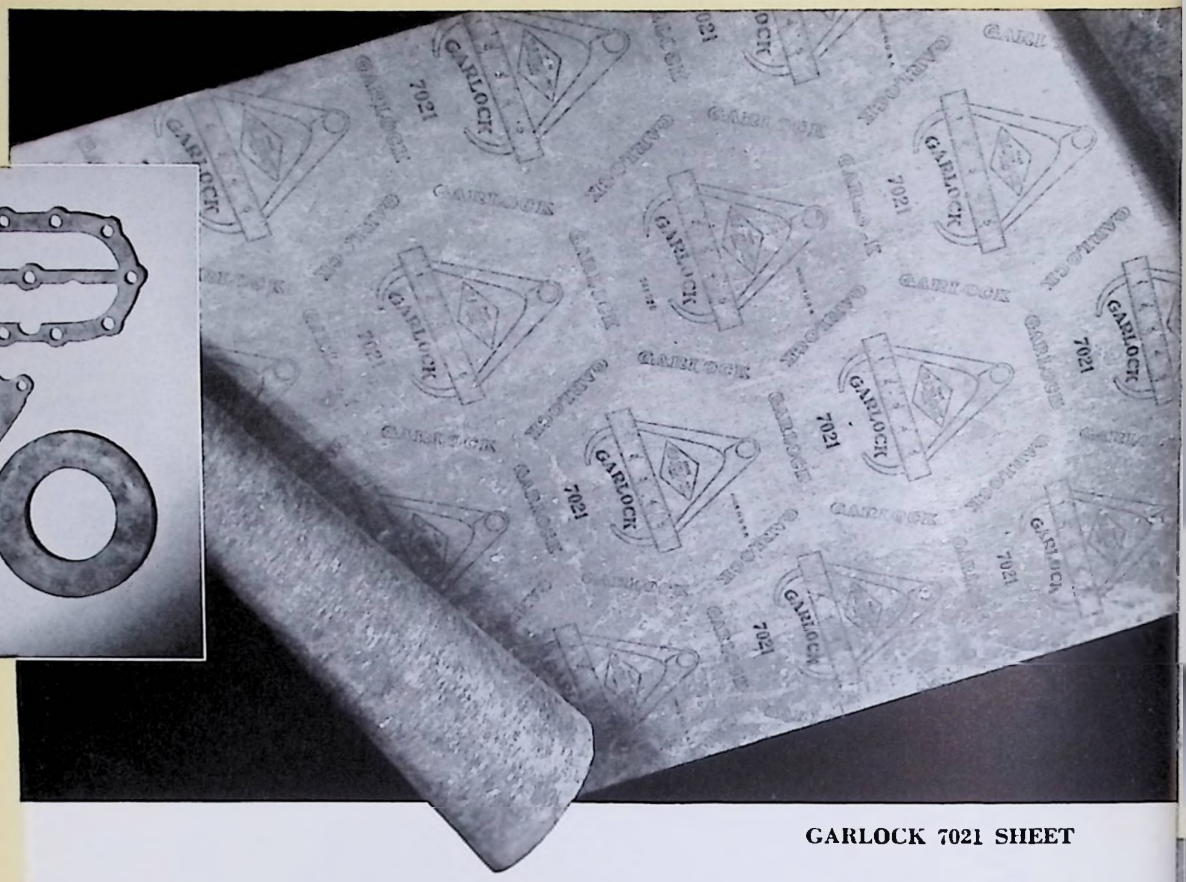
GARLOCK 950 GASKETS
GARLOCK 951 GASKETS
(*Graphited*)

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 86 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/86

Compressed Asbestos Sheet



GARLOCK 7022 GASKETS



GARLOCK 7021 SHEET

FOR . . .

Gasketing in hot oil service at high temperature and for steam or hot gases up to approximately 700° F.

ON . . .

Flanges of cracking stills and other refinery equipment; pipe lines; steam engines; compressors; internal combustion engines and other high temperature applications.

Construction—Garlock 7021 Compressed Asbestos Sheet is made of long fibre Canadian asbestos and a special oil-resistant Garlock rubber compound. The material is bonded under pressure and vulcanized into a homogeneous structure.

This is a strong, dense sheet packing which is sufficiently compressible to compensate for normal irregularities in flange faces but is unusually resistant to plastic flow under heavy bolt loads.

Form—Garlock 7021 Sheet Packing is available in the several standard sheet sizes and thicknesses shown in the table below.

Gaskets, styled Garlock 7022, in any size or shape are cut to the customer's specifications from Garlock 7021 Sheet.

Both the sheet form and cut gaskets are available with graphited surfaces if so specified.

GARLOCK 7021
Approximate Weight per Sheet—Pounds

Standard Sheet Sizes	Standard Thicknesses						
	1/64"	1/32"	1/16"	3/32"	1/8"	3/16"	1/4"
40" x 40"	1½	2¾	5½	8¼	11¼	16¾	22½
40" x 60"	2¼	4¼	8¼	12½	16¾	25	33½
40" x 80"	3	5½	11¼	16¾	22½	33½	45
40" x 120"	4½	8¼	16¾	25	33½	50	67
60" x 60"	3¾	6¾	12½	19	25	38	50
60" x 80"	4½	8¼	16¾	25	33½	50	67
60" x 120"	6¾	12½	25	38	50	76	101
80" x 80"	5½	11¼	22½	33½	45	67	90
80" x 120"	8¼	16¾	33½	50	67	101	134
120" x 120"	12½	25	50	76	101	151	202

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 87 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/87

Compressed Blue Asbestos Sheet

Construction—Garlock 7705 Compressed Blue Asbestos Sheet is made of South African blue asbestos fibre and a special Garlock rubber compound, bonded under pressure and vulcanized into a homogeneous structure.

This sheet packing is sufficiently compressible to provide a properly gasketed joint but is resistant to plastic flow under heavy bolt loads.

Form—Garlock 7705 in sheet form is produced in the thicknesses and sheet sizes shown in the table below.

Gaskets cut from Garlock 7705 Sheet are available in any size and shape, fabricated to the customer's specifications.

Sheet or gaskets are supplied graphited if so specified.

GARLOCK 7705
Approximate Weight per Sheet—Pounds

Standard Sheet Sizes	Standard Thicknesses				
	1/64"	1/32"	1/16"	3/32"	1/8"
40" x 40"	1¼	2½	5¼	8	10½
40" x 60"	2	4	8	12	16
40" x 80"	2½	5¼	10½	16	21
40" x 120"	4	8	16	24	32
60" x 60"	3	6	12	18	24
60" x 80"	4	8	16	24	32
60" x 120"	6	12	24	36	48
80" x 80"	5¼	10½	21	32	42
80" x 120"	8	16	32	48	64
120" x 120"	12	24	48	72	95

FOR...

Gasketing against hot or cold mineral acids either alone or in conjunction with oils or organic solvents.

ON...

Pipe flanges or flanged joints of any equipment handling acids.

Neoprene Compressed Asbestos Sheet

Construction—Garlock 7228 Neoprene Compressed Asbestos Sheet is made of long fibre, Canadian asbestos and an oil-resisting neoprene compound bonded under pressure and vulcanized into a homogeneous sheet.

This material is sufficiently compressible for proper gasketing but resists heavy bolt loads without excessive plastic flow.

Form—Garlock 7228 in sheet form is available in the thicknesses and sheet sizes indicated in the table below.

Gaskets in any size or shape, cut from this sheet, are fabricated to the customer's specifications.

Sheet or gaskets will be externally graphited if so specified.

GARLOCK 7228
Approximate Weight per Sheet—Pounds

Standard Sheet Sizes	Standard Thicknesses				
	1/32"	1/16"	3/32"	1/8"	1/4"
40" x 40"	1½	3	6	9	12
40" x 60"	2¼	4½	9	13½	18
40" x 80"	3	6	12	18	24
40" x 120"	4½	9	18	27	36
60" x 60"	3½	6¾	13½	20	27
60" x 80"	4½	9	18	27	36
60" x 120"	6¾	13½	27	40½	54
80" x 80"	6	12	24	36	48
80" x 120"	9	18	36	54	72
120" x 120"	13½	27	54	81	108

FOR...

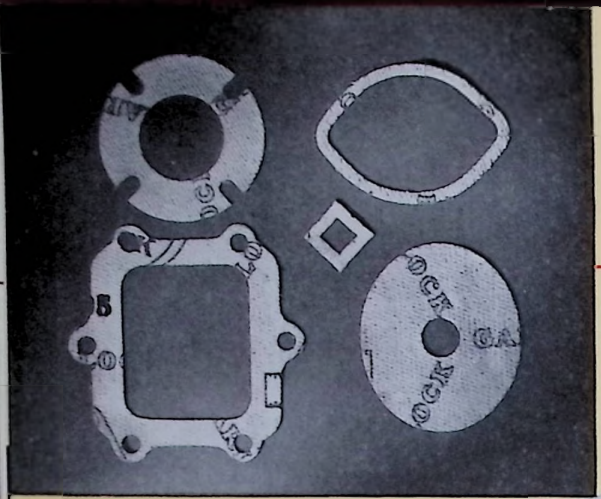
Gasketing against oil or solvents at temperatures up to 300° F.

ON...

Pipe flanges and gasketed joints on steam engines, internal combustion engines, compressors, pumps or other equipment.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 88 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/88

Woven Asbestos Sheets



GARLOCK 607 GASKETS

FOR...

Gasketing against steam or gases at temperatures up to 600° F.

ON...

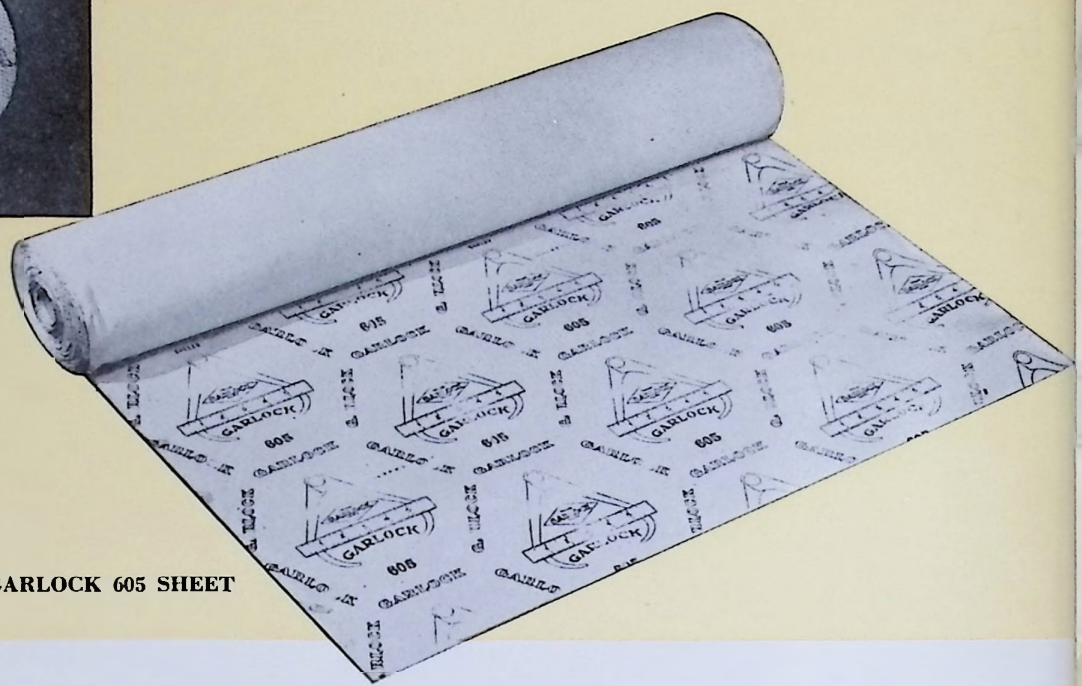
Cylinder heads or other flanged joints requiring ports or bolt holes in gaskets of relatively narrow flange width.

FOR...

Gasketing against steam or gases at temperatures up to 600° F.

ON...

Cylinder heads or other flanged joints requiring gaskets of relatively narrow flange width containing ports or bolt holes.



GARLOCK 605 SHEET

WIRE INSERTION ASBESTOS SHEET

Construction—Garlock 605 Sheet Packing is woven of wire-inserted, long fibre, Garlock asbestos yarn. It is treated with a special, heat-resistant white cement. Regularly supplied ungraphited.

This sheet is woven in nominal $\frac{1}{32}$" and $\frac{1}{16}$" thicknesses. Thicknesses in excess of $\frac{1}{16}$" are made up of two or more plies.

Form—Garlock 605 Sheet is produced in a standard 48" width and in nominal thicknesses from $\frac{1}{32}$" to $\frac{1}{4}$" inclusive as shown in the table below.

Garlock 607 Gaskets are cut from Garlock 605 Sheet and are available in any size or shape fabricated to the customer's specifications.

AUTOLINE SHEET PACKING

Construction—Garlock 625 Autoline Sheet Packing is woven of wire-inserted long fibre Garlock asbestos yarn. This material is treated with a special, heat-resistant rubber cement and is graphited on one side and red on the other side.

This sheet is woven in nominal $\frac{1}{32}$" and $\frac{1}{16}$" thicknesses. Thicknesses in excess of $\frac{1}{16}$" are made up of two or more plies.

Form—Garlock 625 Sheet is produced in a standard 48" width and in nominal thicknesses from $\frac{1}{32}$" to $\frac{1}{4}$" inclusive as shown in the table below.

Garlock 627 Gaskets are cut from Garlock 625 Sheet and are available in any size or shape made to customer's specifications.

GARLOCK 605 and 625 Sheet

Standard Thicknesses	Standard Roll Quantities	
	Linear Yards	Pounds (approx.)
$\frac{1}{32}$"	20	100
$\frac{1}{16}$"	36	200
$\frac{3}{32}$"	18	200
$\frac{1}{8}$"	12	200
$\frac{1}{4}$"	9	200

Note: Actual thickness of nominal $\frac{1}{32}$" sheet is approximately $\frac{3}{64}$".

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 89 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/89

Red Rubber Sheet

Construction—Garlock 22 Sheet Packing is made of a high-grade Garlock red rubber compound, developed specially for use in the manufacture of this gasketing material. It is a tough, resilient rubber sheet of approximately 80 durometer hardness.

Form—Garlock 22 Sheet Packing is produced in a standard 40″ width and in thicknesses from $\frac{1}{32}$″ to $\frac{1}{4}$″ inclusive as shown in the table below.

Garlock 122 Gaskets are cut from Garlock 22 Sheet. These gaskets are available in any size or shape, fabricated to the customer's specifications.

GARLOCK 22 Sheet		
Standard Thicknesses	Standard Roll Quantities	
	Linear Yards	Pounds (approx.)
$\frac{1}{32}$″	36	97
$\frac{1}{16}$″	36	195
$\frac{3}{32}$″	24	193
$\frac{1}{8}$″	18	195
$\frac{5}{32}$″	14	189
$\frac{3}{16}$″	12	195
$\frac{7}{32}$″	10	189
$\frac{1}{4}$″	9	195

FOR . . .

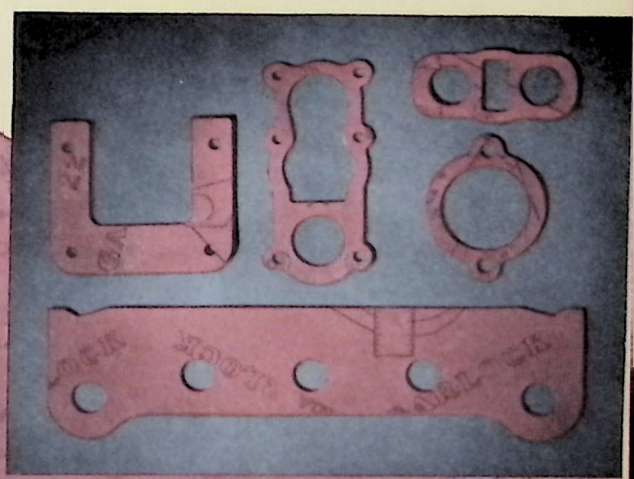
Gasketing against hot or cold water, aqueous solutions (except strong acids), low pressure steam or gas.

ON . . .

Pipe flanges or any other flanged joints requiring a rubber gasket of the highest grade.

An outstanding red rubber sheet.

GARLOCK 122 GASKETS



GARLOCK 22 SHEET

Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/90

Wire Inserted Red Rubber Sheet

FOR . . .

Gasketing against hot or cold water, aqueous solutions (except strong acids), and low pressure steam.

ON . . .

Flanged joints of all kinds, particularly where flanges are narrow; where the equipment is subject to vibration; or where bolt loads are heavy.

Construction—Garlock 24 Wire Inserted Sheet Packing is made of a high-grade Garlock rubber compound with woven wire cloth insertion, produced to our specifications.

This ply of woven wire reinforces the sheet, making it an exceptionally tough and resilient gasketing material. This sheet is approximately 80 durometer hardness.

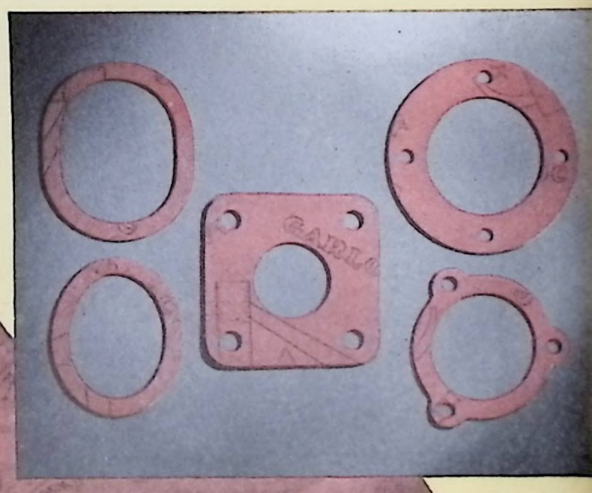
Form—Garlock 24 Sheet Packing is made in a standard 44″ width and in thicknesses from $\frac{1}{32}$″ to $\frac{1}{4}$″ inclusive as shown in the table below.

Garlock 124 Gaskets are cut from Garlock 24 Sheet and are produced in any size or shape fabricated to the customer's specifications.

GARLOCK 24 Sheet

Standard Thicknesses	Standard Roll Quantities	
	Linear Yards	Pounds (approx.)
$\frac{1}{32}$″	24	99
$\frac{1}{16}$″	28	199
$\frac{3}{32}$″	20	202
$\frac{1}{8}$″	15	196
$\frac{5}{32}$″	12	193
$\frac{3}{16}$″	10	191
$\frac{7}{32}$″	9	199
$\frac{1}{4}$″	8	200

GARLOCK 124 GASKETS



GARLOCK 24 SHEET

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 91 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/91

Duck Inserted Rubber Sheet

Construction—Garlock 19 Sheet Packing is constructed of a high-grade, strong cotton duck with covers of a special Garlock rubber compound. In thicknesses of $\frac{1}{16}$″ or less a single ply of fabric is used with one additional ply for each increase of $\frac{1}{16}$″ in the thickness of the sheet. This rubber sheet is approximately 80 durometer hardness.

Form—Garlock 19 Sheet Packing is regularly manufactured in 44″ width and in thicknesses from $\frac{1}{32}$″ to $\frac{1}{4}$″ inclusive as shown in the table below.

Garlock 219 Gaskets are cut from Garlock 19 Sheet and are supplied in any size or shape, fabricated to the customer's specifications.

GARLOCK 19 Sheet		
Standard Thicknesses	Standard Roll Quantities	
	Linear Yards	Pounds (approx.)
$\frac{1}{32}$″	40	92
$\frac{1}{16}$″	40	202
$\frac{3}{32}$″	27	208
$\frac{1}{8}$″	20	200
$\frac{5}{32}$″	16	203
$\frac{3}{16}$″	13	195
$\frac{7}{32}$″	11	195
$\frac{1}{4}$″	10	199

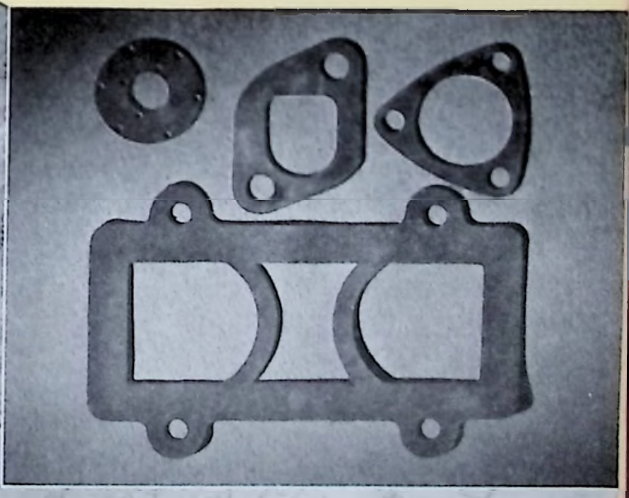
FOR . . .

Gasketing against hot or cold water, aqueous solutions (except strong acids) and low pressure steam or gas.

ON . . .

Flanged joints of pipe lines or equipment in heavy hydraulic service where ordinary rubber gaskets may creep.

This superior rubber sheet is frequently used as apron cloths in paper mills and as door strips on street cars or buses.



GARLOCK 19 SHEET

Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/92

Black Rubber Sheets

FOR...

Gasketing against hot or cold water, aqueous solutions (except strong acids), low pressure steam or gas.

ON...

Pipe flanges or flanged joints on other equipment requiring a rubber gasket.

GARLOCK 353 SHEET—953 GASKETS

Construction—Garlock 353 Sheet is made of a high grade, Garlock black rubber compound specially developed for use as a gasketing material.

This rubber sheet is approximately 80 durometer hardness and is tough and resilient.

Form—Garlock 353 Sheet Packing is manufactured in a standard 40″ width and in thicknesses from $\frac{1}{32}$″ to $\frac{1}{4}$″ as shown in the table below.

Garlock 953 Gaskets are cut from Garlock 353 Sheet. These gaskets are available in any size and shape fabricated to the customer's specifications.

GARLOCK 353 Sheet		
Standard Thicknesses	Standard Roll Quantities	
	Linear Yards	Pounds (approx.)
$\frac{1}{32}$″	40	100
$\frac{1}{16}$″	40	200
$\frac{3}{32}$″	27	203
$\frac{1}{8}$″	20	200
$\frac{5}{32}$″	16	200
$\frac{3}{16}$″	13	195
$\frac{7}{32}$″	11	193
$\frac{1}{4}$″	10	200

FOR...

Gasketing against hot or cold water, aqueous solutions (except nitric acid and concentrated sulphuric acid), low pressure steam or gas.

ON...

Pipe flanges or flanged joints of other equipment, particularly on food equipment requiring an odorless, tasteless gasketing.

GARLOCK 7790 SHEET—7790 GASKETS

Construction—Garlock 7790 Sheet is made of a high-grade Garlock rubber compound. This sheet is black in color and has a durometer hardness of approximately 80. It is a dependable rubber gasketing material.

Form—Garlock 7790 Sheet Packing is manufactured in a standard 40″ width and in thicknesses from $\frac{1}{32}$″ to $\frac{1}{4}$″ as shown in the table below.

Garlock 7790 Gaskets, cut from this sheet, are available in any size or shape fabricated to the customer's specifications.

GARLOCK 7790 Sheet		
Standard Thicknesses	Standard Roll Quantities	
	Linear Yards	Pounds (approx.)
$\frac{1}{32}$″	48	100
$\frac{1}{16}$″	48	197
$\frac{3}{32}$″	32	197
$\frac{1}{8}$″	24	197
$\frac{5}{32}$″	19	195
$\frac{3}{16}$″	16	197
$\frac{7}{32}$″	14	201
$\frac{1}{4}$″	12	197

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 93 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/93

Soft Rubber Sheets

GARLOCK 6023 SHEET—6023 GASKETS

Construction—Garlock 6023 is manufactured from a special Garlock compound containing a maximum percentage of crude rubber. This "pure gum rubber" sheet is brown in color and is very soft, having a durometer hardness of approximately 35.

Form—Garlock 6023 Rubber Sheet is produced in standard thicknesses from $\frac{1}{16}$" to $\frac{1}{4}$" and in standard 40" width as shown in the table below. This material in $\frac{1}{32}$" thickness can be produced in sheets 53" square, maximum size.

Garlock 6023 Gaskets, cut from this sheet are available in any size or shape fabricated to customer's specifications.

GARLOCK 6023 Sheet

Standard Thicknesses	Standard Roll Quantities	
	Linear Yards	Pounds (approx.)
$\frac{1}{16}$"	48	149
$\frac{3}{32}$"	32	149
$\frac{1}{8}$"	24	149
$\frac{5}{32}$"	19	147
$\frac{3}{16}$"	16	149
$\frac{7}{32}$"	14	152
$\frac{1}{4}$"	12	149
$\frac{1}{32}$"	53" x 53" sheet	3

FOR...

Gasketing against hot or cold water, gases and aqueous solutions (except nitric acid and concentrated sulphuric acid).

ON...

Flanged joints which operate with a very light bolt load or where the flange surfaces are extremely irregular.

GARLOCK 91 SHEET—96 GASKETS

Construction—Garlock 91 Sheet is made of a high-grade Garlock rubber compound, black in color.

It is a resilient sheet of approximately 60 durometer hardness.

Forms—Garlock 91 Rubber Sheet is made in a standard 40" width and in thicknesses from $\frac{1}{32}$" to $\frac{1}{4}$" inclusive as shown in the table below.

Garlock 96 Gaskets are cut from this sheet and are available in any size or shape, fabricated to the customer's specifications.

GARLOCK 91 Sheet

Standard Thicknesses	Standard Roll Quantities	
	Linear Yards	Pounds (approx.)
$\frac{1}{32}$"	48	93
$\frac{1}{16}$"	48	186
$\frac{3}{32}$"	32	186
$\frac{1}{8}$"	24	186
$\frac{5}{32}$"	19	184
$\frac{3}{16}$"	16	186
$\frac{7}{32}$"	14	190
$\frac{1}{4}$"	12	186

FOR...

Gasketing against hot or cold water and aqueous solutions (except nitric acid and concentrated sulphuric acid), low pressure steam or gas.

ON...

Flanged joints where limited bolt load or flange irregularities require a soft gasketing.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 94 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/94

Rubber Sheets

FOR...

Gasketing against hot or cold water.

ON...

Pipe flanges or equipment where a general purpose gasketing is desired.

GARLOCK 159

Construction—Garlock 159 Sheet is made of a black rubber compound with cotton cloth insertion. One ply of cloth is used in $\frac{1}{32}$″ and $\frac{1}{16}$″ thicknesses and one additional ply for each $\frac{1}{16}$″ increase in thickness. Approximately 80 durometer hardness.

GARLOCK 169

Construction—Garlock 169 Sheet is made of a black rubber compound with cotton cloth on one surface. In thicknesses of $\frac{1}{8}$″ or greater the sheet contains one or more insertions of cotton cloth in addition to the surface ply of cloth. Approximately 80 durometer hardness.

GARLOCK 179

Construction—Garlock 179 Sheet is made of a black rubber compound with cotton cloth surface on both sides. In thicknesses greater than $\frac{1}{8}$″ the sheet contains one or more insertions of cotton cloth in addition to the cloth on the two surfaces. Approximately 80 durometer hardness.

Form—Garlock 159, 169 and 179 Rubber Sheets are produced in standard 44″ width and in thicknesses from $\frac{1}{32}$″ to $\frac{1}{4}$″ inclusive except that the minimum thickness for Garlock 179 is $\frac{1}{16}$″.

Standard roll quantities are shown in the table below. These materials regularly are sold in full roll quantities only.

GARLOCK 159, 169 and 179 Sheets

Standard Thicknesses	Standard Roll Quantities	
	Linear Yards	Pounds (approx.)
$\frac{1}{32}$″	40	101
$\frac{1}{16}$″	40	205
$\frac{3}{32}$″	27	209
$\frac{1}{8}$″	20	206
$\frac{5}{32}$″	16	208
$\frac{3}{16}$″	13	202
$\frac{7}{32}$″	11	201
$\frac{1}{4}$″	10	207

Note: Garlock 179 is not made in $\frac{1}{32}$″ thickness.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 95 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/95

Neoprene Sheets

Construction—The Garlock Sheet Packings described on this page are all made of neoprene and carbon black compounds and differ from each other only in the hardness of the finished material. The harder materials generally are employed on precision-finished flanges and where maximum resistance to gasket flow under heavy bolt loads is required. When bolt loads are light or when flanges are in poor condition the softer gasketing materials are desirable. The approximate durometer hardnesses of these neoprene sheets are:

GARLOCK 7300—90 duro.

GARLOCK 7797—80 duro.

GARLOCK 7986—60 duro.

GARLOCK 8312—50 duro.

Form—Garlock 7300 Sheet is regularly produced in 40″ width and in thicknesses from $\frac{1}{32}$″ to $\frac{1}{4}$″ inclusive. Standard roll quantities are shown in the table below.

Garlock 7797 Sheet is regularly manufactured in 40″ width and in thicknesses from $\frac{1}{32}$″ to $\frac{1}{4}$″ inclusive. Standard roll quantities are shown in the table below.

Garlock 7986 Sheet is regularly produced in thicknesses from $\frac{1}{16}$″ to $\frac{1}{4}$″ inclusive and in 40″ width, packaged in roll quantities as shown in the table below. This material is also made in $\frac{1}{32}$″ thickness in sheets 53″ square.

Garlock 8312 Sheet is regularly produced in thicknesses from $\frac{1}{16}$″ to $\frac{1}{4}$″ inclusive and in 40″ width, packaged in roll quantities as shown in the table below. This material is also made in $\frac{1}{32}$″ thickness in sheets 53″ square.

NEOPRENE SHEET—Standard Roll Quantities

Standard Thickness	Garlock 7300		Garlock 7797		Garlock 7986		Garlock 8312	
	Linear Yards	Pounds (approx.)	Linear Yards	Pounds (approx.)	Linear Yards	Pounds (approx.)	Linear Yards	Pounds (approx.)
$\frac{1}{32}$″	44	103	44	99	*	4	*	4
$\frac{1}{16}$″	44	205	44	198	44	193	44	196
$\frac{3}{32}$″	29	203	29	196	29	191	29	193
$\frac{1}{8}$″	22	205	22	198	22	193	22	196
$\frac{5}{32}$″	18	210	18	203	18	198	18	200
$\frac{3}{16}$″	15	210	15	203	15	198	15	200
$\frac{7}{32}$″	13	212	13	205	13	200	13	202
$\frac{1}{4}$″	11	205	11	198	11	193	11	196

*Weight shown is for one sheet 53″ square

FOR . . .

Gasketing against non-aromatic petroleum, fatty oils or solvents (except those of the aromatic, chlorinated or ketone types) at temperatures up to 300° F.

ON . . .

Flanged joints where the oil resistant qualities of a neoprene gasketing are required.

The compounds from which these sheets are made are also manufactured in ring, gasket and strip forms and in molded and extruded shapes.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 96 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/96

Buna-N Rubber Sheets

FOR . . .

Gasketing against oils and solvents (including aromatic types to a limited extent but generally excluding the chlorinated and ketone types) at temperatures up to 300° F.

ON . . .

Flanged joints where the high temperature, oil-resistant qualities of a Buna-N rubber gasketing are required.

The compounds from which these Buna-N sheets are made are also manufactured in ring, gasket and strip forms and in molded and extruded shapes.

Construction—The Garlock Sheet Packings described on this page are all made of Buna-N, carbon black compounds and differ from each other only in the hardness of the finished material.

The harder materials generally are used on precision-finished flanges and where maximum resistance to gasket flow under heavy bolt loads is required. When bolt loads are light or where flanges are in poor condition the softer gasketing materials are desirable.

The approximate durometer hardnesses of these Buna-N sheets are:

GARLOCK 8452—90 duro.
GARLOCK 8459—80 duro.
GARLOCK 8495—70 duro.
GARLOCK 8474—60 duro.

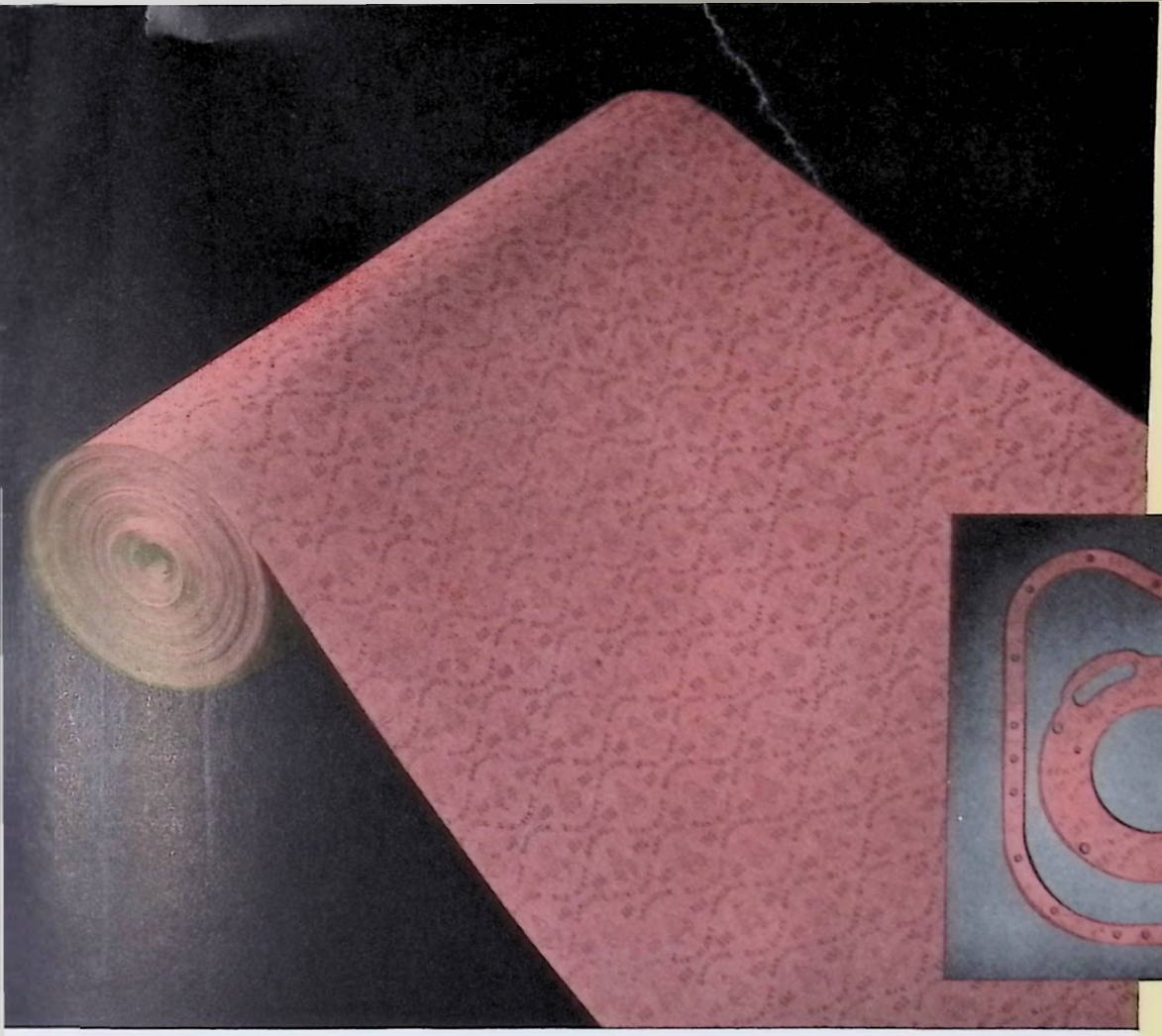
Form—Garlock 8452, 8459, 8495 and 8474 sheet packings are regularly produced in standard 40″ width and in thicknesses from $\frac{1}{16}$″ to $\frac{1}{4}$″ inclusive, packaged in roll lots as shown in the table below. These materials are also available in $\frac{1}{32}$″ thickness in sheets 53″ square.

BUNA-N SHEETS—Standard Roll Quantities

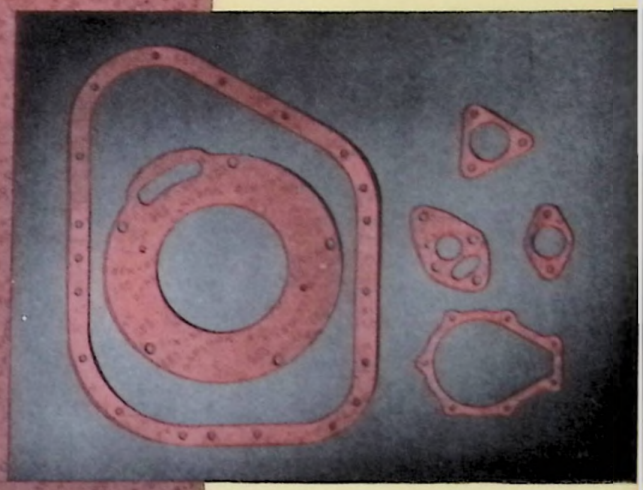
Standard Thickness	Garlock 8452		Garlock 8459		Garlock 8495		Garlock 8474	
	Linear Yards	Pounds (approx.)	Linear Yards	Pounds (approx.)	Linear Yards	Pounds (approx.)	Linear Yards	Pounds (approx.)
$\frac{1}{32}$″	*	4¼	*	4	*	3¾	*	3½
$\frac{1}{16}$″	44	193	48	197	48	189	48	184
$\frac{3}{32}$″	29	191	32	197	32	189	32	184
$\frac{1}{8}$″	22	193	24	197	24	189	24	184
$\frac{5}{32}$″	18	198	19	195	19	187	19	182
$\frac{3}{16}$″	15	198	16	197	16	189	16	181
$\frac{7}{32}$″	13	200	14	201	14	193	14	188
$\frac{1}{4}$″	11	193	12	197	12	189	12	184

*Weight shown is for one sheet 53″ square.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 97 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/97



GARLOCK 660 SHEET



GARLOCK 661 GASKETS

Cork-Fibre Sheet

Construction—Garlock 660 Sheet is made by a patented process which combines granulated cork and vegetable fibre into a strong and compressible sheet packing. This material is treated with an oil-resistant binder. In thicknesses in excess of $\frac{1}{16}$" the sheet is of plied construction.

Forms—Garlock 660 is regularly supplied in standard 36" width and in thicknesses from .010" to ½". Thicknesses up to $\frac{1}{8}$" are produced in roll lots as shown in the table below. Thicknesses of $\frac{1}{8}$" or greater are supplied in sheets 36" square.

Garlock 661 Gaskets are cut from Garlock 660 Sheet and are made in any size or shape fabricated to the customer's specifications.

GARLOCK 660 Sheet		
Standard Thickness	Standard Roll Quantities	
	Linear Yards	Pounds (approx.)
.010"	100	46
.015" ($\frac{1}{64}$")	50	26
.021"	50	41
.032" ($\frac{1}{32}$")	50	54
.047" ($\frac{3}{64}$")	50	87
.062" ($\frac{1}{16}$")	25	47
.095" ($\frac{3}{32}$")	25	78
.125" ($\frac{1}{8}$")	36" Sq. Sheet	3.75 (per sheet)

FOR . . .

Gasketing against oils and solvents at temperatures up to 212° F.

ON . . .

Flanged joints of gear cases, crankcases, oil pans and similar applications involving little or no internal pressure and for gasketing on shipping containers.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 98 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/98

Guardian Gaskets

FOR . . .

Steam, oils, gases or liquids at the highest pressures and at temperatures up to 1000° F.

ON . . .

Pipe flanges; boiler manhole, handhole and tube plates; oil refinery equipment or any other application where operating conditions are extremely severe.

Construction—Garlock 555 Guardian Gaskets are constructed of spirally wound strips of zinc-coated rustproof steel alternated with asbestos paper. The inner and outer edges of the gasket are reinforced with a double layer of steel and electrically spot welded.

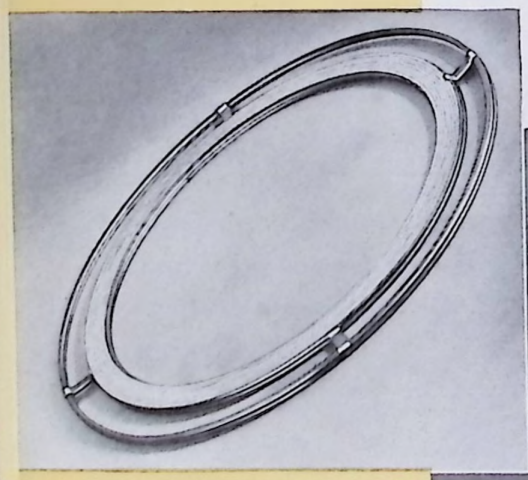
The metal strip used in Guardian Gaskets is formed into a cross sectional shape resembling the letter M but with rounded angles. This structural design imparts unusual resiliency and rebound to the gasket.

Form—Garlock Guardian Gaskets are made in round, oval, square, diamond and other shapes, fabricated to the customer's specifications. These gaskets are not made with bolt holes or in shapes with re-entrant angles.

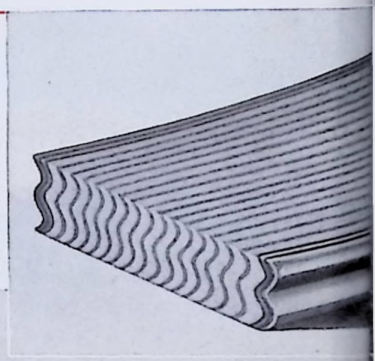
Standard thickness is $\frac{3}{16}$".

Centering Ring—When so ordered these gaskets are supplied with an attached steel centering ring of the proper diameter to fit inside the bolts of a flanged pipe joint. This arrangement is advantageous on many applications. For example, when gaskets are to be applied to raised face flanges the centering ring permits usage of a gasket having the same I. D. and O. D. as the raised face of the flange and at the same time insures correct centering of the gasket in the joint.

GARLOCK 555 GASKETS



GUARDIAN GASKET WITH CENTERING RING



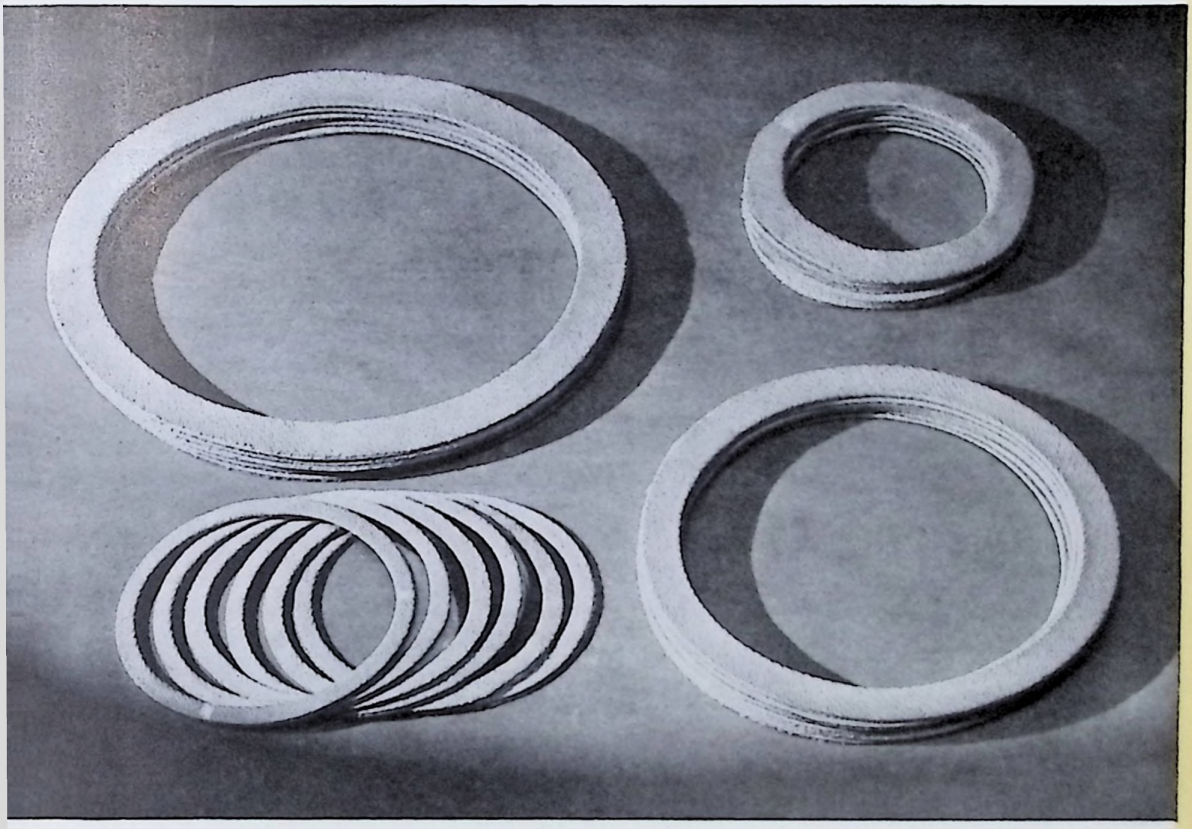
Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 99 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/99

Folded Asbestos Gaskets

GARLOCK 604

Construction—Garlock 604 Gaskets are made of wire-inserted Garlock asbestos cloth treated with a heat-resistant, rubber cement. The cloth is folded, formed and pressed to produce gaskets of the required size and shape.

Form—Garlock 604 Gaskets are produced in any practicable size, shape and thickness, fabricated to the customer's specifications.



GARLOCK 604 GASKETS

FOR...

Gasketing against steam, gases, water or aqueous solutions (except strong mineral acids) at temperatures up to 600° F.

ON...

Boiler manholes and handholes and on flanged joints such as autoclaves, column stills or other equipment where conditions require a soft gasketing material.

GARLOCK 7849

Construction—Garlock 7849 Gaskets are made of pure African blue asbestos cloth treated with a special neoprene cement. The cloth is folded, formed and pressed to produce gaskets of the required size and shape.

Form—Garlock 7849 Gaskets are made in any practicable size, shape and thickness, fabricated to the customer's specifications.

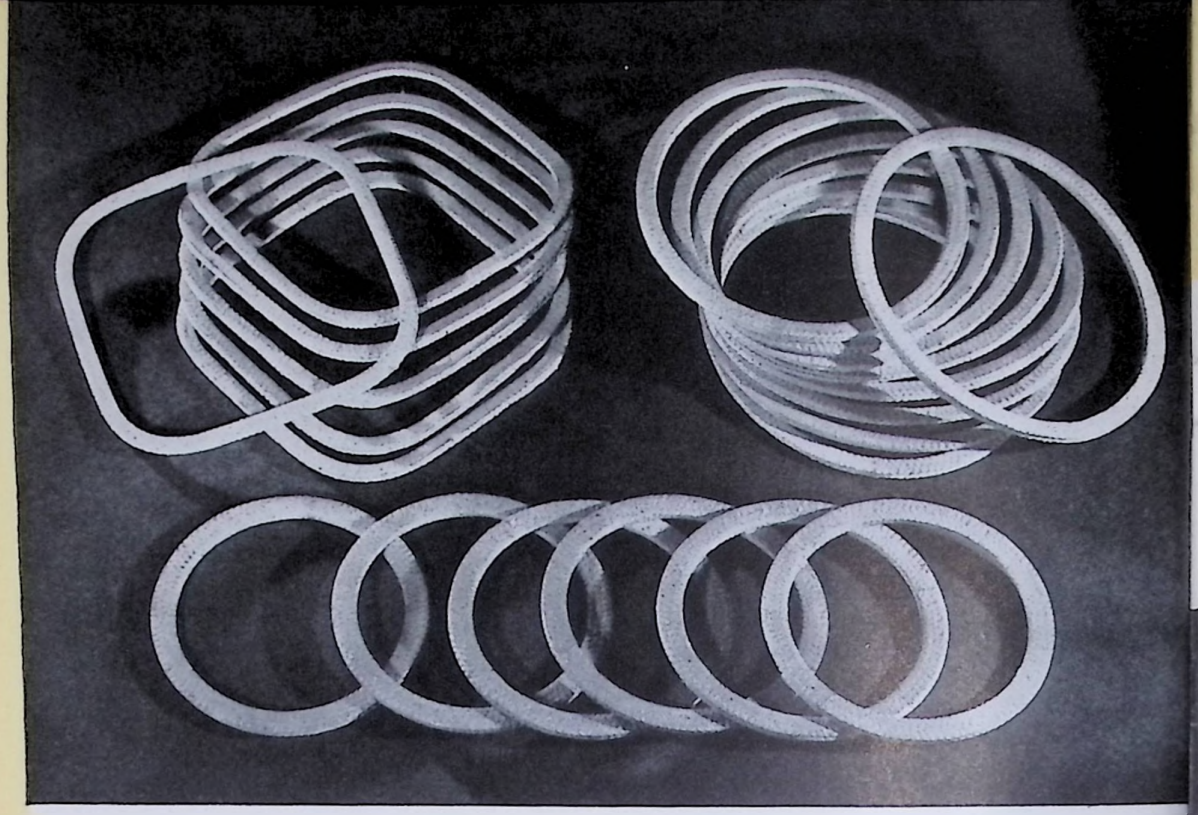
FOR...

Gasketing against strong mineral acids, alone or in presence of oils or organic solvents.

ON...

Flanged joints of autoclaves, column stills or other equipment where a soft, acid-resistant gasketing is required.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 100 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/100



GARLOCK 601, 602 and 608 GASKETS

Folded Asbestos Gaskets

GARLOCK 601

FOR...

Tube plates of Heine water tube boilers.

Construction—Garlock 601 Gaskets are made of Garlock wire-inserted asbestos cloth treated with a heat-resistant rubber cement, folded, formed and pressed into shape. In round shape these gaskets are made seamless and in oval shape they are made with a taped joint.

Form—Garlock 601 Gaskets are made to fit round and oval tube plates of Heine boilers. Standard size for round gaskets is 3½" I. D. x 4¼" O. D. x ⅛" thick. Standard size for oval gaskets is 3½" x 4⅝" I. D. x ⅜" flange x ⅛" thick.

GARLOCK 602

FOR...

Tube plates of B. & W. water tube boilers.

Construction—Garlock 602 Gaskets are of seamless construction, made of Garlock, wire-inserted asbestos cloth treated with a heat-resistant rubber cement, folded, formed and pressed into shape.

Form—Garlock 602 Gaskets are made to fit oval and square tube plates on B. & W. boilers. Standard size for oval gaskets is 4⅜" x 5⅜" I.D. x $\frac{5}{16}$" flange x ⅛" thick.

Standard size for square gaskets is 4¾" x 4⅞" I.D. x ¼" flange x ⅛" thick.

GARLOCK 608

FOR...

Tube plates of Edgemoor water tube boilers.

Construction—Garlock 608 Gaskets are of seamless construction, made of Garlock, wire-inserted asbestos cloth treated with a heat-resistant, rubber cement, folded formed and pressed into shape.

Form—Garlock 608 Gaskets are made in a standard oval size, 4$\frac{1}{16}$" x 5⅛" I.D. x ½" flange x ⅛" thick to fit Edgemoor boiler tube plates.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 101 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/101

Asbestos Gasketing Materials

GARLOCK 612 TAPE

Construction—Garlock 612 Tape is made of wire-inserted Garlock asbestos cloth, treated with a heat-resistant rubber cement, folded, formed and pressed to the required width and thickness.

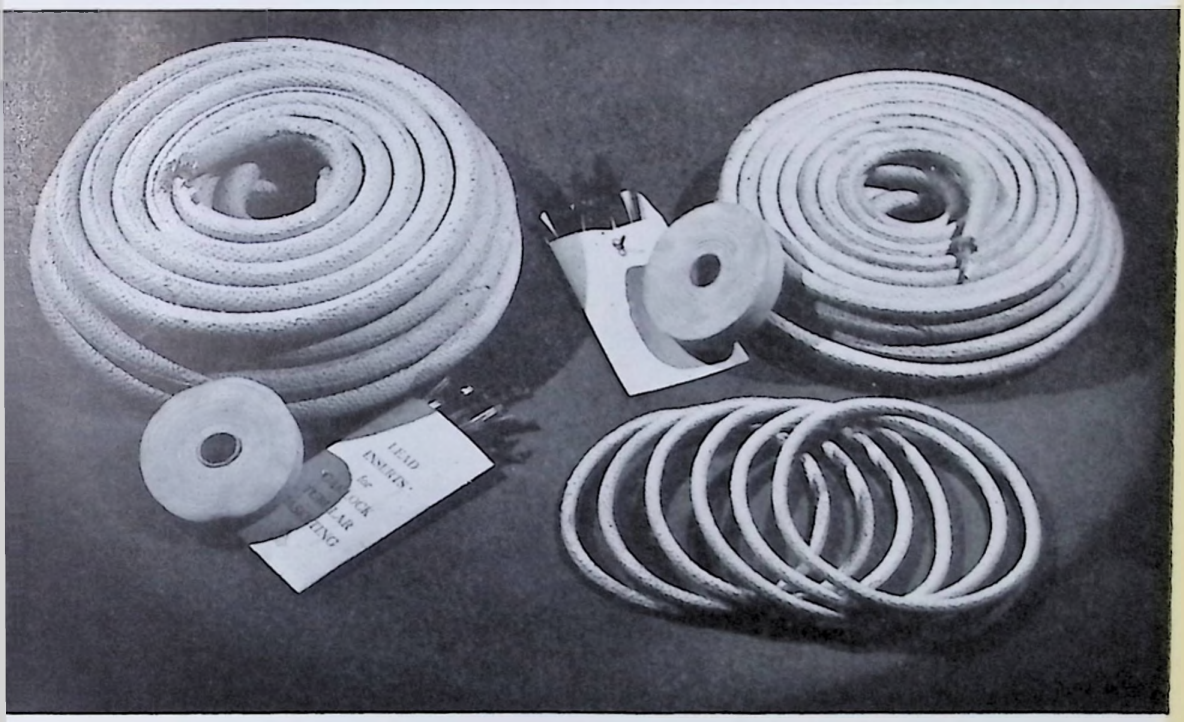
Form—Garlock 612 Tape is produced in any practicable width and in thicknesses from $\frac{3}{32}$" up. It is available in continuous lengths as specified by the customer.

FOR . . .

Gasketing against steam, gases, water or aqueous solutions (except strong mineral acids) at temperatures up to 600° F.

ON . . .

Flanged joints, especially those of large diameter, such as autoclaves, cylinder heads or other equipment requiring a soft, asbestos gasketing.



GARLOCK 610 and 611

GARLOCK 610 GASKETING—GARLOCK 611 GASKETS

Construction—Garlock 610 Gasketing is made of wire-inserted, Garlock asbestos cloth, treated with a heat-resistant rubber cement and formed into round cross section. Sizes $\frac{3}{8}$" and above are made with a hollow center.

Forms—Garlock 610 Gasketing is made in sizes from $\frac{1}{4}$" to 1" inclusive packaged as shown in the table below. Each box contains friction tape and lead connectors for use in forming gaskets. (Lead connectors not supplied for sizes below $\frac{3}{8}$".)

Garlock 611 Gaskets are made from 610 material and are supplied in sizes as specified by the customer. These gaskets are not made with a hollow center.

FOR . . .

Gasketing against steam, gases, water or aqueous solutions (except strong mineral acids) at temperatures up to 600° F.

ON . . .

Flanged joints where a compressible asbestos gasket is required. Usually applied to grooved flanges.

GARLOCK 610

Packing Size	¼"	⅜"	½"	⅝"	¾"	⅞"	1"	1⅛"	1¼"	1⅜"	1½"	1⅝"	1¾"	1"
Coils per box	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Feet per box	50	50	50	50	50	50	50	37½	37½	37½	37½	37½	37½	37½
Pounds per box (approx.)	2¾	3½	4¾	5¾	6¾	8	9¼	8¼	9¼	10½	12¼	11½	17¼	

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 102 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/102

Asbestos Neoprene Gasketing Materials

FOR...

Gasketing against oils or solvents at high pressures and at temperatures up to 300° F.

ON...

Flanged joints of oil refinery equipment or other applications requiring a soft, asbestos gasketing.

GARLOCK 8240

Construction—Garlock 8240 is a gasketing tape made of wire-inserted Garlock asbestos cloth, treated with an oil-resistant neoprene cement. It is folded, formed and pressed to the desired width and thickness.
Form—Garlock 8240 Tape is produced in any practicable width and in thicknesses from $\frac{1}{16}$" up. It is usually supplied in continuous lengths on reels.

Garlock 8240 Gaskets, formed from this tape, are manufactured to customer's specifications.

FOR...

Gasketing against oils or solvents at high pressures and at temperatures up to 300° F.

ON...

Heater doors or flanged joints—usually installed in a groove.

GARLOCK 7588

Construction—Garlock 7588 is a gasketing made in coil form of wire-inserted, Garlock asbestos cloth, treated with a neoprene cement and formed to the required size and cross sectional shape.
Form—Garlock 7588 is regularly produced in round or square cross-section and in sizes from $\frac{1}{4}$" to 1" inclusive, packaged as shown in the table below. Also available in rectangular cross section, made to customer's specified sizes.

This material is also available in gasket form, manufactured to customer's specifications.

GARLOCK 7588

Packing Size		$\frac{1}{4}$"	$\frac{5}{16}$"	$\frac{3}{8}$"	$\frac{7}{16}$"	$\frac{1}{2}$"	$\frac{9}{16}$"	$\frac{5}{8}$"	$\frac{11}{16}$"	$\frac{3}{4}$"	$\frac{13}{16}$"	$\frac{7}{8}$"	$\frac{15}{16}$"	1"
Coils per Box		2	2	2	2	2	2	2	2	2	2	2	2	2
Feet per box		50	50	50	50	50	50	50	37½	37½	37½	37½	37½	37½
Pounds per box (approx.)	Round	2¼	3¼	4½	5¾	7	8¼	9½	8½	9½	10¾	12½	14¾	17½
	Square	3	4	5¼	6½	8	9½	11	9¾	11¼	12¾	15	17¼	20

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 103 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/103

Gasketing Materials

GARLOCK 7051

Construction—Garlock 7051 Gasketing material is made of wire-inserted, Garlock asbestos cloth treated with a heat-resistant rubber cement and formed to the required size and cross sectional shape.

Form—Garlock 7051 is produced in round or square cross section in standard sizes from ¼″ to 1″ inclusive as shown in the table below. This material is also available in rectangular cross section to customer's specified sizes.

Gaskets formed from this material are produced to customer's specifications.

GARLOCK 7051

Packing Size		¼″	5/16″	3/8″	7/16″	½″	9/16″	5/8″	11/16″	¾″	13/16″	7/8″	15/16″	1″
Coils per box		2	2	2	2	2	2	2	2	2	2	2	2	2
Feet per box		50	50	50	50	50	50	50	37½	37½	37½	37½	37½	37½
Pounds per box (approx.)	Round	2¼	3¼	4½	5¾	7	8¼	9½	8½	9½	10¾	12½	14¾	17½
	Square	3	4	5¼	6½	8	9½	11	9¾	11¼	12¾	15	17¼	20

FOR...

Gasketing against steam, gases, water or aqueous solutions (except strong mineral acids) at temperatures up to 600° F.

ON...

Heater doors or other equipment—usually installed in grooved flanges.

GARLOCK 5534

Construction—Garlock 5534 is made of high grade cotton yarn, braided square. It is lubricated with a special vegetable oil lubricant.

Form—Garlock 5534 is produced in any practicable packing size to customer's specifications. It is packaged in coil lengths in boxes or in continuous lengths on reels as specified. Also available in rings with square cut joints.

FOR...

Use against cold oils and solvents.

ON...

Hatches on marine tankers.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 104 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/104

Gasketings

FOR...

Gasketing against hot or cold water, aqueous solutions (except strong acids) and low pressure steam.

ON...

Boiler manholes and handholes, heater doors, large tanks and similar applications.

GARLOCK 28 GASKETING—GARLOCK 281 GASKETS

Construction—Garlock 28 Gasketing is made of a special Garlock red rubber compound, formed round in cross section. This material is manufactured with a hollow center which adds to its resiliency. It has a durometer hardness of approximately 80.
Forms—Garlock 28 is regularly produced in 12½ foot lengths and in sizes from ⅜" to 1" inclusive, packaged as shown in the table below. Each box contains friction tape and lead connectors for making gaskets.

Garlock 281 Gaskets are formed from this material and are produced in sizes as specified by the customer.

GARLOCK 28

Packing Size	⅜"	7/16"	½"	9/16"	⅝"	11/16"	¾"	13/16"	⅞"	15/16"	1"
Coils per box	4	4	4	3	3	2	2	1	1	1	1
Feet per box	50	50	50	37½	37½	25	25	12½	12½	12½	12½
Pounds per box (approx.)	3½	4½	5¾	6½	8	6	7¾	4½	5¼	6	6¾

FOR...

Gasketing against hot or cold water, aqueous solutions (except strong acids) and low pressure steam.

ON...

Boiler manholes and handholes, heater doors, large tanks and similar applications.

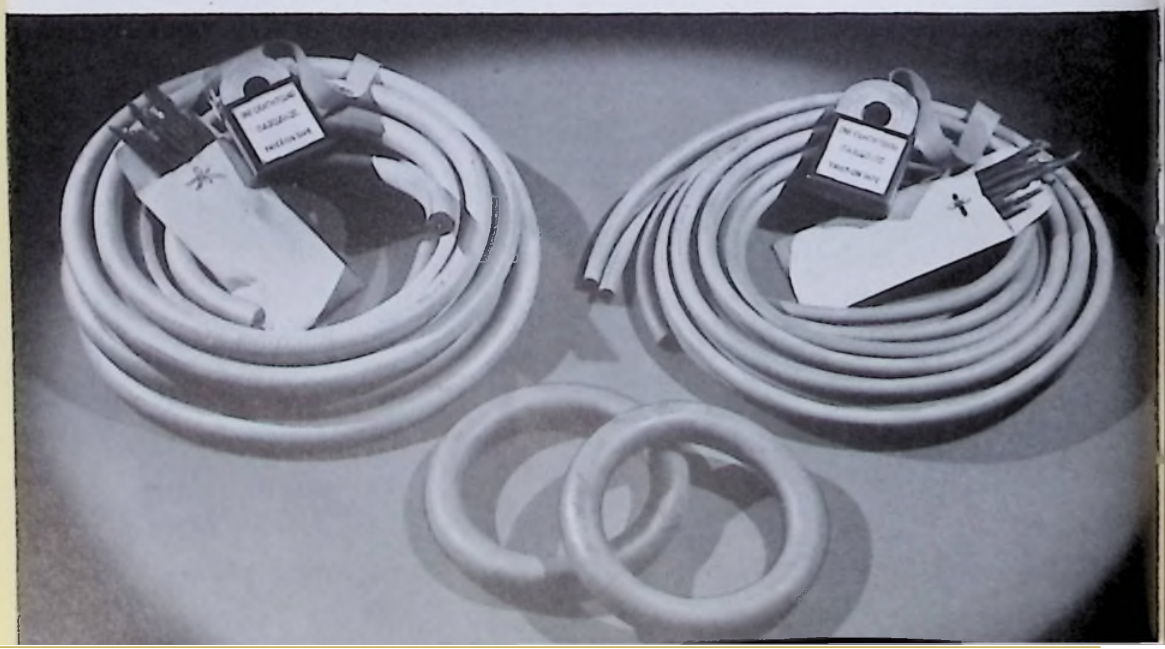
GARLOCK 500 GASKETING—GARLOCK 501 GASKETS

Construction—Garlock 500 Gasketing is a round gasketing material made of a special Garlock red rubber compound of approximately 80 durometer hardness, formed around a hollow, lead tube center.
Forms—Garlock 500 is regularly produced in 12½ foot lengths and in sizes from ⅜" to 1" inclusive as shown in the table below. Each box contains friction tape and lead connectors for use in making gaskets.

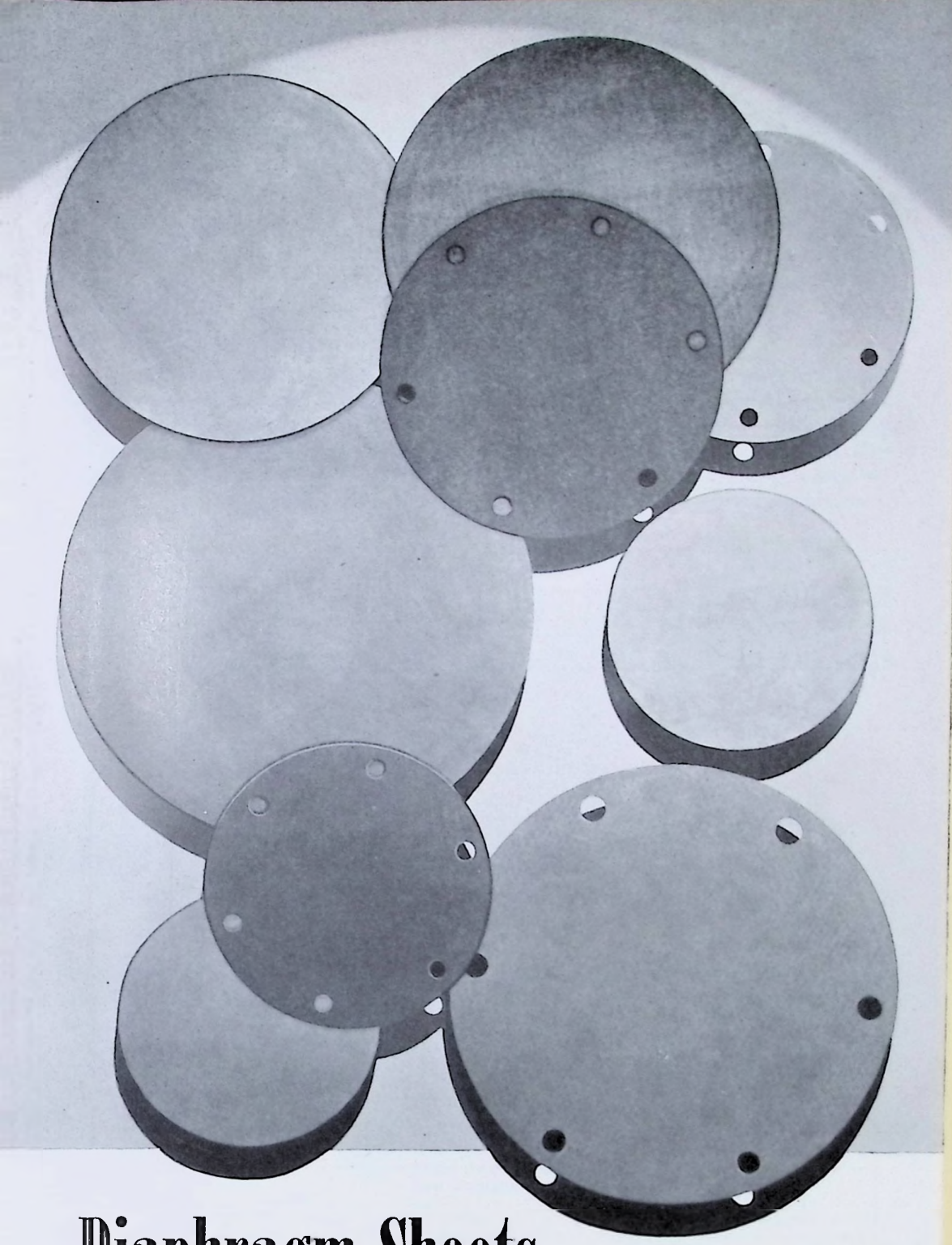
Garlock 501 Gaskets are made from Garlock 500 in sizes as specified.

GARLOCK 500

Packing Size	⅜"	7/16"	½"	9/16"	⅝"	11/16"	¾"	13/16"	⅞"	15/16"	1"
Coils per box	4	4	4	3	3	2	2	1	1	1	1
Feet per box	50	50	50	37½	37½	25	25	12½	12½	12½	12½
Pounds per box (approx.)	6¾	8¼	9¼	8¼	15¼	11½	13	7¾	8½	9¼	10



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 105 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/105



Diaphragm Sheets

Garlock Diaphragm Sheets and cut or molded diaphragms are made of special rubber or synthetic rubber compounds, developed specifically for use in the manufacture of these products. This complete line includes diaphragm materials designed to operate at various pressures and against the several gases and liquids for which diaphragms commonly are employed.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 106 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/106

Rubber Diaphragm Sheets

FOR...

Dry natural gas, air or water at medium pressures.

ON...

Diaphragm motors for valves, switches or similar devices.

GARLOCK 619

Construction—Garlock 619 is made of a high grade black rubber compound with cotton duck insertion. Thicknesses up to 1/8" inclusive contain a single ply of fabric with one additional ply for each 1/16" increase in thickness.

Forms—Garlock 619 is made in standard 44" width and in thicknesses from 1/16" to 1/4" inclusive. Standard roll quantities are shown in the table below.

Cut or molded diaphragms are produced to customer's specifications.

GARLOCK 619							
Standard Thicknesses	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"
Linear Yards per Roll	48	32	24	19	16	14	12
Pounds per Roll (approx.)	202	203	204	202	204	209	204

FOR...

Dry natural gas, air or water at medium or high pressures.

ON...

Diaphragm motors for valves, switches or similar devices.

GARLOCK 7104

Construction—Garlock 7104 is made of a high grade black rubber compound with strong, cotton duck insertion. Thicknesses up to 1/8" inclusive contain a single ply of fabric with one additional ply for each 1/16" increase in thickness.

Forms—Garlock 7104 is made in standard 44" width and in thicknesses from 1/16" to 1/4" inclusive. Standard roll quantities are shown in the table below.

Diaphragms cut or molded from this material are produced to the customer's specifications.

GARLOCK 7104							
Standard Thicknesses	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"
Linear Yards per Roll	48	32	24	19	16	14	12
Pounds per Roll (approx.)	202	203	204	202	203	208	203

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 107 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/107

Rubber Diaphragm Sheets

GARLOCK 7998

Construction—Garlock 7998 is made of a high grade rubber compound with strong, cotton duck insertion.

Thicknesses up to 1/8" inclusive contain a single ply of fabric with one additional ply provided for each 1/16" increase in thickness.

Forms—Garlock 7998 is made in standard 44" width and in thicknesses from 1/16" to 1/4" inclusive, packaged in standard roll quantities as shown in the table below. Cut or molded diaphragms are fabricated to the customer's specifications.

GARLOCK 7998

Standard Thicknesses	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"
Linear Yards per Roll	48	32	24	19	16	14	12
Pounds per Roll (approx.)	194	193	194	192	193	197	195

FOR...

Dry natural gas, air or water at medium or high pressures.

ON...

Diaphragm motors for valves, switches and similar devices, especially on applications exposed to radiant heat.

GARLOCK 7543

Construction—Garlock 7543 is made of a "pure gum" brown rubber compound with a single insertion of cotton sheeting. It is a very high grade, soft diaphragm stock.

Forms—Garlock 7543 is made in 1/32" and 1/16" thicknesses and in standard 44" width, packaged in rolls containing 48 linear yards. Weight per roll is approximately 88 pounds in 1/32" thickness and 169 pounds in 1/16" thickness.

Diaphragms cut or molded from this material are made to the customer's specifications.

FOR...

Dry natural gas, air or water at low pressures.

ON...

Household gas regulators, air pressure regulators or other applications requiring great sensitivity.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 108 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/108

Thiokol Rubber Diaphragm Sheets

FOR...

Wet manufactured gas and solvents (especially those of the aromatic and chlorinated types) at medium or high pressures.

ON...

Diaphragm motors for valves and switches and similar applications.

GARLOCK 7598 (Thiokol)

Construction—Garlock 7598 is made of a Thiokol rubber compound with heavy cotton duck insertion.

Thicknesses up to $\frac{1}{8}$″ inclusive contain a single ply of fabric with one additional ply for each $\frac{1}{16}$″ increase in thickness.

Forms—Garlock 7598 is made in thicknesses from $\frac{1}{16}$″ to $\frac{1}{4}$″ inclusive. Maximum size of sheets is 46″ x 53″. Approximate weight per sheet is shown in the table below. Cut or molded diaphragms are fabricated to the customer's specifications.

GARLOCK 7598—Sheets 46″ x 53″

Standard Thicknesses	$\frac{1}{16}$″	$\frac{3}{32}$″	$\frac{1}{8}$″	$\frac{5}{32}$″	$\frac{3}{16}$″	$\frac{7}{32}$″	$\frac{1}{4}$″
Pounds per Sheet (approx.)	7¾	11½	15½	19½	23	27	31

FOR...

Wet manufactured gas and solvents (especially those of the aromatic and chlorinated types) at low pressures.

ON...

Household gas regulators, air pressure regulators, automotive fuel pumps or other applications requiring great sensitivity.

GARLOCK 7603 (Thiokol)

Construction—Garlock 7603 is made of a Thiokol rubber compound with a single ply insertion of high grade cotton sheeting.

Forms—Garlock 7603 is made in standard 44″ width and in $\frac{1}{32}$″ thickness only. In sheet form this material is packaged in rolls containing 40 linear yards and weighing approximately 100 pounds.

Cut or molded diaphragms are fabricated to the customer's specifications.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 109 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/109

Neoprene Rubber Diaphragm Sheets

GARLOCK 7992 (Neoprene)

Construction—Garlock 7992 is made of a neoprene rubber compound with strong, cotton duck insertion. Thicknesses up to 1/8" inclusive contain a single ply of fabric with one additional ply provided for each 1/16" increase in thickness.

Forms—Garlock 7992 is made in standard 44" width and in thicknesses from 1/16" to 1/4" inclusive. It is packaged in roll lots as shown in the table below.

Cut or molded diaphragms are fabricated to the customer's specifications.

GARLOCK 7992							
Standard Thicknesses	1/16"	3/32"	1/8"	5/32"	3/16"	7/32"	1/4"
Linear Yards per Roll	44	29	22	18	15	13	11
Pounds per Roll (approx.)	198	197	198	202	203	205	198

FOR...

Wet natural gas, gasoline, oils or refrigerant gases at medium or high pressures.

ON...

Diaphragm motors for valves, switches and similar devices.

GARLOCK 7430 (Neoprene)

Construction—Garlock 7430 is made of neoprene rubber compound with a single ply insertion of high grade cotton sheeting.

Forms—Garlock 7430 is made in standard 44" width and in 1/32" thickness only. It is packaged in rolls containing 40 linear yards and weighing approximately 95 pounds.

Cut or molded diaphragms are fabricated to the customer's specifications.

FOR...

Wet natural gas, gasoline, oils or refrigerant gases at low pressures.

ON...

Household gas regulators, air pressure regulators and similar applications where great sensitivity is required.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 110 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/110

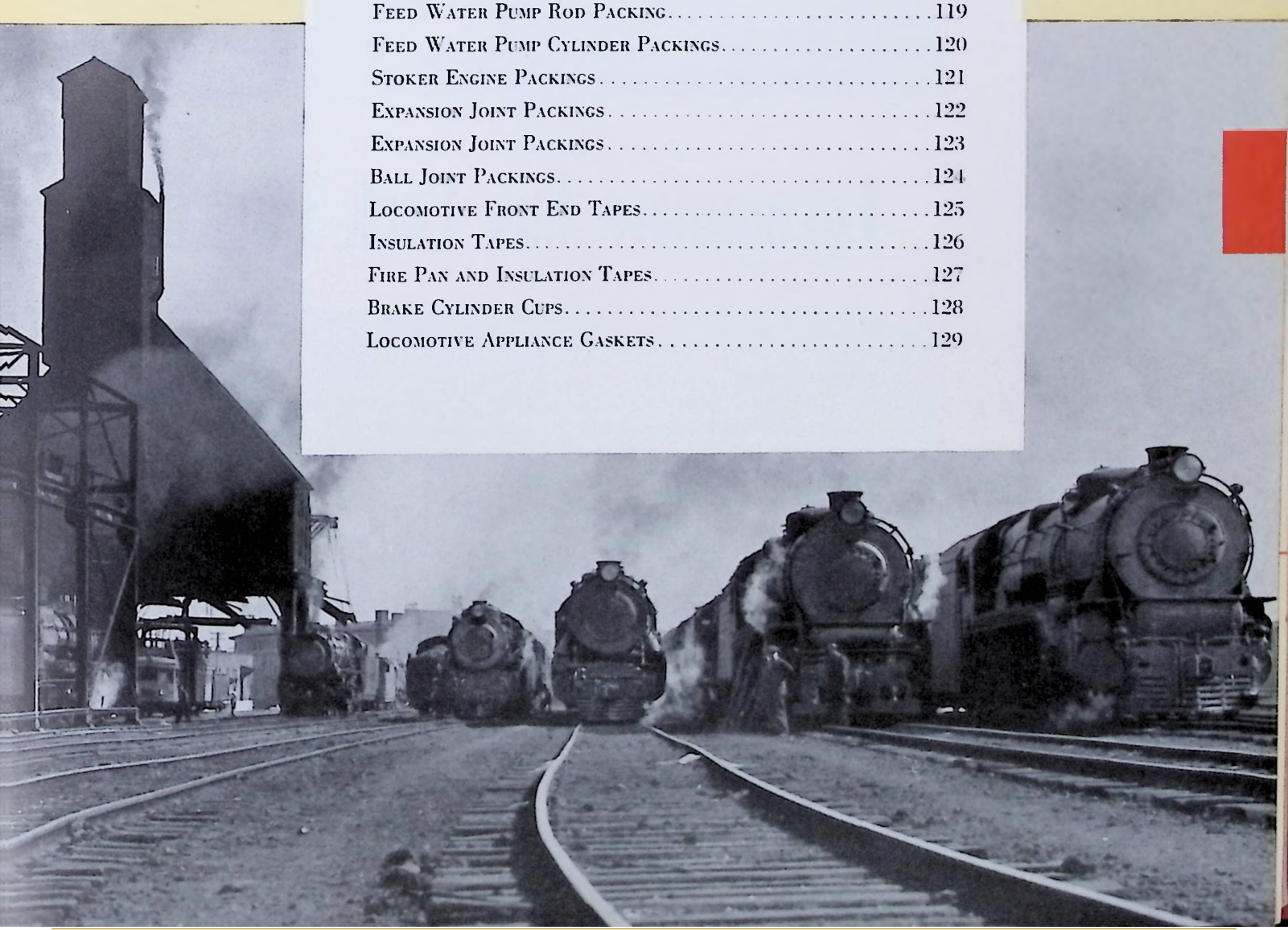
RAILROAD



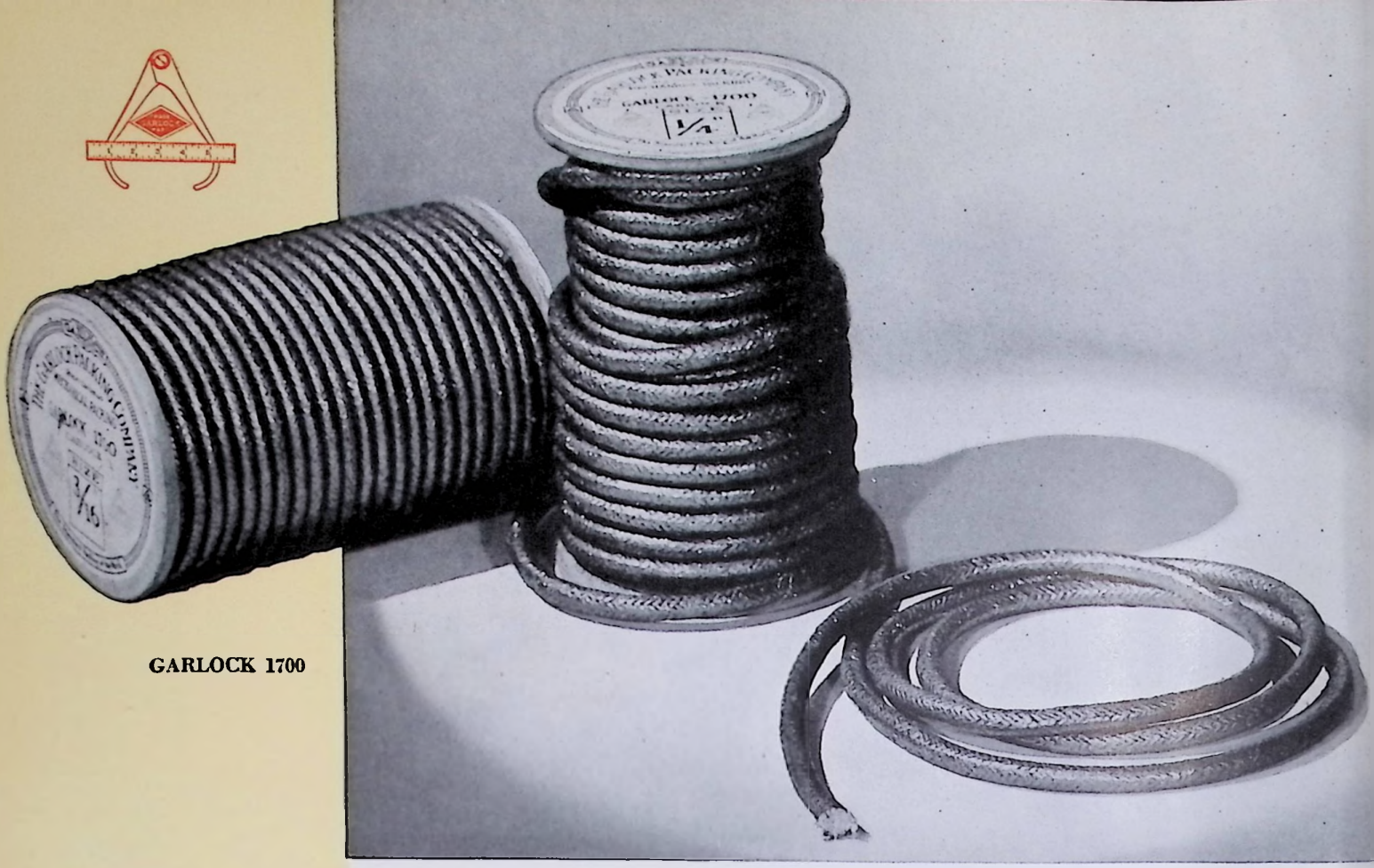
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/111

PACKINGS

	PAGE
Locomotive Cab Cock Packing	112
Chevron Throttle Packing	113
American Multiple Throttle Packings	114
Gauge Cock Discs—Throttle Packing	115
Air Pump Packings	116
Power Reverse Gear Rod Packings	117
Power Reverse Gear Cylinder Packings	118
Feed Water Pump Rod Packing	119
Feed Water Pump Cylinder Packings	120
Stoker Engine Packings	121
Expansion Joint Packings	122
Expansion Joint Packings	123
Ball Joint Packings	124
Locomotive Front End Tapes	125
Insulation Tapes	126
Fire Pan and Insulation Tapes	127
Brake Cylinder Cups	128
Locomotive Appliance Gaskets	129



Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/112



GARLOCK 1700

Locomotive Cab Cock Packing

Construction—Garlock 1700 Locomotive Cab Cock Packing is braided from long-fibre Canadian asbestos yarn; it is round in cross section. This material contains no internal lubricant but is treated with a surface coating of graphite.

Form—Garlock 1700 is manufactured in sizes from $\frac{1}{16}$" to $1\frac{5}{8}$" inclusive advancing by sixteenths. In sizes up to $\frac{3}{8}$" inclusive it is regularly packaged on 1 lb., 2 lb. or 5 lb. spools; $\frac{7}{16}$" and $\frac{1}{2}$" sizes are packaged on 2 lb. or 5 lb. spools and sizes from $\frac{1}{2}$" to $\frac{3}{4}$", on 5 lb. spools only. Sizes above $\frac{3}{4}$" are not put up on spools. Approximate footage per pound is shown in the table below.

GARLOCK 1700												
Packing Size	$\frac{1}{16}$"	$\frac{1}{8}$"	$\frac{3}{16}$"	$\frac{1}{4}$"	$\frac{5}{16}$"	$\frac{3}{8}$"	$\frac{7}{16}$"	$\frac{1}{2}$"	$\frac{9}{16}$"	$\frac{5}{8}$"	$\frac{11}{16}$"	$\frac{3}{4}$"
Feet per pound (approx.)	440	150	70	45	34	22	16	12	9	7	6	5

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 113 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/113

Chevron Throttle Packing

Construction—Garlock 530 Chevron Throttle Packing is manufactured of special Garlock asbestos cloth treated with a rubber compound and molded into the unique and exclusive Chevron shape. Because of the automatic action of these hinge-like Chevron rings very little gland pressure is required. The result is a leakless, easy-operating throttle.

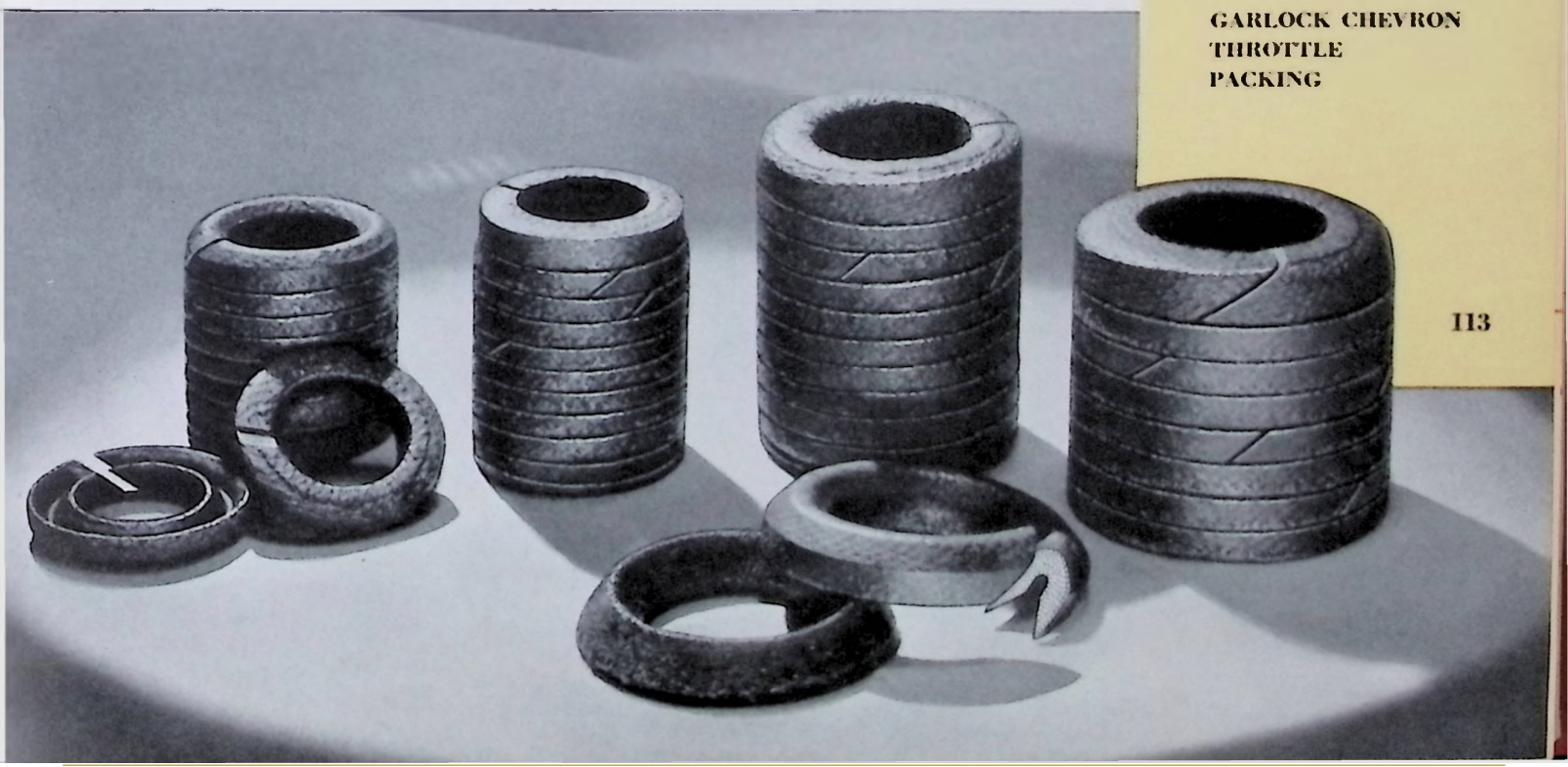
Form—Chevron Throttle Packing is furnished in complete sets only, molded to throttle stem and stuffing box sizes. Each set contains a top and bottom adapter ring and a sufficient number of intermediate Chevron rings to obtain the required depth. Data concerning the depth of Chevron sets appears on page 77.

Chevron Throttle Packing is frequently installed with a grease lantern ring and a connection for a grease gun. This type of installation permits the introduction of a lubricant into the stuffing box which makes for longer packing life, reduces friction to a minimum and increases the ease with which the throttle can be opened and closed.

Economy—Because of its longer life Chevron Throttle Packing is a most economical throttle stem packing. Furthermore, Chevron throttle sets should not exceed 3″ in depth and sets shallower than 3″ frequently are desirable. Deeper stuffing boxes, therefore, should be bushed accordingly, thus effecting a reduction in the amount of packing required per locomotive.

Application—Chevron Throttle Packing must be applied with the recess or V in the Chevron rings toward the pressure or the bottom of the stuffing box and the apex of the ring pointed to the atmosphere or toward the gland. Apply the bottom ring first, followed by the Chevron rings, which should be applied one at a time and seated properly against the next ring by using a flat tool or stick. Complete the installation by applying the top ring.

Draw up on the gland to make sure the entire set is firmly seated in the stuffing box but do not apply excessive gland pressure at any time. This packing operates best with light gland pressure and the gland should be carefully adjusted with just enough pressure to prevent leakage.



GARLOCK CHEVRON THROTTLE PACKING

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 114 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/114

American Multiple Throttle Packings

GARLOCK 8061

Construction—Garlock 8061 American Multiple Throttle Packing is made of strands of copper floss or tinsel with a shellac binder. Rings are molded into a conical shape and are cut open with a beveled joint.
Form—Garlock 8061 is made in ring form only and is generally supplied in complete sets made up in the proper sizes to pack the several different types of American Multiple Throttles. Sets for Types A, B, C and D throttles are regularly supplied with bronze adapter ring on top end of set but if so specified this adapter ring will be made of 8061 material. Sets for Types E and F throttles are regularly supplied with 8061 adapter rings but bronze adapters are available. These sets are individually boxed.

For replacement service the conical rings only, without the adapter rings, are obtainable.

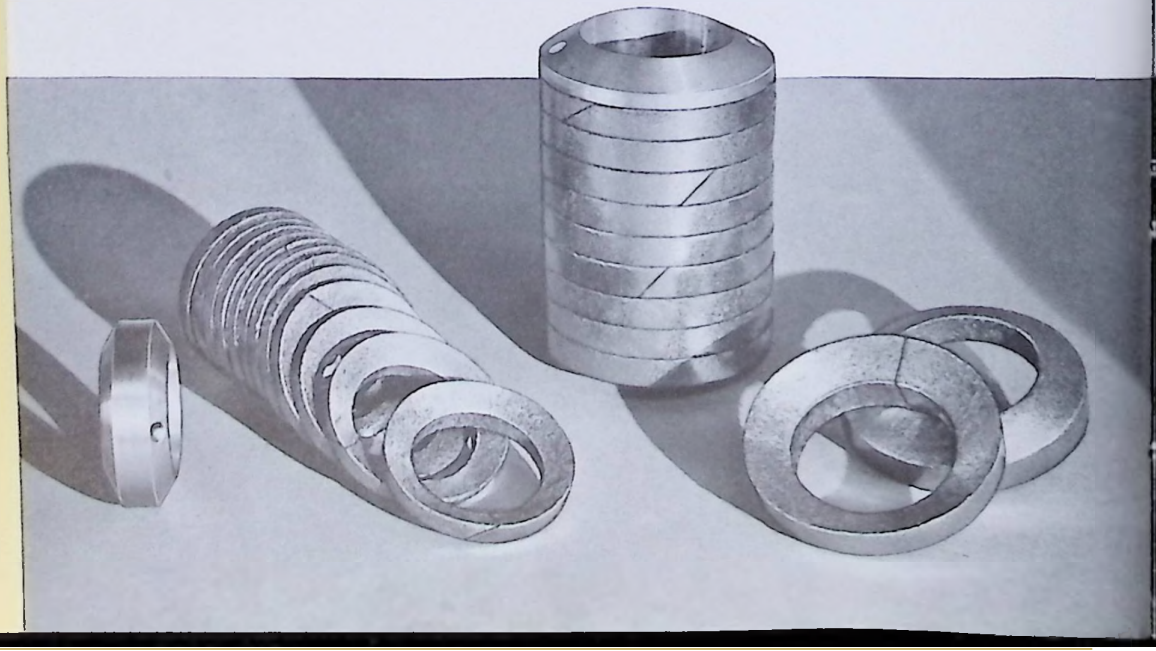
GARLOCK 9001

Construction—Garlock 9001 American Multiple Throttle Packing is made of strands of copper floss or tinsel and a special Garlock rubber binder. Rings are molded into conical shape and are cut open with a beveled joint.
Form—Garlock 9001 is made in ring form only and is generally supplied in complete sets, made up in sizes to pack properly the several different types of American Multiple Throttles. Each set contains a top adapter ring which is made of bronze for Types A, B, C and D throttles and of the 9001 material for Types E and F, unless otherwise specified. Sets are individually boxed.

For replacement service Garlock 9001 conical rings only, without the adapter rings, are obtainable.

GARLOCK 5689

Construction—Garlock 5689, which is a successful packing both on American Multiple Throttles and on Locomotive Air Pumps, is described on page 116.
Form—For American Multiple Throttle service Garlock 5689 is regularly packaged in individual sets, each set consisting of a bronze adapter or end ring, a beveled bottom ring of 5689 material and a sufficient number of 5689 rings, approximately square in cross section, to make up sets of the proper depth to pack the stuffing box.



GARLOCK 8061
GARLOCK 9001

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 115 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/115

Throttle Packing – Gauge Cock Discs



GARLOCK 2000

GARLOCK 2000

Construction—Garlock 2000 Locomotive Throttle Packing is composed of rings of Garlock 200 asbestos packing with rubber back described on page 20.

Form—Garlock 2000 is supplied in sets only and is available in a complete range of sizes to fit all throttle stems and stuffing box diameters and depths. Each set is individually boxed.

GARLOCK 7751 LOCOMOTIVE GAUGE COCK DISCS

Construction—Garlock 7751 Locomotive Gauge Cock Discs are molded of a special asbestos fibre and rubber compound developed for use especially in this severe service.

Form—Garlock 7751 discs are furnished in standard size (1¼" O.D. x ¼" thick x $\frac{17}{32}$" hole) to fit locomotive gauge cocks.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 116 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/116

Locomotive Air Pump Packings

GARLOCK 2200

Construction—Garlock 2200 Locomotive Air Pump Packing is composed of rings of Garlock 200 High Pressure Asbestos Packing (page 20) and Garlock 222 Asbestos Compressor Packing (page 25), formed to size.

Form—Garlock 2200 is supplied in sets to fit the air and steam ends of Westinghouse and New York air pumps. When ordering Garlock 2200 for Westinghouse pumps the size of the pump should be specified and when ordering for New York pumps specify the number of the pump. Garlock 2200 is packaged in individual boxes, each containing sufficient packing for one stuffing box only. Two sets, therefore, are required to completely pack a 9½" Westinghouse pump and 4 sets to completely pack a No. 5 New York pump.

GARLOCK 5689

Construction—Garlock 5689 is made of a shredded metal foil and asbestos fibre plastic mixture treated with vegetable oil, encased in a braided asbestos cover, and surface coated with a special graphite compound. Rings are pressed to specified size and are cut open with a butt joint.

Form—Garlock 5689 is put up in sets to fit the air and steam ends of Westinghouse and New York air pumps. When ordering for Westinghouse pumps the pump size should be specified and when ordering for New York pumps the pump number is required.

Each box of Garlock 5689 contains sufficient packing for one stuffing box. Two boxes or sets are required, therefore, to completely pack a 9½" Westinghouse pump and 4 boxes are required for a complete packing of a No. 5 New York pump.

GARLOCK 2200



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 117 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/117

Power Reverse Gear Rod Packings

Garlock Power Reverse Gear Packings are packaged in sets to fit the piston rods and trunks of gears of all types. The style or styles of Garlock packing recommended and most commonly used on reverse gears of different kinds and types are indicated below.

When ordering power reverse gear packing specify the kind and type of gear, the style of Garlock packing and the number of sets required. If the rod is undersize specify also the rod diameter.



GARLOCK 430 CHEVRON

ALCO GEARS

Types E, G and H—Garlock 430 Chevron (described on page 79)
Type K—Garlock 530 Modified Chevron (a modified form of Garlock 530 Chevron described on page 80)
Garlock 449-S, consisting of Garlock 333 (described on page 40) and Garlock 550 (described on page 41), has been used on old types of Alco gears.

BALDWIN GEARS

Garlock 530 Modified Chevron (a modified form of Garlock 530 Chevron described on page 80)

BARCO GEARS

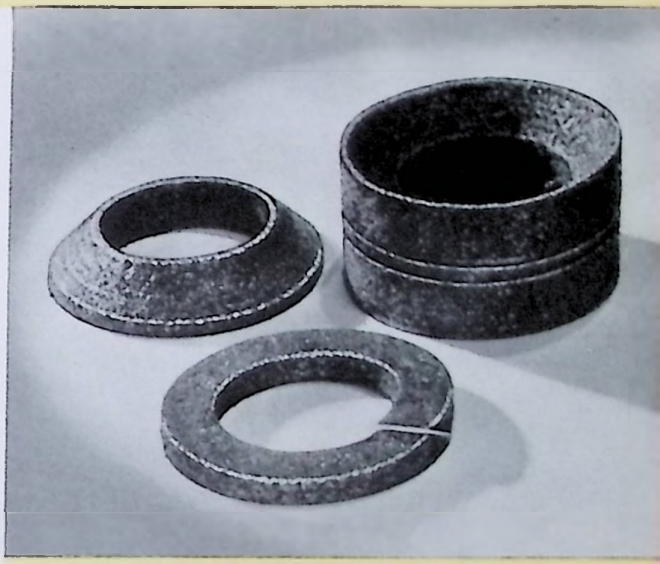
Type M. I.—Garlock 530 Modified Chevron (a modified form of Garlock 530 Chevron described on page 80)

FRANKLIN-PRECISION GEARS

Including Type G—Garlock 530 Modified Chevron (a modified form of Garlock 530 Chevron described on page 80)

RAGONNET GEARS

Types A and B—Garlock 430 Chevron (described on page 79)
Type E—Garlock 530 Modified Chevron (a modified form of Garlock 530 Chevron described on page 80)
Garlock 1225, consisting of Garlock 222 (described on page 25) and Garlock 235 (described on page 22) has been used on all types of Ragonnet gears.



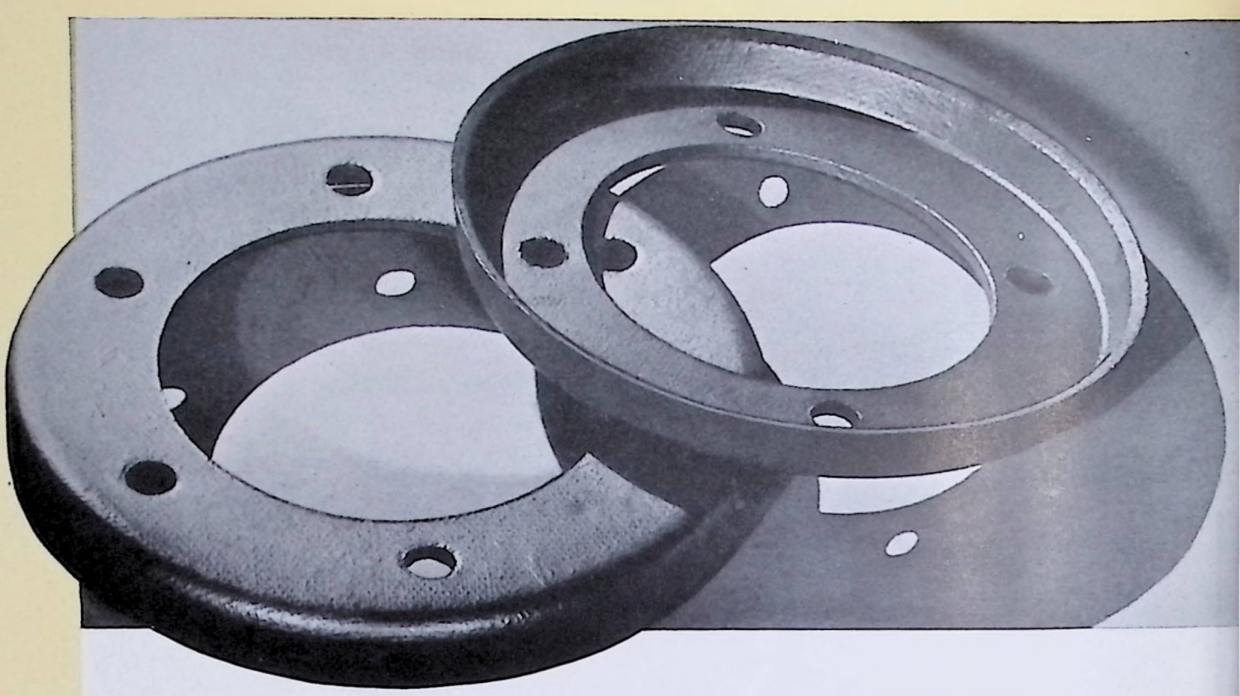
GARLOCK 449-S



GARLOCK 530
MODIFIED CHEVRON

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 118 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/118

Power Reverse Gear Cylinder Packings



Garlock Power Reverse Gear Cups are made in sizes to fit all types of locomotive power reverse gears. Molds are available for producing the cups described below for standard and oversize cylinders of Alco, Baldwin, Barco, Franklin, Precision, and Ragonnet gears. When ordering, specify make and type of reverse gear, diameter of cylinder and number of cups required.

GARLOCK 813 CUPS

Garlock 813 Cups are made of a special asbestos cloth, frictioned with a Garlock rubber compound, molded to size and treated with a lubricant and graphited. This is a moderately hard cup.

GARLOCK 813-A CUPS

Garlock 813-A cups are made of a special asbestos cloth, frictioned with a neoprene rubber compound, molded to size and treated with a lubricant and graphited. This cup is quite flexible.

GARLOCK 7810 CUPS

Garlock 7810 Cups are made of a heavy cotton duck, frictioned with a neoprene rubber compound, molded to size and treated with a lubricant and graphited. This cup is quite flexible.

GARLOCK 1200 POWER REVERSE GEAR CYLINDER PACKING

Garlock 1200 is intended for use on gears having spool-type pistons requiring a packing instead of a cup.

Garlock 1200 is made of a special asbestos cloth frictioned with a rubber compound and molded into rings of rectangular cross section, cut open with a bevel joint. It is treated with a lubricant and graphite. Available either in individual rings or in sets of the required depth.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 119 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/119

Feed Water Pump Rod Packing

Garlock 530 Chevron Packing is recommended for use both on the steam rods and on the water rods of Elesco and Worthington Feed Water Pumps. This automatic packing is fully described on page 80.

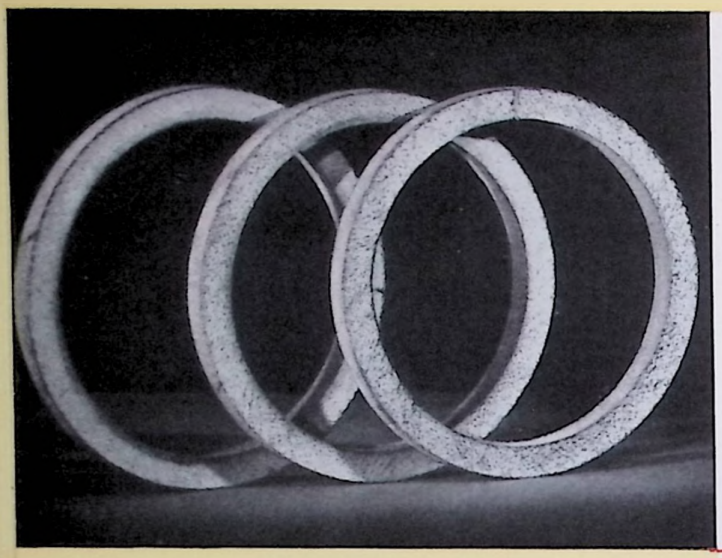
This packing is made in a complete range of sizes, put up in sets, for all types of Elesco and Worthington pumps and for standard size or undersize rods. Each set consists of a top and bottom adapter ring and a sufficient number of Chevron rings to provide a total depth which permits proper entrance of the gland into the stuffing box.

When ordering Garlock 530 Chevron for Elesco or Worthington Feed Water Pumps specify the make and type of pump, the rod diameter and the number of sets required.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 120 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/120

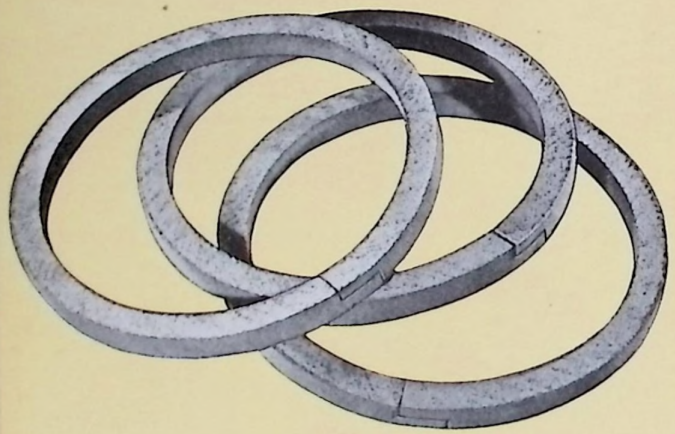
Feed Water Pump Cylinder Packings



GARLOCK 7963 RING FOR ELESCO PUMPS

Garlock 7963 Packing was developed specially for use on the pistons of Elesco feed water pumps. This material is made of plies of strong, cotton duck frictioned with a special Garlock rubber compound. It is given a rock-hard cure and has minimum expansion in hot water service.

Garlock 7963 is available in all ring sizes to fit Elesco pump cylinders. This material is made in ring form only with square-cut, butt joint, molded to specified dimensions. It is regularly put up in sets.



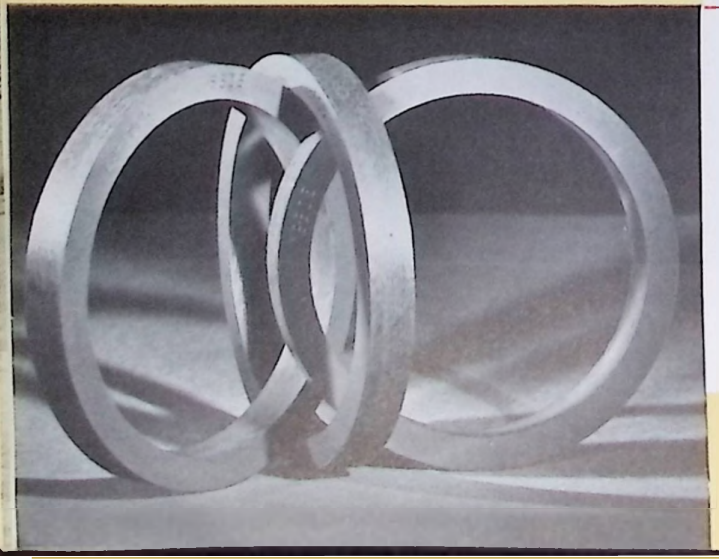
GARLOCK 33 SPECIAL ROCK-HARD FOR WORTHINGTON PUMPS

Garlock 33 Special Rock-Hard Packing was developed for use on the pistons of Worthington feed water pumps. It is made of plies of strong, cotton duck, frictioned with a special Garlock rubber compound and receives a rock-hard cure. This packing has minimum expansion in hot water service.

Garlock 33 Special Rock-Hard is available in rings, formed to specified sizes, or in coil form. Coils are approximately square in cross section and are made in 15 foot lengths and in all sizes from 1/8" to 1 1/4" advancing by sixteenths. The table below shows standard boxes for sizes up to 1".

GARLOCK 33 SPECIAL R.H. Coil

Packing Size	1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"
Coils per box	8	4	4	3	3	2	2	2	2	2	2	1	1	1	1
Feet per box (approx.)	120	60	60	45	45	30	30	30	30	30	30	15	15	15	15
Pounds per box (approx.)	3	2	2 1/2	3 1/2	3 3/4	3 1/2	4	6	6 3/4	9	10	6	6 3/4	8 1/4	9



GARLOCK 8605 RING FOR WORTHINGTON PUMPS

Garlock 8605 Packing is a molded, hard rubber ring made of a special Garlock rubber compound, for use on the pistons of Worthington feed water pumps. These rings are accurately molded to specified dimensions for application either to standard or to oversize cylinders.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 121 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/121



GARLOCK 8527 (above)
GARLOCK 343 (left)

Standard Stoker Engine Packings

STEAM END—STOKER ENGINES—GARLOCK 8527

Garlock 8527 is made of a channel of Garlock asbestos cloth with a wedge-shaped core or insert of soft, bearing metal fabricated to provide a series of small, staggered wearing surfaces which contact the rod. The material is treated with a special lubricant and externally graphited.

Garlock 8527 is available in ring form only. Each ring is individually molded to specified shape and size and is cut open with a beveled joint. This material is individually packaged in complete sets.

OIL END—STOKER ENGINES—GARLOCK 343

Garlock 343 is made of plies of Garlock asbestos cloth frictioned with a special Garlock rubber compound and finished with rubber top and bottom covers. It is treated with a lubricant and is externally graphited.

Garlock 343 is made in ring form only and usually is supplied in individually packaged complete sets with beveled end rings to fit the gland and stuffing box bevels. Rings are cut open with a beveled joint.

OIL END—STOKER ENGINES—GARLOCK 7567

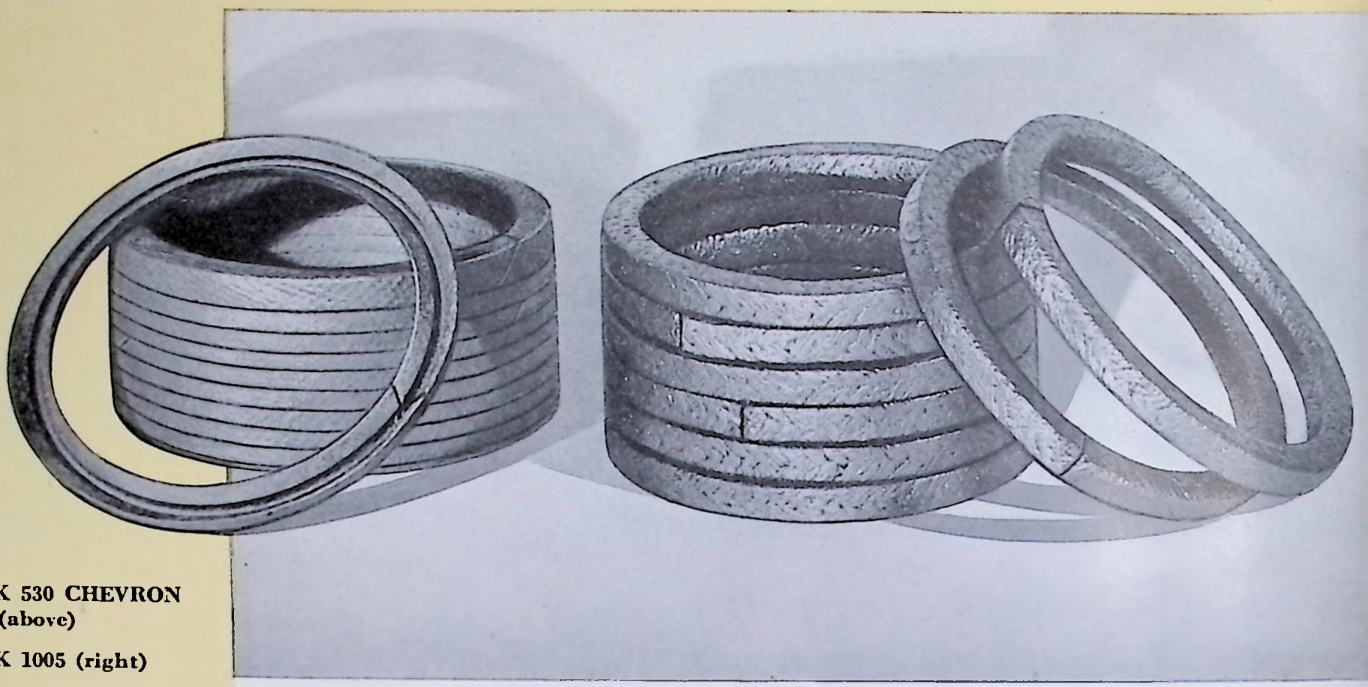
Garlock 7567 is made of plies of strong, cotton duck frictioned with a special Neoprene rubber compound. The material is treated with a lubricant and receives a surface coating of graphite.

Garlock 7567 is made in ring form only. Rings are cut open with a beveled joint. This packing is regularly supplied in complete sets, individually packaged.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 122 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/122

Expansion Joint Packings



GARLOCK 530 CHEVRON (above)

GARLOCK 1005 (right)

GARLOCK 1005 RING

Garlock 1005 Ring Packing is made of wire-inserted Garlock asbestos yarn, firmly braided and externally coated with a graphite compound. This material is specially intended for use on locomotive expansion joints.

Garlock 1005 rings with square-cut, butt joint are supplied in any specified dimensions. This same material is also available in coil form in sizes from 1/8" to 1 3/4" advancing by sixteenths. If coil form is desired specify Garlock 1015.

For some applications a lightly lubricated and graphited material may be required. A material of that description is available and can be obtained by specifying 1005-A if ring form is desired and by specifying 1015-A if coil form is desired.

GARLOCK 530

Garlock 530 Chevron Packing is made of a Garlock asbestos cloth molded into the exclusive Chevron shape. This material is fully described on page 80.

Garlock 530 is an effective packing on locomotive expansion joints because it automatically adjusts itself to pressure changes and vibration in the joint.

Garlock 530 Chevron is made in ring form only and generally is supplied in complete sets, each set consisting of a top and bottom adapter ring and a sufficient number of Chevron rings to make a packing of the required depth.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 123 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/123

Expansion Joint Packings

GARLOCK 5250

Garlock 5250 is a Locomotive Expansion Joint Packing made of wire-inserted Garlock asbestos yarn braided hard by the braid-over-braid method and formed square in cross section. It is internally treated with a petrolatum lubricant and graphite.

Garlock 5250 Rings are made with a square-cut or butt joint and are available in any specified sizes. Garlock 5250 Coil is manufactured in all sizes from 3/16" to 1 5/8". This material is usually supplied in continuous lengths on reels but is also available in boxes. The table below shows standard box quantities for sizes up to 1" inclusive.

GARLOCK 5250 Coil

Packing Size	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"
Coils per box	*	5	5	4	3	3	3	3	3	3	3	1	1	1	1	1	1
Feet per box (approx.)	32†	120	100	116	72	66	60	51	45	42	26	24	22	20			
Pounds per box (approx.)		7 1/2	8 1/2	15	12 1/4	14 1/2	16 3/4	17 3/4	19	21	15 1/4	16 1/2	17 1/2	18 1/2			

*On 1, 2 or 5 lb. spools. †Feet per pound—approx.

GARLOCK 5270

Garlock 5270 Locomotive Expansion Joint Packing is made of hard braided, wire-inserted, Garlock asbestos yarn, braided square in cross section. The asbestos yarn used in producing this packing is treated with a petrolatum lubricant and graphite before braiding.

Garlock 5270 Rings are made with a square-cut or butt joint and are produced in any specified size. Garlock 5270 Coil is made in all sizes from 1/8" to 1 3/4" advancing by sixteenths. This packing is usually supplied in continuous lengths on reels but is available also in boxes. Standard box quantities for sizes up to 1" inclusive are shown in the table below.

GARLOCK 5270 Coil

Packing Size	1/8"	5/32"	3/16"	7/32"	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"
Coils per box	*	*	5	5	4	3	3	3	3	3	3	1	1	1	1		
Feet per box (approx.)	76†	37†	120	100	116	72	66	60	51	45	42	26	24	22	20		
Pounds per box (approx.)			6 1/2	7 1/2	12 1/2	10	12 1/2	15 1/2	15 3/4	16 1/4	17 1/4	12 3/4	13 1/2	14 1/2	16 1/2		

*On 1, 2 or 5 pound spools †Feet per pound—approx.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 124 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/124

Ball Joint Packings

GARLOCK 1010 RING

Garlock 1010 Ring Packing was developed for use on the ball joints of locomotive booster engines. This packing is used, also, on the new type ball joints of mallet locomotives.

Garlock 1010 is made of accordion-folded, Garlock asbestos cloth frictioned with a special Garlock rubber compound. The material is molded square in cross-section and is externally treated with a modified glycerol lubricant and graphite.

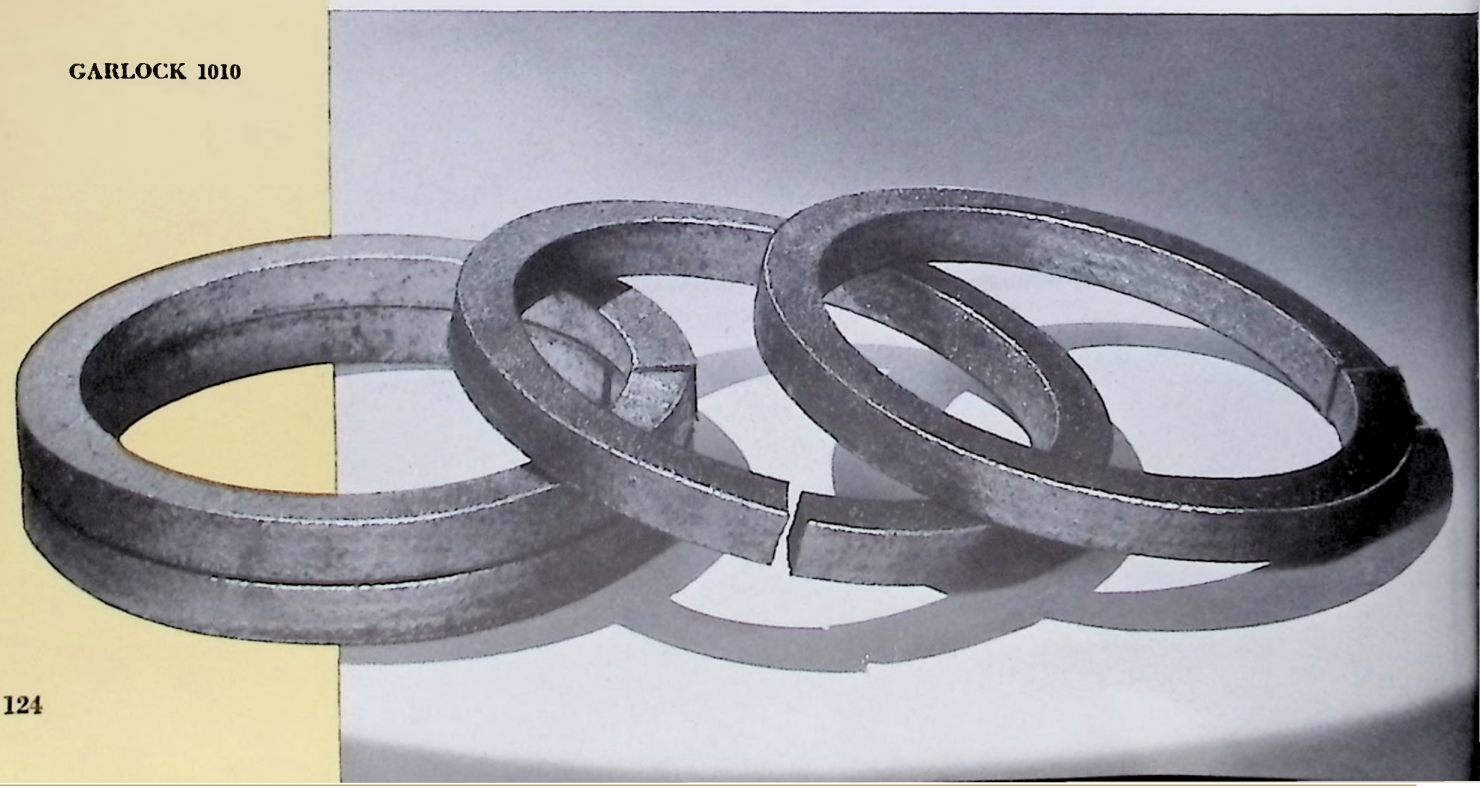
This material is regularly supplied in ring sets. Rings are individually molded to fit the contour of the ball and are cut open with a butt joint. Sets are made in standard sizes to fit 3″, 3½″ and 4½″ joints.

GARLOCK 7114 FILLER RING

Garlock 7114 Filler Rings are intended for use in conjunction with Garlock 1010 Rings on booster engine ball joints. These rings take up any slack which may develop in the packing due either to wear of the metal parts of the joint or to compression of the packing in service.

Garlock 7114 Rings are made of Garlock asbestos cloth frictioned with a special Garlock rubber compound. They are molded to standard ⅛″ thickness and are externally treated with lubricant and graphite. These rings are made to fit 3″, 3½″ and 4½″ joints.

GARLOCK 1010



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 125 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/125

Locomotive Front End Tapes

GARLOCK 617

Garlock 617 Slotted Asbestos Tape was developed for use as a gasketing on locomotive front ends. It is a highly efficient front end tape, quickly and easily applied. It is also used for gasketing flanged joints on large tanks or other equipment where high temperatures and pressures exist.

Garlock 617 tape is constructed of two parallel courses or strips of wire-inserted Garlock asbestos cloth frictioned with a Garlock rubber cement and spaced $\frac{7}{16}$" apart. These parallel strips of asbestos gasketing are joined together with a fabric connecting member. Diagonal slits, spaced one inch apart, are provided in this fabric connecting member which permits the tape to be applied readily over studs or bolts.

This tape is produced in any practicable width and thickness. When specifying width, allowance must be made for the $\frac{7}{16}$" space between the two asbestos gasketing strips. Garlock 617 tape usually is supplied in continuous lengths on reels. Friction tape for joining the ends of the material into an endless gasket when applied to the equipment is supplied with this material.

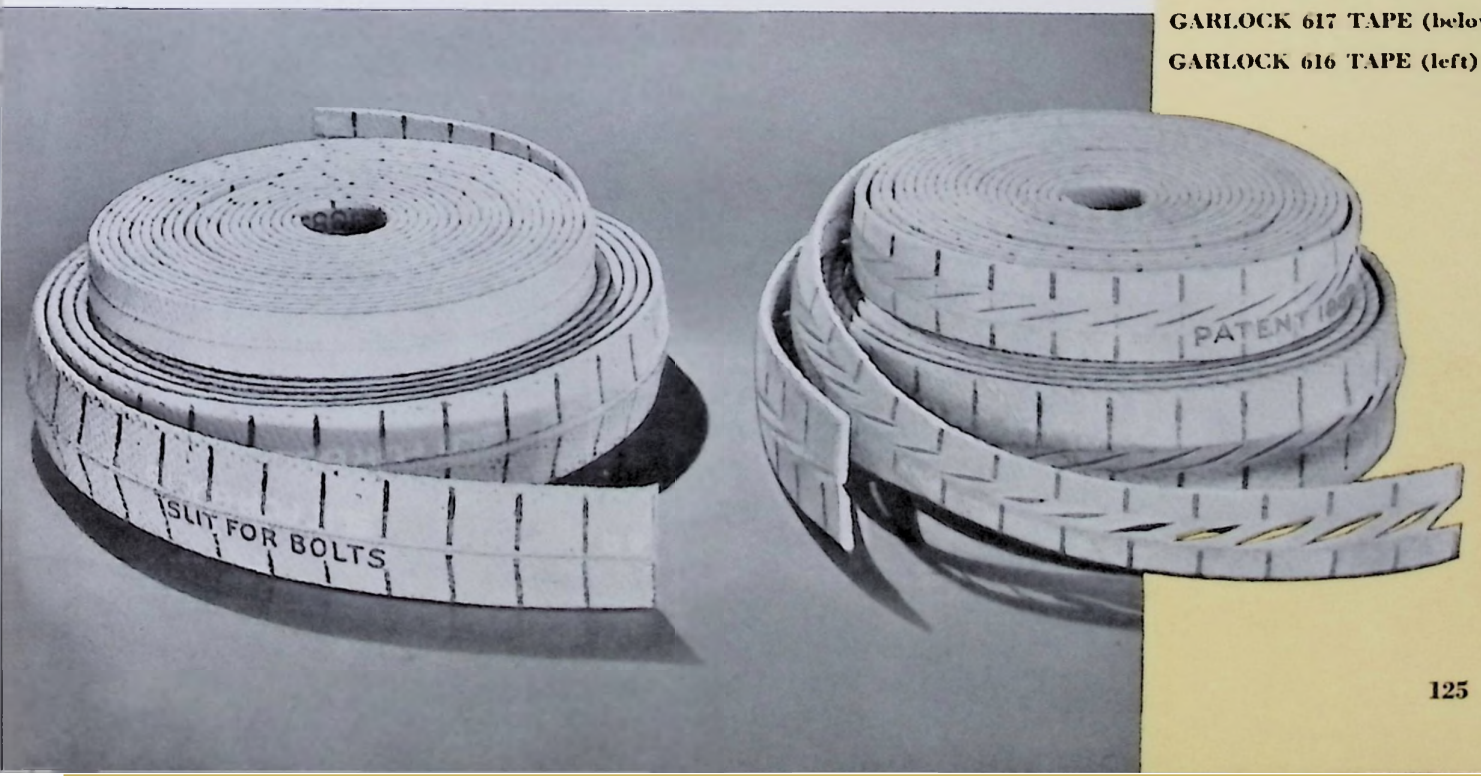
GARLOCK 616

Garlock 616 Buttonhole Tape is for use on locomotive front ends or for gasketing flanged joints on large equipment operating under high temperatures or pressures.

This material is made of two parallel courses or strips of wire-inserted Garlock asbestos cloth frictioned with a special Garlock rubber compound. These parallel strips are located approximately $\frac{1}{16}$" apart and are joined by a fabric connecting member.

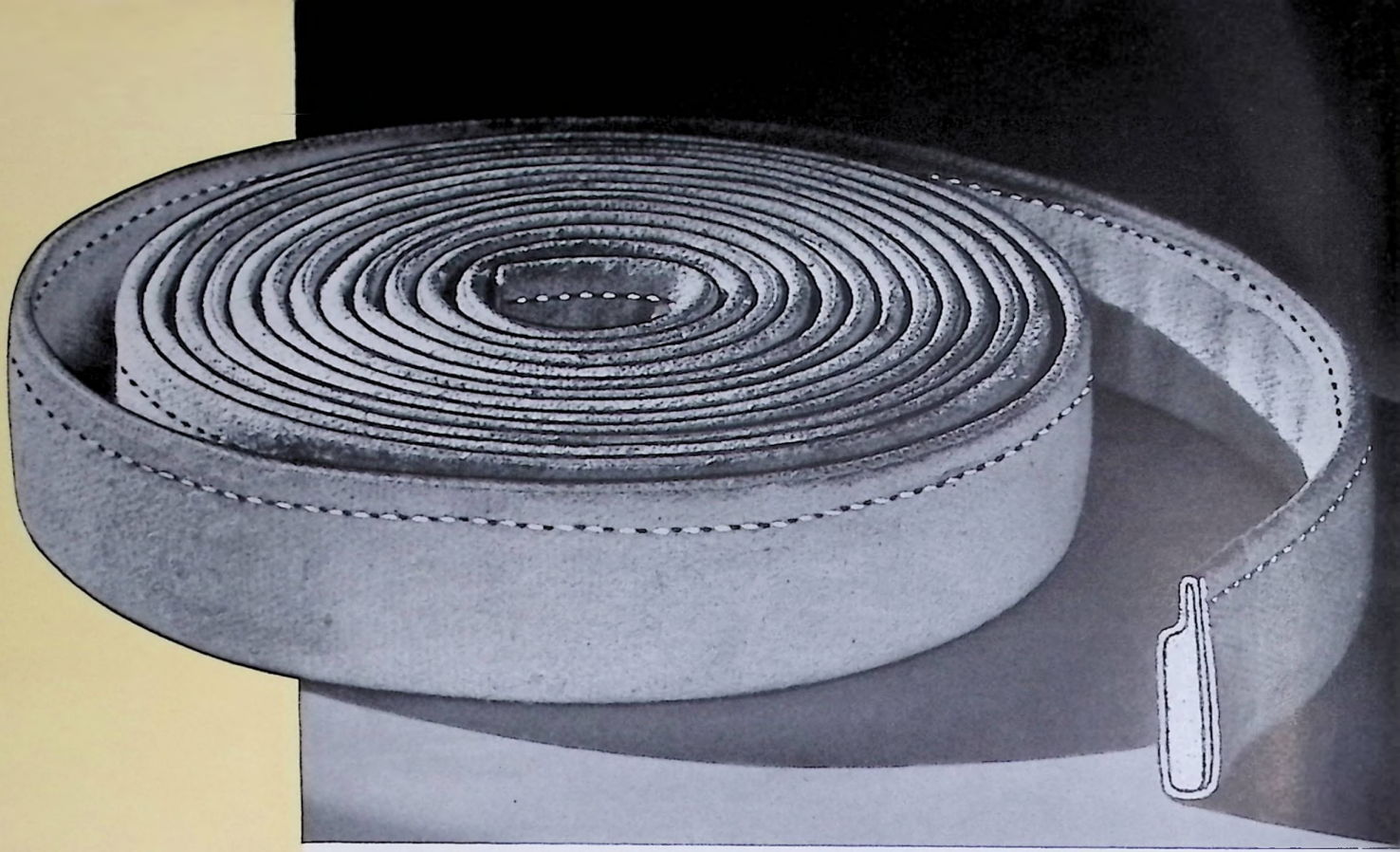
When applying Garlock 616 tape, bolt holes are made in the fabric connecting member by inserting a knife blade through the fabric. Graduation marks spaced one inch apart are printed on the tape making it possible to cut the bolt holes at the bench if the bolt spacing is known.

Garlock 616 tape is produced in any practicable width and thickness. It usually is supplied in continuous lengths on reels.



GARLOCK 617 TAPE (below)
GARLOCK 616 TAPE (left)

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 126 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/126



Insulation Tapes — Gasketing Tape



GARLOCK 7771 INSULATION TAPE

Garlock 7771 Insulation Tape is made of special Garlock asbestos cloth wrapped around a center core of asbestos fibre. The tape is formed with a flap approximately 3/8" wide along one edge and is strongly stitched to make this flap permanent and uniform throughout the length of the tape. This material is recommended for insulating steam pipes on locomotives.

When applying Garlock 7771 tape on locomotive steam pipes it is wrapped around the pipe with the 3/8" flap overlapping the next adjoining course of tape. This makes a smooth wrapping job and provides a complete and unbroken insulating cover for the pipe.

Garlock 7771 tape is made in thicknesses from 3/16" up and in any suitable width, as specified. When specifying width do not include the 3/8" flap in the specified dimensions. For example, a tape 2" wide has an overall width, including the 3/8" flap, of 2 3/8". This tape usually is supplied in 50 foot lengths.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 127 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/127

GARLOCK 7066 INSULATION TAPE

Garlock 7066 Insulation Tape is made of special Garlock asbestos cloth wrapped around a center core of asbestos fibre and strongly stitched.

This tape is not made with an overlapping flap. It is for use in insulating steam pipes.

Garlock 7066 tape is made in thicknesses from $\frac{3}{16}$" up and in any practicable width. This material usually is supplied in 50 foot lengths.

GARLOCK 5339 TUBULAR TAPE (wire-inserted)
GARLOCK 5349 TUBULAR TAPE (without wire)

Garlock 5339 and 5349 are made of Garlock asbestos yarn braided into a tubular tape. This tape is weather-proofed and water-proofed with a special Garlock rubber cement and receives a special treatment to eliminate tackiness. Garlock 5339 is made of wire-inserted yarn and Garlock 5349 of plain yarn, without wire.

The tubular construction of Garlock 5339 and 5349 provides a convenient and effective means for insulating small pipes or tubing on which wrapped tape would be difficult to apply. This material is applied by slipping or pulling it over the pipes and produces a smooth and completely unbroken insulating cover.

Garlock 5339 and 5349 are made in any practicable inside diameter and wall thickness and generally are supplied in continuous lengths as specified.

GARLOCK 8030 FIRE PAN TAPE

Garlock 8030 Tape is recommended for fire pan gasketing on oil burning locomotives. This material seals against air leakage between the fire pan and the mud ring.

Garlock 8030 Tape is constructed of two parallel courses or strips of special Garlock asbestos cloth wrapped around a center core of asbestos fibre. These two parallel strips of gasketing are spaced approximately 1" apart and are joined together by a fabric connecting member. Diagonal slits, spaced 1" apart, are provided in this fabric connecting member which permits easy and quick application of the tape over studs or bolts.

This tape is produced in any practicable width and thickness and usually is supplied in continuous lengths. When specifying width, however, it must be remembered that there is 1" space between the two strips of asbestos gasketing and due allowance made for this 1" connecting member.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 128 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/128

Air Brake Cylinder Cups

Garlock 7752, which is an improved cup developed especially for brake cylinder usage, is sufficiently flexible to permit easy installation even in the coldest weather. Combined with this flexibility is the toughness and sturdiness necessary for successful operation in brake cylinder service.

Garlock 7752 cups are made of plies of strong cotton duck frictioned with a special Garlock rubber compound. Each cup is vulcanized to the proper hardness in a mold and surface coated with a lubricating compound after molding.

Garlock 7752 cups are made in all standard air brake cylinder sizes. When ordering it is only necessary to specify cylinder sizes and number of cups required.

GARLOCK 7752 CUPS



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 129 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/129

Locomotive Appliance Gaskets



BOOSTER ENGINES

Garlock 950 Gaskets, cut from Garlock 900 Sheet (page 85) are recommended and used for all locations on booster engines. When ordering booster engine gaskets specify builder's part or drawing number and description. If plain gaskets are desired specify Garlock 950; for graphited gaskets specify Garlock 951.

POWER REVERSE GEARS

For gasketing locomotive power reverse gears Garlock 950 Gaskets (page 85) are recommended. Orders should specify builder's part and drawing number and type of gear. Graphited gaskets (Garlock 951) will be furnished if specified.

FEED WATER PUMPS

Garlock 7022 Gaskets (page 86) are recommended for use on Elesco and Worthington feed water equipment except that for valve cap covers of Worthington pumps Garlock 7597 Gaskets are recommended. When ordering gaskets specify builder's drawing and part number and type of equipment.

AMERICAN MULTIPLE THROTTLES

For gasketing smoke box cover plates of American multiple throttles Garlock 604 Gaskets (page 99) are recommended. To insure receipt of gaskets of correct shape orders should be accompanied by prints.

TANK CAR GASKETS

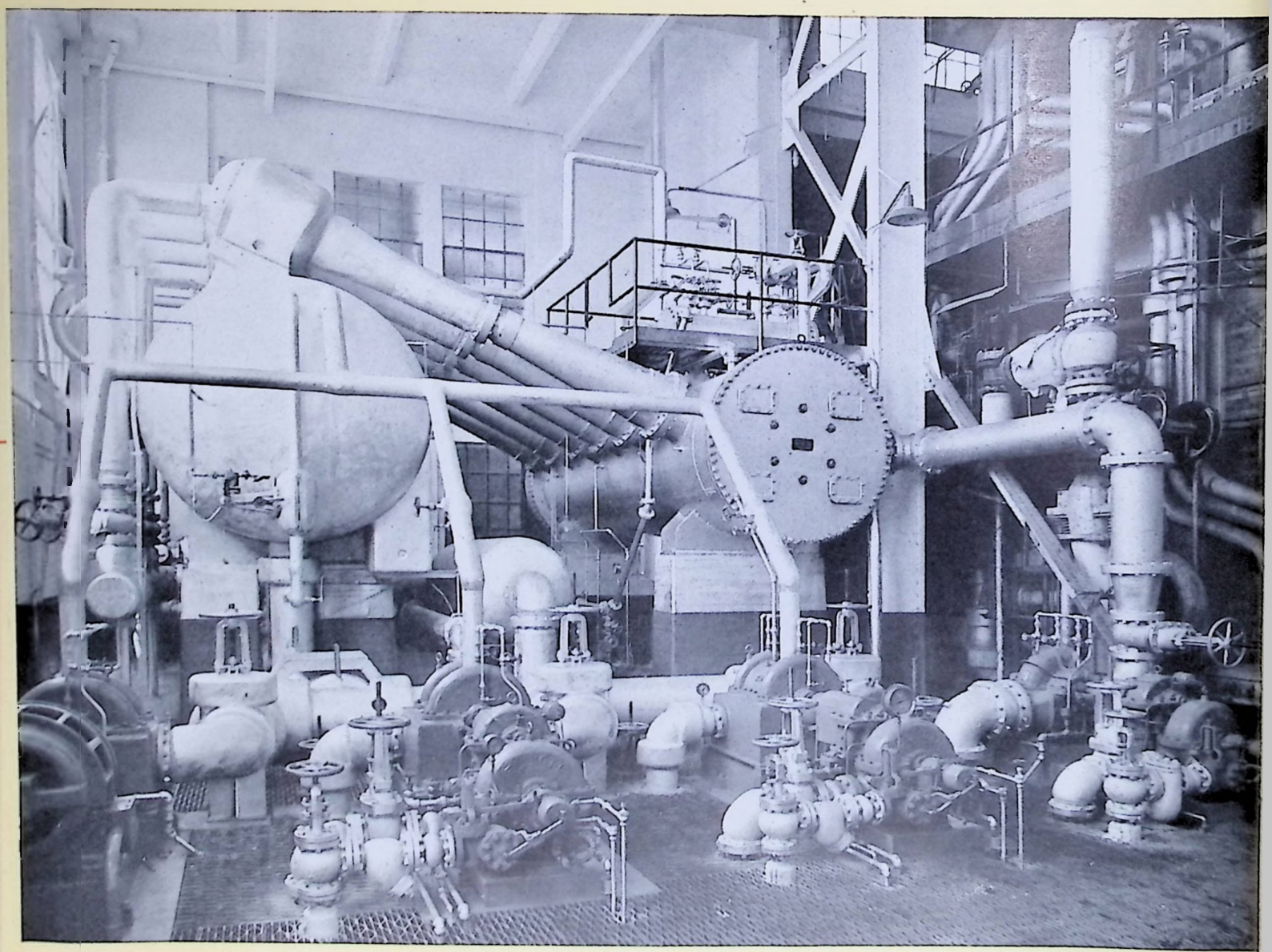
Garlock 7300 Neoprene Rubber Gaskets (page 95) or Garlock 8452 Buna-N Rubber Gaskets (page 96) are recommended for use on tank car dome heads and outlet caps. These materials are of suitable hardness for tank car service and are resistant to the action of oils and solvents. Garlock 7300 and 8452 Gaskets are produced in any size and thickness as specified.

TANK HOSE GASKETS

Garlock 122 Gaskets (page 89) are recommended for tank hose connections. These gaskets are made in any specified size and thickness.

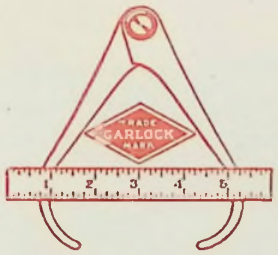
Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 130 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/130

LEATHERS, DUOS and



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 131 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/131

MISCELLANEOUS PACKINGS



	PAGE
Leather Packings	132
Steam and Hot Water Duo Packings	133
Hot Water Duo Packings	134
Hot Water, Cold Water and Hydraulic Duo Packings	135
Braided Copper Wire Packing	136
Diagonal Packing—*Cold Water*	137
Diagonal Packings—*Steam and Hot Water*	138
Amberite (*Phenolic Resin*) Packings	139
Amberite (*Phenolic Resin*) Packings	140
Gum Core Packing—*Cold Water*	141
Channel Flax Packing—*Cold Water*	142
Lip Packings—*Cold Water Hydraulic*	143
Molded Cups—*Oil and Water Hydraulic*	144
Polished Rod Rings—*oil field pumps*	145
Slush Pump Packings—*oil field*	146
Condenser Tube Packings	147

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 132 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/132

Garlock Leather Packings

FOR . . .

Use against cold or warm water, oils, gasoline, benzine, air, gas, oxygen or mild acid solutions, at low or medium temperatures and medium to high pressures.

ON . . .

Hydraulic equipment and other applications where cups, "U" packings, "V" packings or other shaped packings are desired.

Construction—Garlock Leather Packings are made of the best selected leathers. These packings are available in Oak tanned leather, Chrome tanned leather and in the exclusive Garlock BITAN leather which combines the most desirable qualities of oak and chrome tannages.

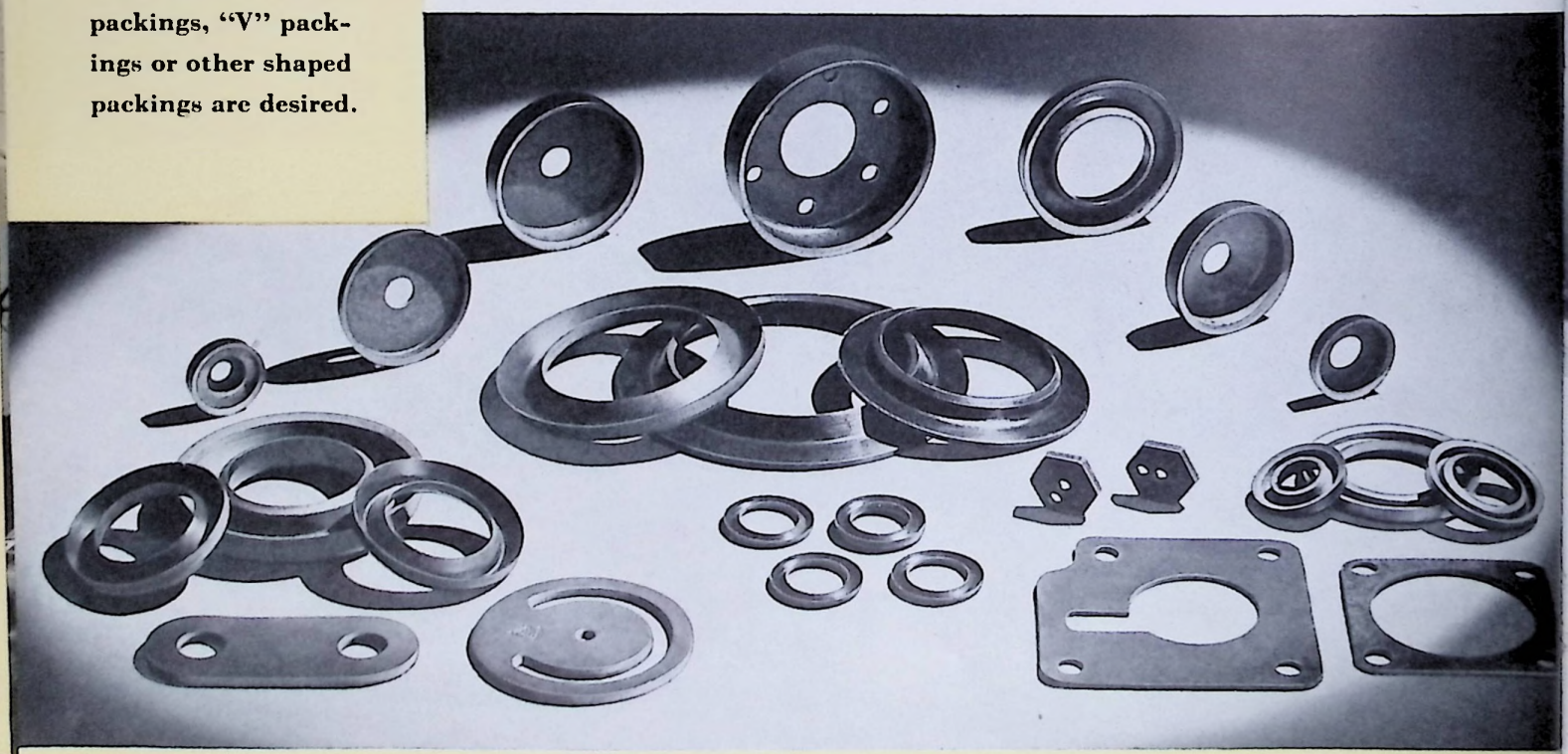
Garlock BITAN leather packings operate satisfactorily at higher temperatures and higher pressures than leathers of standard tannage and treatment.

Forms—Garlock Leather Packings are made in all forms in which leather packings commonly are used, such as:

Molded Cups	Hat Packings
"U" Packings	Washers
"V" Packings	Gaskets
Flange Packings	Discs

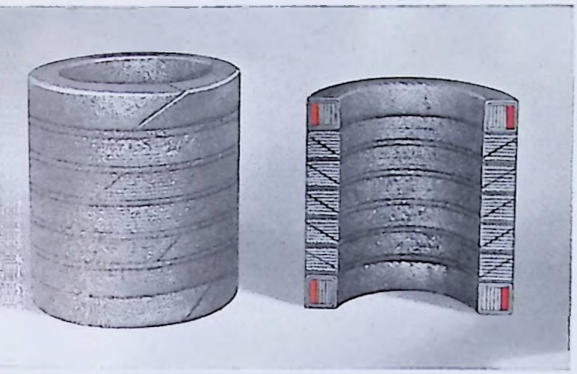
These packings are made to customer's specified sizes. Sketches showing all dimensions should be supplied with orders. Full information concerning the temperature, pressure and the nature of the gas or liquid should also be furnished.

A complete booklet covering the design and application of all types of Garlock leather packings will be supplied on request.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 133 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/133

Duo Packings



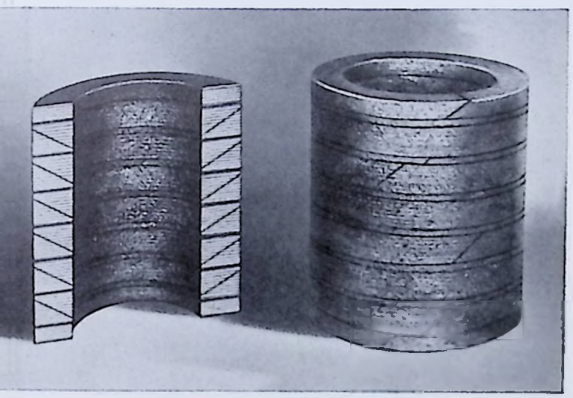
GARLOCK 446

GARLOCK 446—STEAM DUO

Construction—Garlock 446 Duo is made up of end rings of Garlock 200 high pressure asbestos packing (page 20) with a sufficient number of center rings of Garlock 550 diagonal-cut duck and rubber packing (page 41) to provide the required depth.
Form—Garlock 446 Duo packing is furnished in complete sets only, made to fit the rod and stuffing box diameters and stuffing box depth as specified.

FOR...
Steam at low pressures and low temperatures.

ON...
Piston rods of steam engines and other steam rods.



GARLOCK 449

GARLOCK 449—STEAM DUO

Construction—Garlock 449 is made up of end rings of Garlock 333 duck and rubber packing (page 40) with a sufficient number of center rings of Garlock 550 diagonal-cut duck and rubber packing (page 41) to make a set of the required depth.
Form—Garlock 449 Duo packing is furnished in complete sets only, made to fit the rod and stuffing box diameters and the stuffing box depth as specified.

FOR...
Steam at low pressures and low temperatures.

ON...
Piston rods of steam hammers or other rods operating with considerable vibration or weave.

GARLOCK 1906—HOT WATER DUO

Construction—Garlock 1906 is made up of end rings of Garlock 333 duck and rubber packing (page 40) with center rings of Garlock 550 diagonal-cut duck and rubber packing (page 41) alternated with Garlock 712 "Z" packing (page 42).
Form—Garlock 1906 Duo packing is supplied in complete sets only, made to fit the rod and stuffing box diameters and the stuffing box depth as specified.

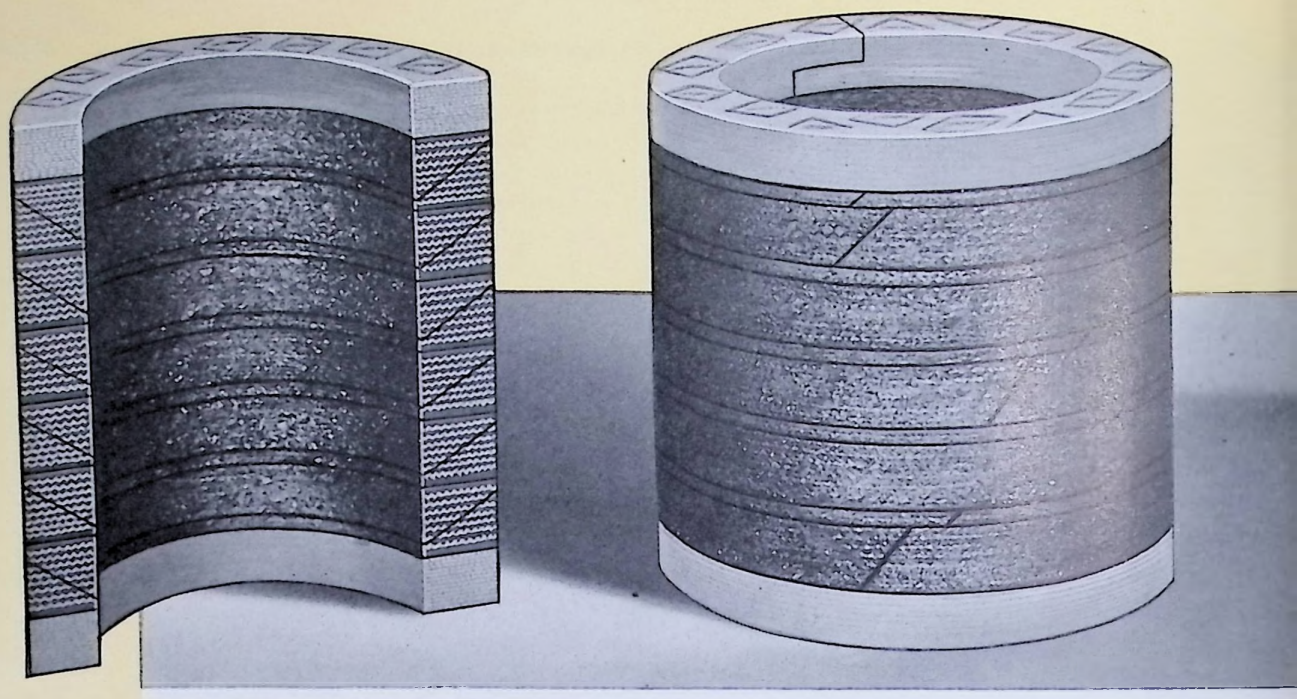
FOR...
Hot water service at medium or low pressures.

ON...
Plungers of outside packed pumps and other hot water applications.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 134 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/134

Duo Packings

GARLOCK 440



FOR...
Hot or cold water at medium or low pressures.

ON...
Plungers of outside packed pumps and other water rods where vibration or rod weave is encountered.

GARLOCK 440—HOT WATER DUO

Construction—Garlock 440 is made up of end rings of Garlock 261 hydraulic packing (page 48) and a sufficient number of rings of Garlock 550 diagonal-cut duck and rubber rings (page 41) to make a set of the required depth.

Form—Garlock 440 Duo Packing is supplied in complete sets only, made to fit the rod and stuffing box diameters and the stuffing box depth as specified by the customer.

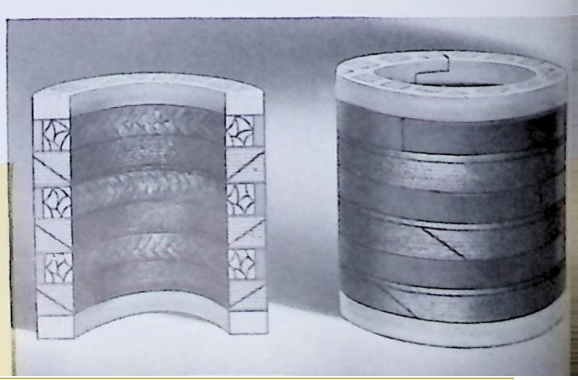
FOR...
Hot or cold water at medium or low pressures.

ON...
Plungers of outside packed pumps or other water rods where considerable vibration or rod weave exists.

GARLOCK 443—HOT WATER DUO

Construction—Garlock 443 is made up of end rings of Garlock 261 hydraulic packing (page 48) and center rings of Garlock 193 rubber-back flax packing (page 60) alternated with Garlock 550 diagonal-cut duck and rubber rings (page 41).

Form—Garlock 443 Duo Packing is supplied in complete sets only, made to fit the rod and stuffing box diameters and stuffing box depth as specified by the customer.



GARLOCK 443

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 135 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/135

Duo Packings

GARLOCK 1907—HOT WATER DUO

Construction—Garlock 1907 is made up of end rings of Garlock 261 hydraulic packing (page 48) and center rings of Garlock 712 "Z" packing (page 42) alternated with Garlock 550 diagonal-cut duck and rubber packing (page 41).
Form—Garlock 1907 Duo Packing is supplied in complete sets only, made to fit the rod and stuffing box diameters and the stuffing box depth as specified by the customer.

FOR...
Hot or cold water at high or medium pressures.

ON...
Plungers of outside packed pumps or other water rods, particularly where considerable vibration or rod weave exists.

GARLOCK 960—HYDRAULIC DUO

Construction—Garlock 960 is made up of end rings of Garlock 346 braided copper wire packing (page 136) and center rings of Garlock 216 metal inner wedge duck and rubber packing (page 45) alternated with Garlock 99 waterproof hydraulic flax packing (page 55).
Form—Garlock 960 Duo Packing is supplied in complete sets only, made to fit rod and stuffing box diameters and stuffing box depth as specified by the customer.

FOR...
High-pressure, cold water hydraulic service.

ON...
Rams or plungers of presses, accumulators, elevators and pumps.

GARLOCK 980—HYDRAULIC DUO

Construction—Garlock 980 is made up of end rings of Garlock 99 waterproof hydraulic flax (page 55) and a sufficient number of center rings of Garlock 550 diagonal-cut duck and rubber packing (page 41) to make a set of the required depth.
Form—Garlock 980 Duo Packing is supplied in complete sets only, made to fit rod and stuffing box diameters and stuffing box depth as specified by the customer.

FOR...
Medium or high pressure cold water.

ON...
Plungers of outside packed pumps or cold water rods.

GARLOCK 965—HYDROSTATIC DUO

Construction—Garlock 965 is made up with a machine-finished babbitt and lead top ring; a bottom ring of Garlock 99 waterproof hydraulic flax (page 55); and a sufficient number of center rings of Garlock 346 braided copper wire (page 136) to make a set of the required depth.
Form—Garlock 965 Duo Packing is supplied in complete sets only, made to fit rod and stuffing box diameters and stuffing box depth as specified by the customer.

FOR...
Heavy duty hydraulic service.

ON...
Rams or plungers of presses, accumulators, outside packed pumps and other hydraulic equipment.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 136 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/136



GARLOCK 346 RING
GARLOCK 344 COIL (illustrated)

Braided Copper Wire Packing

FOR...

Water, steam or gases at high temperatures.

ON...

Rods or plungers, particularly in heavy duty hydraulic service. Generally used as end rings, in combination with other packings, to prevent extrusion of the packing when there are abnormal clearances between the rod and stuffing box or gland.

Construction—Garlock Braided Copper Wire Packing is manufactured from fine copper wire braided approximately square in cross section.

This packing is not lubricated or otherwise treated.

Forms—Garlock 346 Rings are supplied with square-cut joint to fit specified rod and stuffing box dimensions.

Garlock 344 Coil is produced in all sizes from 1/8" to 1 1/2" advancing by sixteenths. Coil form is available either in continuous lengths on reels or in coil lengths. The table below shows standard packaging for coils in sizes up to 1" inclusive.

GARLOCK 344 Coil

Packing Size	1/8"	3/16"	1/4"	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	1 1/8"	1 1/4"	1 3/8"	1 1/2"
Coils per box	*	*	1	1	1	1	1	1	1	1	1	1	1	1	1
Feet per box (approx.)	28†	10†	50	45	39	36	30	21	22	19	17	15	15	15	15
Pounds per box (approx.)			7 1/4	11 3/4	14 1/2	15 3/4	16 1/2	18	19 1/4	19 1/2	25 1/2	25 1/2	28	31	35

*On 1, 2 or 5 pound spools. †Feet per pound—approx.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 137 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/137

Diagonal Packing

GARLOCK 67

Construction—Garlock 67 consists of a diagonal-cut duck and rubber packing and a braided jute packing. These two materials are combined into a single packing structure by a braided cotton cover. The material is thoroughly lubricated.

Forms—Garlock 67 Coil is made in all packing sizes from 1/4" to 1 1/2" advancing by sixteenths. The thickness of this material is approximately double the packing space dimension.

Garlock 67 Rings are made with bevel-cut joint to specified rod and stuffing box dimensions.

Standard packaging of Garlock 67 Coil in sizes up to 1" inclusive is shown in the table below.

GARLOCK 67 Coil

Packing size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"
Coils per Box	3	3	3	3	2	2	1	1	1	1	1	1	1
Feet per Box (approx.)	72	60	51	45	44	40	25	25	25	25	25	25	25
Pounds per Box (approx.)	4 1/4	4 3/4	5	6 1/4	8 1/2	10 1/2	8 1/2	10 1/4	12 1/2	14 3/4	17 1/2	20 1/2	23 1/2

FOR . . .

Cold water or dilute aqueous solutions at low pressures.

ON . . .

Reciprocating rods or plungers of outside packed pumps. Effective where rods are worn or rod weave exists.

GARLOCK 67 COIL



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 138 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/138

Diagonal Packings

GARLOCK 87

FOR . . .

Low pressure steam, hot or cold water.

ON . . .

Reciprocating rods or plungers of outside packed pumps; an effective packing on worn rods or where rods are out of alignment.

Construction—Garlock 87 consists of a diagonal-cut rubber and duck packing and a round, rubber-cored, rubber and duck packing. A braided cotton cover encloses these two types of packing, combining them into a single structure. This material is well lubricated.

Forms—Garlock 87 Coil is made in all packing sizes from 1/4" to 1 1/2" advancing by sixteenths. The thickness of this diagonal packing is approximately double the width or packing space.

Garlock 87 Rings are made with a bevel-cut joint to specified rod and stuffing box dimensions.

Standard packaging of Garlock 87 Coil in sizes up to 1" inclusive is shown in the table below.

GARLOCK 87 Coil

Packing Size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"
Coils per box	3	3	3	3	2	2	1	1	1	1	1	1	1
Feet per box (approx.)	72	60	51	45	44	40	25	25	25	25	25	25	25
Pounds per box (approx.)	4 1/4	4 1/2	4 3/4	6	8 1/4	10 1/4	8 1/4	10	12 1/4	14 1/2	17	20	23

GARLOCK 107

FOR . . .

Steam at medium or low pressure.

ON . . .

Reciprocating rods, particularly where rods are worn or rod weave exists.

Construction—Garlock 107 consists of a diagonal-cut rubber and duck packing and a braided asbestos packing combined, by a braided cotton cover, into a single packing structure. This material is well lubricated.

Forms—Garlock 107 Coil is made in all packing sizes from 1/4" to 1 1/2" advancing by sixteenths. The thickness of this packing is approximately double the width or packing space dimension.

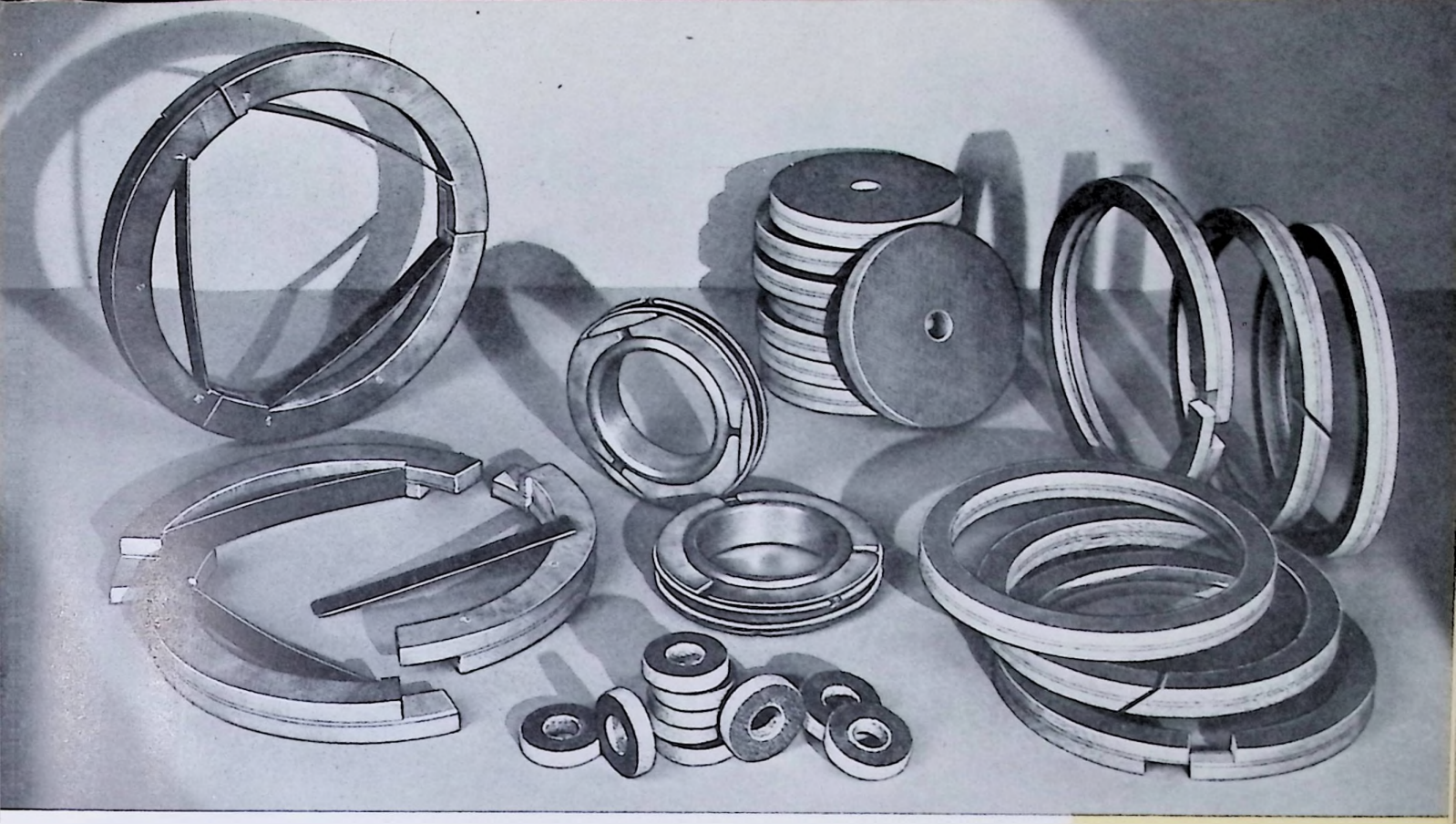
Garlock 107 Rings, with bevel-cut joint, are made to specified rod and stuffing box dimensions.

Standard packaging for Garlock 107 Coil in sizes up to 1" inclusive is shown in the table below.

GARLOCK 107 Coil

Packing Size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"
Coils per box	3	3	3	3	2	2	1	1	1	1	1	1	1
Feet per box (approx.)	72	60	51	45	44	40	25	25	25	25	25	25	25
Pounds per box (approx.)	4 1/2	5	5 1/2	6 3/4	9 1/4	11 1/2	9 1/4	11 1/4	13 1/2	16	18 1/2	21 1/2	24 1/2

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 139 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/139



Amberite (Phenolic Resin) Products

Garlock Amberite products are made of laminated, phenolic resin materials having great strength and toughness. These materials are highly resistant to the corrosive effects of water, mild acids and caustics, solvents, oils and oil derivatives. Against most gases and liquids they do not harden, soften or swell in service. They operate satisfactorily at elevated temperatures and, when used as rod or cylinder packings, operate with a low coefficient of friction.

Three types of Garlock Amberite materials are available, as follows:

1. Garlock 113 is constructed of plies of wire-inserted asbestos cloth bonded with phenolic resin with outer covers of plain asbestos cloth. For use against highest pressures and temperatures up to 600° F.
2. Garlock 155 is constructed of plies of strong cotton duck bonded with phenolic resin. For use against highest pressures and temperatures up to 400° F.
3. Garlock 155 Graphitized is of the same construction as regular Garlock 155 except that it contains graphite which serves to minimize friction when used as a rod or cylinder packing.

The forms in which Garlock 113 and Garlock 155 commonly are fabricated are indicated on the following page.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 140 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/140

Amberite (Phenolic Resin) Products

GARLOCK 113 VALVE DISCS

Garlock 113 Amberite Valve Discs are recommended for service against the highest pressures and at temperatures up to 600° F. against hot water, solvents, oils or mild acids and caustic solutions. These discs are for use on globe and angle valves and are made with round holes only; when required for oval disc holders they are supplied with round holes sufficiently large to fit the oval holder.

GARLOCK 113 PUMP VALVES

Garlock 113 Amberite Pump Valves are recommended for service against hot oils or solvents at any pressure and at temperatures up to 600° F.

GARLOCK 155 PUMP VALVES

Garlock 155 Amberite Pump Valves are recommended for service against hot water, hot oils, or solvents at the highest pressures and at temperatures up to 400° F.

GARLOCK 155 SEGMENTAL ROD PACKING RINGS

Garlock 155 Amberite Segmental Rod Packing Rings are recommended for use on compressor rods. They are manufactured in sections, each section consisting of one triangular and one radial cut ring assembled like a metal packing ring (page 199). A complete installation usually consists of three or more sections, each placed either in a separate cup or in a groove in a metal case. These rings usually are made of standard Garlock 155 stock but, if so specified, will be made of Garlock 155 graphitized.

GARLOCK 155 SEGMENTAL PISTON RINGS

Garlock 155 Amberite Piston Rings are recommended for use in the compression cylinders of gas compressors. They regularly are made in three segments with step joints. Each segment is equipped with a flat spring with the ends of the spring fitted into notches on the inside diameter of the segment. The pressure exerted by these springs serves to keep the segments in proper contact with the cylinder wall.

GARLOCK 155 PUMP RINGS

Garlock 155 Amberite Pump Rings are recommended for use on spool-type pistons of pumps handling solvents, hot oil, hot water, brine, weak acids or caustics at high pressures and at temperatures up to 400° F. These rings are made either solid or cut-open with a bevel or step joint, as specified. Cut-open rings are available either with spring wire expanders or made to cylinder size and tensioned by peening.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 141 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/141

Majestic Gum Core Packing

Construction—Garlock Majestic Gum Core Packing consists of a core of resilient rubber over which covers of lubricated and graphited flax are braided. It is externally treated with a special lubricating compound.

Garlock 80 is oval in cross section and has a rectangular rubber core.

Garlock 81 is round in cross section and has a round rubber core.

Forms—Garlock 80 and 81 Rings are made with a square-cut, butt joint to rod and stuffing dimensions as specified.

Garlock 80 and 81 Coil are made in all packing sizes from 1/4" to 1 1/2" inclusive advancing by sixteenths.

Standard packaging for these materials in sizes up to 1" inclusive is shown in the tables below.

GARLOCK 80 Coil

Packing Size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"
Coils per box	3	3	3	3	2	2	2	2	2	1	1	1	1
Feet per box (approx.)	72	60	51	45	44	40	34	30	28	26	24	22	20
Pounds per box (approx.)	2 3/4	3 3/4	5 1/4	5 3/4	7	7 3/4	8	8	8 3/4	9 1/4	10	10 1/2	12

GARLOCK 81 Coil

Packing Size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"
Coils per box	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per box (approx.)	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per box (approx.)	3 1/4	5	7	5 3/4	6 1/2	7	8 1/2	8 3/4	9 1/4	7	8	8 1/4	8 1/2

FOR...

Cold water and dilute aqueous solutions at medium or low pressures.

ON...

Reciprocating rods or plungers; effective where rod is out of alignment or rod weave exists.



GARLOCK 80 COIL (Oval)
GARLOCK 81 COIL (Round)

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 142 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/142

Channel Flax Packing

FOR . . .

Use against cold water at low or medium pressures.

ON . . .

Reciprocating rods or plungers of outside packed pumps. An effective packing for use where rod weave exists.

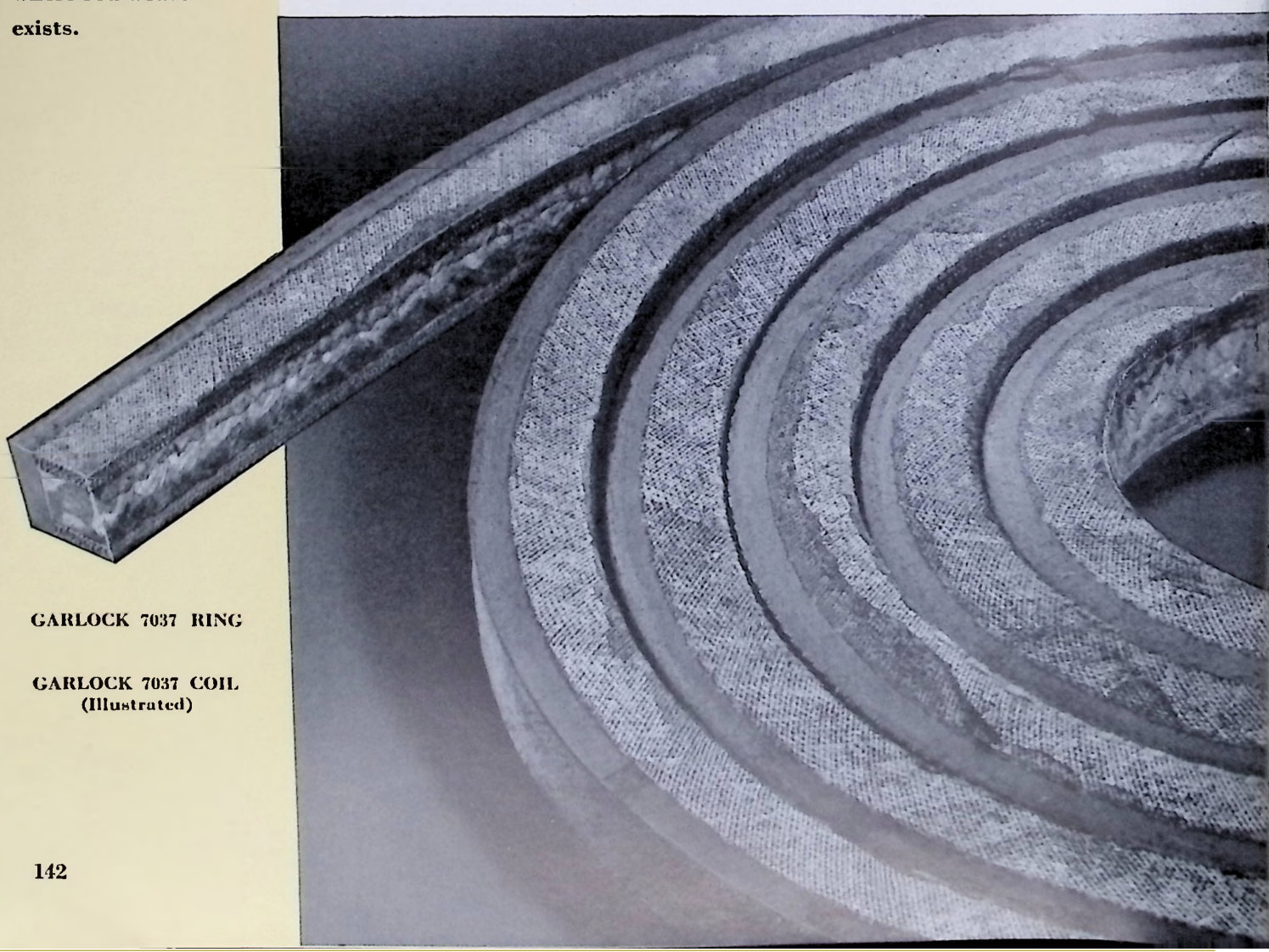
Construction—Garlock 7037 is composed of a core or center of braided flax bonded into a channel member consisting of side walls of strong duck and rubber and a back of resilient rubber. This packing is approximately square in cross section.

Forms—Garlock 7037 Rings are made with bevel-cut joint and are furnished in specified rod and stuffing box sizes.

Garlock 7037 Coil is made in standard 12½ foot lengths and in all sizes from ¼" to 1½" advancing by sixteenths. Standard packaging for sizes up to 1" inclusive is shown in the table below.

GARLOCK 7037 Coil

Packing Size	¼"	5/16"	3/8"	7/16"	½"	9/16"	5/8"	11/16"	¾"	13/16"	7/8"	15/16"	1"
Coils per box	6	4	4	4	4	3	3	2	2	1	1	1	1
Feet per box (approx.)	75	50	50	50	50	37½	37½	25	25	12½	12½	12½	12½
Pounds per box (approx.)	2¾	2¾	3¾	5	6	5½	6¾	5½	6½	3¾	4½	5	5¾

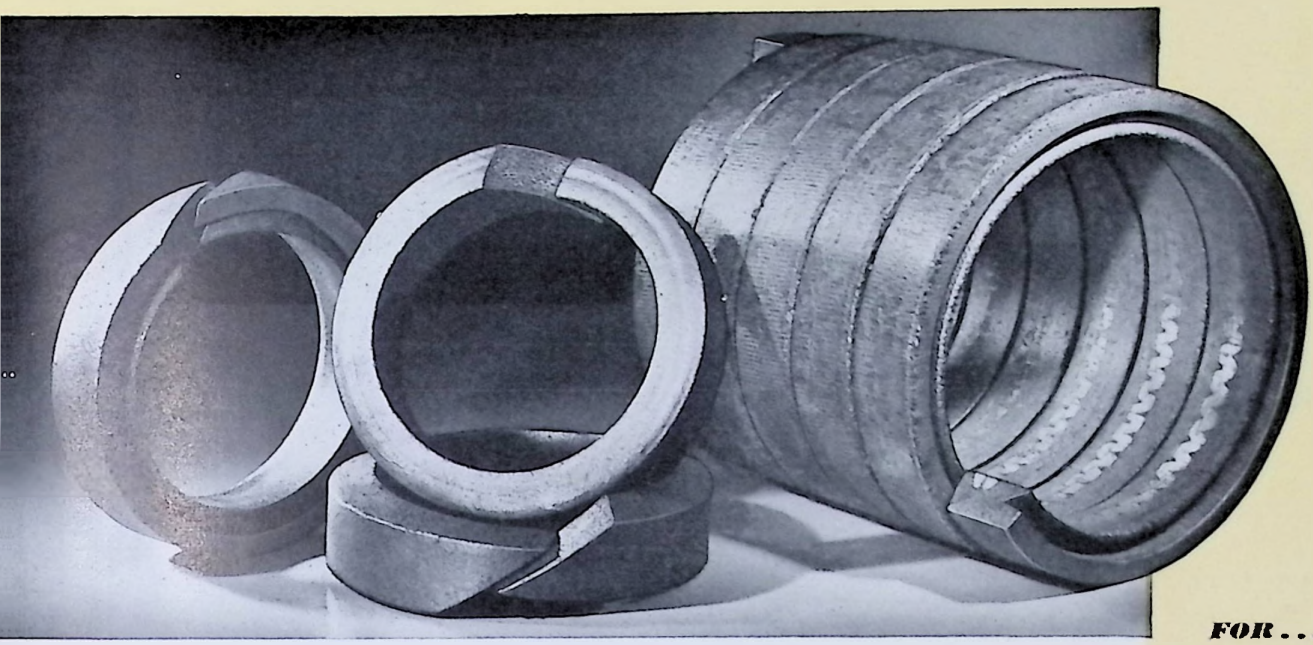


GARLOCK 7037 RING

GARLOCK 7037 COIL (Illustrated)

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 143 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/143

Lip Packings



GARLOCK 300 SPIRAL—GARLOCK 301 RING

Construction—Garlock 300 and 301 Lip Packings are made of strong cotton duck frictioned with a special Garlock rubber compound, folded and molded into circular or ring shape. This material has an unusually sturdy and flexible lip.

These packings are treated with a special lubricant and externally graphited.

Forms—Garlock 300 Spiral is made in standard 12½ foot lengths and in packing sizes from ½" to 1" inclusive, advancing by eighths. Packaging data and thicknesses of the several sizes are shown in the table below.

Garlock 301 Rings are made with bevel-cut joint to any rod or stuffing box dimensions conforming with the sizes in which this material is available.

FOR . . .

Use against cold water at high pressures.

ON . . .

Rams or plungers of presses, pumps or any kind of hydraulic equipment.

GARLOCK 302 SPIRAL—GARLOCK 303 RING

Construction—Garlock 302 and 303 Lip Packings consist of strong cotton duck frictioned with a special Garlock rubber compound, folded and formed with a channel into which a wedge-shaped, soft metal strip with staggered wearing surfaces is inserted and stitched. The material is molded into circular or ring shape and has an unusually sturdy and flexible lip.

These packings are treated with a special lubricant and graphited.

Forms—Garlock 302 Spiral is made in standard 12½ foot lengths and in packing sizes from ½" to 1" inclusive advancing by eighths. Packaging data and thicknesses of the several sizes are shown in the table below.

Garlock 303 Rings are made with bevel-cut joint to any rod and stuffing box dimensions conforming with the sizes in which this material is available.

FOR . . .

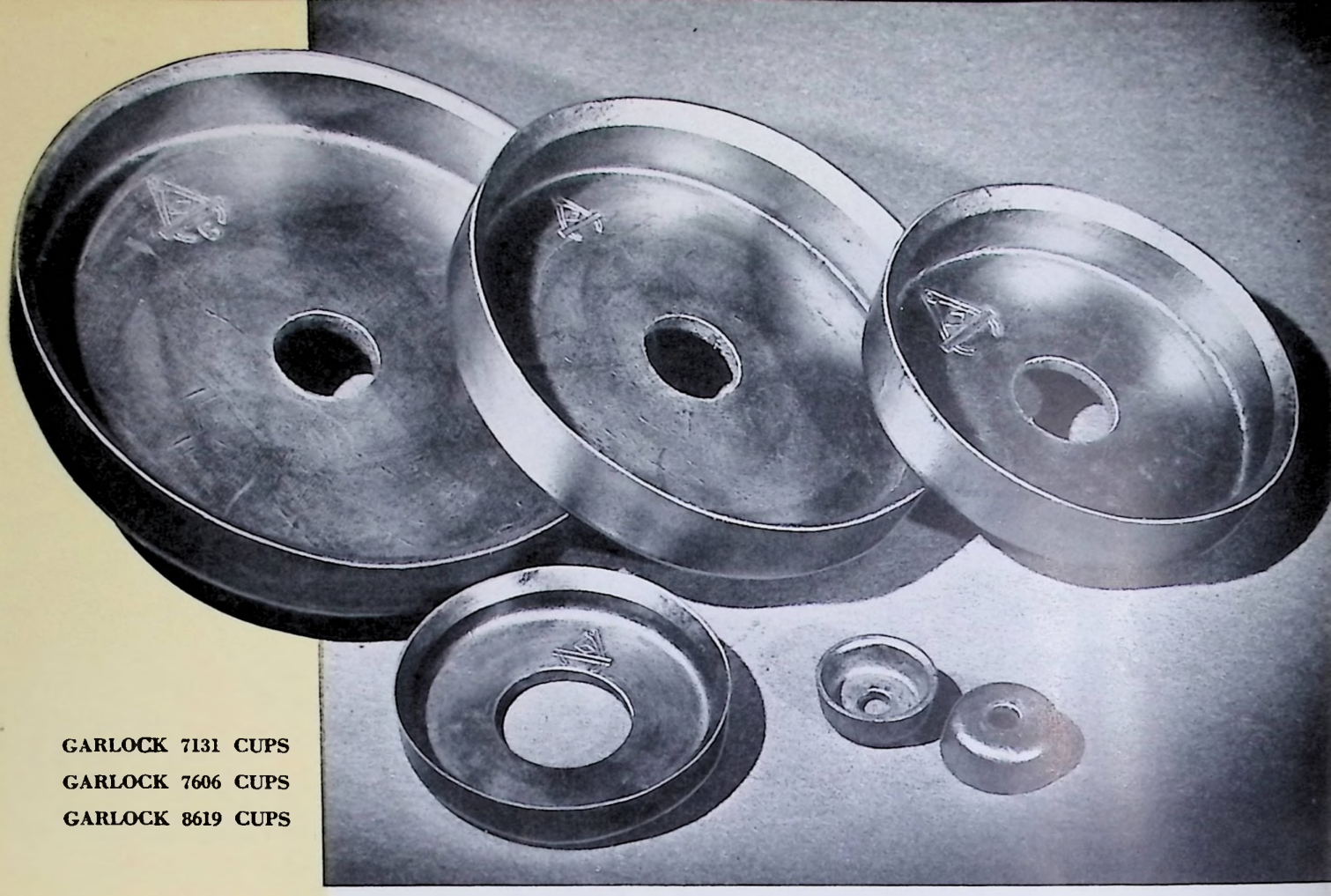
Cold water at heavy, hydraulic pressures.

ON . . .

Rams or plungers of any type of heavy, hydraulic equipment.

Packing Size	GARLOCK 300 Spiral					GARLOCK 302 Spiral				
	½"	⅝"	¾"	⅞"	1"	½"	⅝"	¾"	⅞"	1"
Packing Thickness	11/32"	1 3/32"	1 1/4"	1 13/32"	1 11/32"	11/32"	1 3/32"	1 1/4"	1 13/32"	1 11/32"
Spirals per box	1	1	1	1	1	1	1	1	1	1
Feet per box (approx.)	12½	12½	12½	12½	12½	12½	12½	12½	12½	12½
Pounds per box (approx.)	2½	4	6	8¼	10½	4	6¼	8¾	11¾	15¼

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 144 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/144



GARLOCK 7131 CUPS
GARLOCK 7606 CUPS
GARLOCK 8619 CUPS



Molded Packing Cups

Garlock Molded Packing Cups are made in many types and styles, each designed and constructed for a specific service condition.

Various fabrics, combined or frictioned with one of many special Garlock compounds made of rubber or synthetic rubber, are used in the manufacture of these cups. The selection of the type of fabric and type of compound depends on the nature of the service in which the cup is to be used.

Garlock cups are used on equipment operating against air at high or low pressures, against oils and on heavy duty hydraulic equipment. Some of the most commonly used styles are:

Garlock 7131, which is made of a light-weight cotton fabric frictioned with a special neoprene compound. A good cup for service against oil.

Garlock 7606, which is made of a strong cotton duck frictioned with a special neoprene compound. A good, heavy-duty cup for use against oil.

Garlock 8619, which is made of a strong cotton duck frictioned with a special Garlock rubber compound. A good cup for heavy hydraulic service.

Garlock Molded Cups are made in many different sizes ranging from less than ½" diameter up to very large cylinder sizes.

"U" packings and Hat packings, made of these same materials can also be supplied in many sizes.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 145 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/145

Polished Rod Rings

GARLOCK 197

Construction—Garlock 197 Polished Rod Rings are made of a high grade, Garlock rubber compound of approximately 50 durometer hardness. These rings are unusually resilient and are effective against the sand, grit and salt water encountered in oil field pumping operations.

Form—Garlock 197 Polished Rod Rings are regularly supplied cut open with a bevelled joint.

These rings are made in all standard or special sizes to fit polished rods.

FOR . . .

Use on polished rods of oil field pumps.

GARLOCK 7505

Construction—Garlock 7505 Polished Rod Rings are made of a high-grade Garlock rubber compound of approximately 60 durometer hardness. These rings are slightly less resilient than rings made of softer stocks but are tough with unusual resistance to wear from sand, grit, etc.

Form—Garlock 7505 Polished Rod Rings are regularly supplied cut open with a bevelled joint. These rings are made in all standard and special sizes to fit polished rods.

FOR . . .

Use on polished rods of oil field pumps.

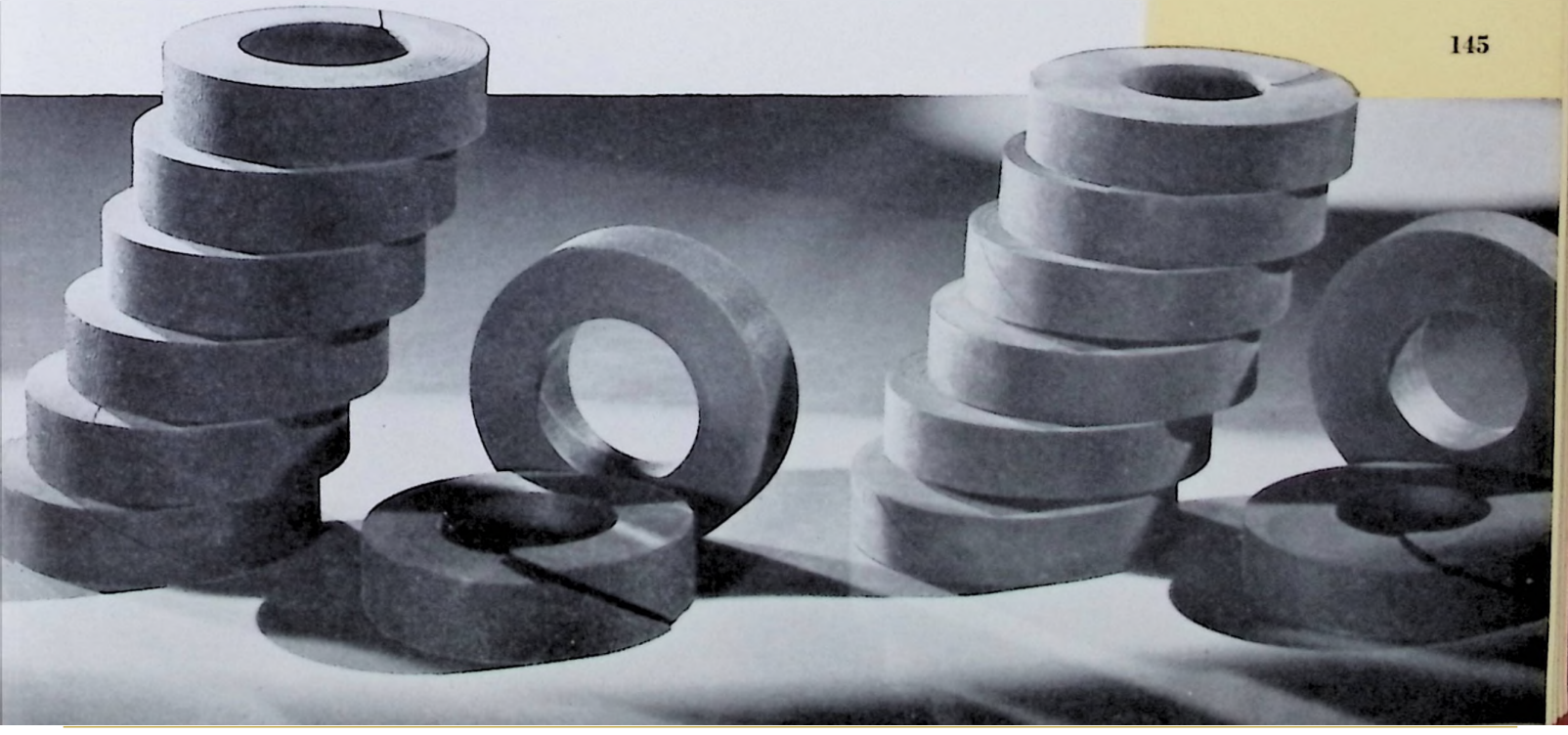
GARLOCK 182-1

Construction—Garlock 182-1 Composite Polished Rod Rings are made of two Garlock rubber compounds. The inner or wearing portion of the ring is made of tough rubber of approximately 90 durometer and the outer portion of a softer compound of approximately 50 durometer hardness.

Form—Garlock 182-1 Polished Rod Rings are regularly supplied cut open with a bevelled joint. These rings are made in all standard and special sizes to fit polished rods.

FOR . . .

Use on polished rods of oil field pumps.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 146 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/146

Slush Pump Packings

FOR . . .

Use on piston rods of slush pumps. A sturdy packing for severe service conditions.

GARLOCK 400

Construction—Garlock 400 Slush Pump Packing is a duo or combination packing consisting of end rings of tough, resilient rubber having a durometer hardness of approximately 80, and center rings of Garlock 67 diagonal packing described on page 137.

Form—Garlock 400 is supplied in complete sets only made to specified diameters and depth. Each set consists of one rubber ring on each end and a sufficient number of Garlock 67 center rings to provide a packing of the required depth. All rings are cut open with a bevelled joint.

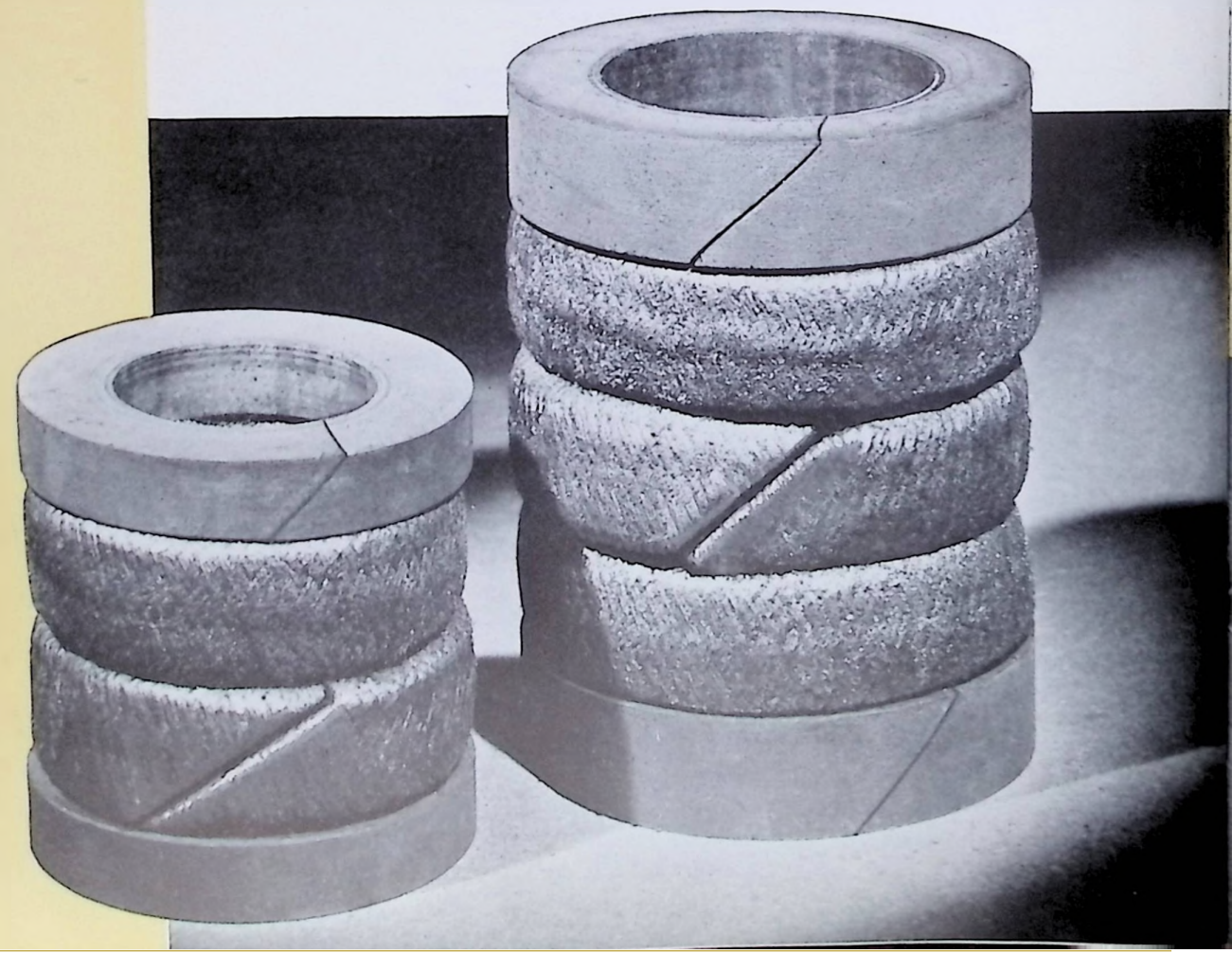
FOR . . .

Use on piston rods of slush pumps. A good packing where service conditions are not extremely severe.

GARLOCK 405

Construction—Garlock 405 Slush Pump Packing is a duo or combination packing consisting of end rings of tough, resilient rubber having a durometer hardness of approximately 50, and center rings of a diagonal packing made up of a plied rubber and duck combined with braided cotton.

Form—Garlock 405 is supplied in complete sets only made to specified diameters and depth. Each set consists of one rubber ring on each end and a sufficient number of center rings of diagonal construction to provide a packing of the required depth. All rings are cut open with a bevelled joint.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 147 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/147

Condenser Tube Packings

GARLOCK 1000 LEAD RINGS — GARLOCK 1001 PLAIN FIBRE RINGS GARLOCK 1002 FIBRE RINGS WITH LEAD INSERT

Garlock 1000 Condenser Tube Packing Rings are made of lead foil, mandrel wrapped and die-formed to accurate size and shape. These lead rings generally are applied in combination with plain fibre rings. When ferrules are used two lead rings separated by a fibre ring usually are employed; when ferrules are not used two lead rings and two fibre rings, arranged alternately, generally are installed.

Garlock 1001 Condenser Tube Packing Rings are high grade fibre rings produced to accurate size and shape. These rings are intended for use in combination with Garlock 1000 lead rings as described in the preceding paragraph.

Garlock 1002 Condenser Tube Packing Rings are made of high grade fibre with lead slug insert. The lead insert in these rings provides the metallic connection required between the condenser tube and tube sheet to prevent electrolytic corrosion of the tubes. Rings of this type, therefore, commonly are installed alone and not in combination with rings of any other type.

Standard sizes for these rings are shown in the table below:

Outside Dia. of Tube	Inside Dia. of Ring	Outside Dia. of Ring	Thickness of Ring		
			Garlock 1000	Garlock 1001	Garlock 1002
5/8"	5/8"	11/16"	1/4", 3/16" or 3/8"	1/8" or 1/16"	1/2" or 3/8"
3/4"	3/4"	13/16"	1/4", 3/16" or 3/8"	1/8" or 1/16"	1/2" or 3/8"
7/8"	7/8"	1 1/32"	1/4", 3/16" or 3/8"	1/8" or 1/16"	1/2" or 3/8"
1"	1"	1 1/32"	1/4", 3/16" or 3/8"	1/8" or 1/16"	1/2" or 3/8"

GARLOCK 954

Garlock 954 Condenser Tube Packing Rings are mandrel wrapped of a thin, unvulcanized asbestos fibre sheet material treated with a special rubber cement. They are available in any diameters or thickness required for condenser tube service. A special tool for use in applying these rings will be supplied at a nominal price.



GARLOCK 1000 RINGS
GARLOCK 1001 RINGS
GARLOCK 1002 RINGS



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 148 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/148

SEMI-METALLIC, AND



Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/149

PLASTIC PACKINGS

Number	Description	Page
Packings for high temperatures		
906	PLEATED COPPER FOIL—*spirally wrapped—asbestos core*	150
907	COPPER FOIL—*spirally wrapped—asbestos core*	150
934	COPPER TINSEL—*molded*	163
935	COPPER TINSEL—*molded*	163
937	COPPER TINSEL—*braided*	159
913	PLEATED ALUMINUM FOIL—*spirally wrapped—asbestos core*	151
914	ALUMINUM FOIL—*spirally wrapped—asbestos core*	151
915	ALUMINUM FOIL—*asbestos core*	154
5366	ALUMINUM FOIL—*braided*	157
928	PLASTIC—*shredded copper and asbestos*	168
930	PLASTIC—*asbestos fibre*	169
931	PLASTIC—*asbestos fibre*	169
924	PLASTIC—*blue asbestos fibre*	167
Packings for low and medium temperatures		
917	PLEATED LEAD FOIL—*spirally wrapped—asbestos core*	152
918	LEAD FOIL—*spirally wrapped—asbestos core*	153
919	LEAD FOIL—*spirally wrapped—flax core*	153
920	LEAD FOIL—*spirally wrapped—plastic core*	153
916	LEAD FOIL—*asbestos core*	154
944	LEAD FOIL—*braided—rubber core*	155
945	LEAD FOIL—*braided*	156
5536	LEAD FOIL—*braided*	158
7050	LEAD FOIL—*shredded*	161
7050-C	LEAD FOIL—*shredded*	162
941	LEAD FOIL—*shredded*	164
981-991	LEAD FOIL—*braided cotton cover*	165
932-942, 962-982-992	LEAD FOIL—*shredded—grooved strand*	166
938-948, 968-988-998	LEAD FOIL—*shredded—fine strand*	166
939-949, 969-999	LEAD WOOL	166
926	PLASTIC—*shredded lead and asbestos*	168
927	PLASTIC—*shredded lead and asbestos*	168
929	PLASTIC—*shredded lead and asbestos*	169
933-943	LEAD WIRE—*braided*	160



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 150 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/150

Copper Foil Packings

FOR...
Temperatures up to 1000° F. against steam, air or gases (except ammonia) and hot oils of low sulphur content.

ON...
Centrifugal or reciprocating pumps, compressors, engines, valves, expansion joints, or other equipment operating at high temperatures and pressures.



GARLOCK 906—PLEATED COPPER FOIL WITH ASBESTOS CORE

Construction—Garlock 906 is made of pleated copper foil, wrapped around a small center core of braided dry asbestos and finished with two spirally-wrapped covers of copper foil. This patented, pleated foil construction produces an unusually flexible packing which can be formed into rings without undue distortion of the material. The many small pockets in the pleats or folds of the foil carry lubricant and graphite which provide an auxiliary supply of lubricant for the wearing surface of the packing.

Forms—Garlock 906 Rings are molded to specified rod and stuffing box diameters in any packing space dimension from 3/8″ to 1″ inclusive. Rings are supplied with square-cut, butt joint.

Garlock 906 Spiral is approximately square in cross-section and is supplied in standard 12½ foot lengths. It is made in packing sizes from 3/8″ to 1″ inclusive, advancing by sixteenths. Packaged one spiral per box.

FOR...
Steam, air or gases (except ammonia) and hot oils of low sulphur content, at temperatures up to 1000° F.

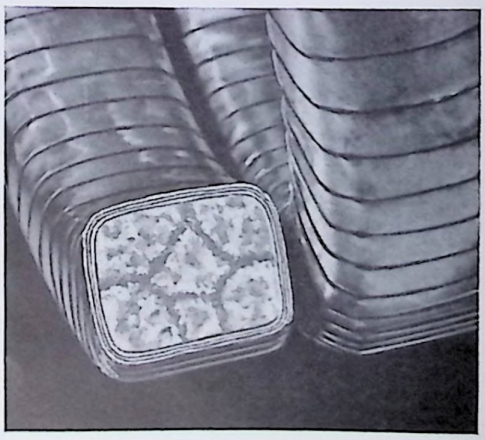
ON...
Centrifugal or reciprocating pumps, expansion joints, valves or other equipment operating at high temperatures and pressures.

GARLOCK 907—COPPER FOIL WITH ASBESTOS CORE

Construction—Garlock 907 is made of copper foil spirally wrapped around a large center core of braided, dry asbestos.

Forms—Garlock 907 Rings are molded to specified rod and stuffing box diameters. They are made in packing space sizes from 3/8″ to 1″ inclusive and are supplied with square-cut, butt joint.

Garlock 907 Spiral is approximately square in cross section and is furnished in standard 12½ foot lengths. It is made in packing sizes from 3/8″ to 1″ inclusive advancing by sixteenths. Packaged one spiral per box.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 151 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/151

Aluminum Foil Packings



FOR...
Hot oils at temperatures up to 1000° F.

ON...
Centrifugal pumps, reciprocating pumps, valves, still necks, or other equipment handling hot crude oil, gas oil or distillates.

GARLOCK 913—PLEATED ALUMINUM FOIL WITH ASBESTOS CORE

Construction—Garlock 913 is made of pleated aluminum foil wrapped around a small, center core of braided, dry asbestos and finished with two spirally-wrapped covers of aluminum foil. This patented, pleated foil construction produces a packing with unusual flexibility which can be formed into rings without undue distortion of the material. Also, the many small pockets in the pleats or folds of the foil carry lubricant and graphite, providing an auxiliary supply of lubrication for the wearing surfaces of the packing.

Forms—Garlock 913 Rings are molded to specified rod and stuffing box diameters in any packing space dimension from 3/8" to 1" inclusive. Rings are supplied with square-cut, butt joint.

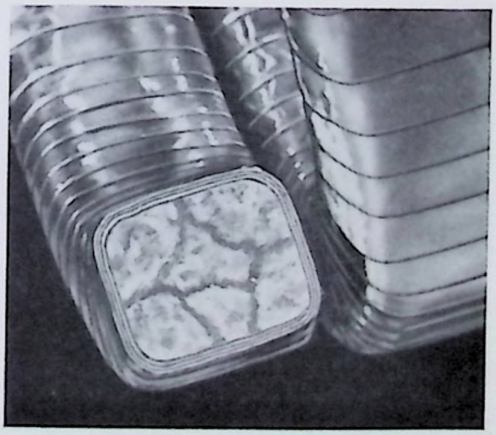
Garlock 913 Spiral is approximately square in cross section. It is furnished in standard 12½ foot lengths and in packing sizes from 3/8" to 1" inclusive, advancing by sixteenths. This material is packaged one spiral per box.

GARLOCK 914—ALUMINUM FOIL WITH ASBESTOS CORE

Construction—Garlock 914 is made of aluminum foil spirally wrapped around a large center core of braided, dry asbestos.

Forms—Garlock 914 Rings are molded to specified rod and stuffing box diameters and are available in any packing space dimension from 3/8" to 1" inclusive. Rings are supplied with square-cut, butt joint.

Garlock 914 Spiral is approximately square in cross section. It is furnished in standard 12½ foot lengths and in packing sizes from 3/8" to 1" inclusive, advancing by sixteenths. This material is packaged one spiral per box.



FOR...
Hot oil service at temperatures up to 1000° F.

ON...
Centrifugal or reciprocating pumps, valves, expansion joints, still heads or other equipment handling hot oils.

Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/152

Lead Foil Packings

FOR...
Steam, air, oil, water, ammonia or other gases at temperatures up to 550° F.

ON...
Rods or shafts of centrifugal or reciprocating pumps, compressors, engines, Corliss valve stems, expansion joints or other equipment. Rods or shafts should be in good condition and alignment.



GARLOCK 917—PLEATED LEAD FOIL WITH ASBESTOS CORE

Construction—Garlock 917 is made of pleated lead foil wrapped around a small, center core of braided, dry asbestos and finished with two spirally wrapped covers of lead foil. This patented, pleated foil construction produces a packing with unusual flexibility which can be formed into rings without undue distortion of the material. Also, the many small pockets in the pleats of the foil carry lubricant and graphite, providing an auxiliary supply of lubrication for the wearing surface of the packing.

Forms—Garlock 917 Rings are molded to specified rod and stuffing box diameters in any packing space dimension from 3/8″ to 1″ inclusive. Rings are supplied with square-cut, butt joint.

Garlock 917 Spiral is furnished in 12½ foot lengths, approximately square in cross section. It is available in packing sizes from 3/8″ to 1″ inclusive, advancing by sixteenths. Packaged one spiral per box.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 153 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/153

Lead Foil Packings

GARLOCK 918—LEAD FOIL WITH ASBESTOS CORE

Construction—Garlock 918 is made of lead foil spirally wrapped around a large center core of braided, lubricated asbestos.
Forms—Garlock 918 Rings are molded to specified rod and stuffing box diameters and are available in any packing space dimension from 3/8" to 1" inclusive. Rings are supplied with square-cut, butt joint.

Garlock 918 Spiral is furnished in 12½ foot lengths, approximately square in cross section. It is available in packing sizes from 3/8" to 1" inclusive, advancing by sixteenths. Packaged one spiral per box.



FOR...
Steam, water, brine, oils or distillates at temperatures up to 550° F.

ON...
Rods or shafts of pumps and other equipment.

GARLOCK 919—LEAD FOIL WITH FLAX CORE

Construction—Garlock 919 is made of lead foil spirally wrapped around a large core of braided, long-fibre flax treated with special waterproof hydraulic compound.
Forms—Garlock 919 Rings are molded to specified rod and stuffing box diameters and are available in packing space dimensions from 3/8" to 1" inclusive. They are supplied with square-cut, butt joint.

Garlock 919 Spiral is approximately square in cross section and is supplied in 12½ foot lengths. It is made in packing sizes from 3/8" to 1" inclusive, advancing by sixteenths. Packaged one spiral per box.



FOR...
Water or oil hydraulic service at temperatures up to 150° F.

ON...
Pumps, stern glands, turbine shafts or hydraulic equipment.

GARLOCK 920—LEAD FOIL WITH PLASTIC CORE

Construction—Garlock 920 is made of lead foil spirally wrapped around a core of plastic material containing shredded lead, asbestos fibre, graphite and lubricant.
Forms—Garlock 920 Rings are molded to specified rod and stuffing box diameters and are available in packing space dimensions from 3/8" to 1" inclusive. They are supplied with square-cut, butt joint.

Garlock 920 Spiral is approximately square in cross section. It is made in standard 12½ foot lengths and in packing sizes from 3/8" to 1" inclusive, advancing by sixteenths. Packaged one spiral per box.



FOR...
Oils, solvents, steam, air or water at temperatures up to 550° F.

ON...
Rotary shafts or reciprocating rods of pumps or compressors, valve stems or other equipment.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 154 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/154

Metal Foil Packings

GARLOCK 915 ALUMINUM FOIL

FOR...

Hot oil at temperatures up to 1000° F

ON...

Reciprocating, rotary or centrifugal pumps and other equipment. A resilient metal foil packing.

Construction—Garlock 915 is made of pleated aluminum foil wrapped around a core of braided asbestos and formed square in cross section. The aluminum foil is treated with a vegetable oil and graphite before pleating which provides internal lubrication in addition to the surface coating of graphite which this packing receives.

Forms—Garlock 915 Rings are die-pressed to size and are regularly cut open with beveled joint. These rings are available in any size within the following limitations:

	Minimum	*Maximum*
Inside dia.	5/8"	10"
Outside dia.	1 1/8"	11 1/2"
Packing space	1/4"	1"

Garlock 915 Spiral is available in 3/8", 1/2", 5/8" and 3/4" packing sizes, packaged one 12-foot spiral per box.

GARLOCK 916 LEAD FOIL

FOR...

Steam, oil, air, water ammonia or other gases at temperatures up to 550° F.

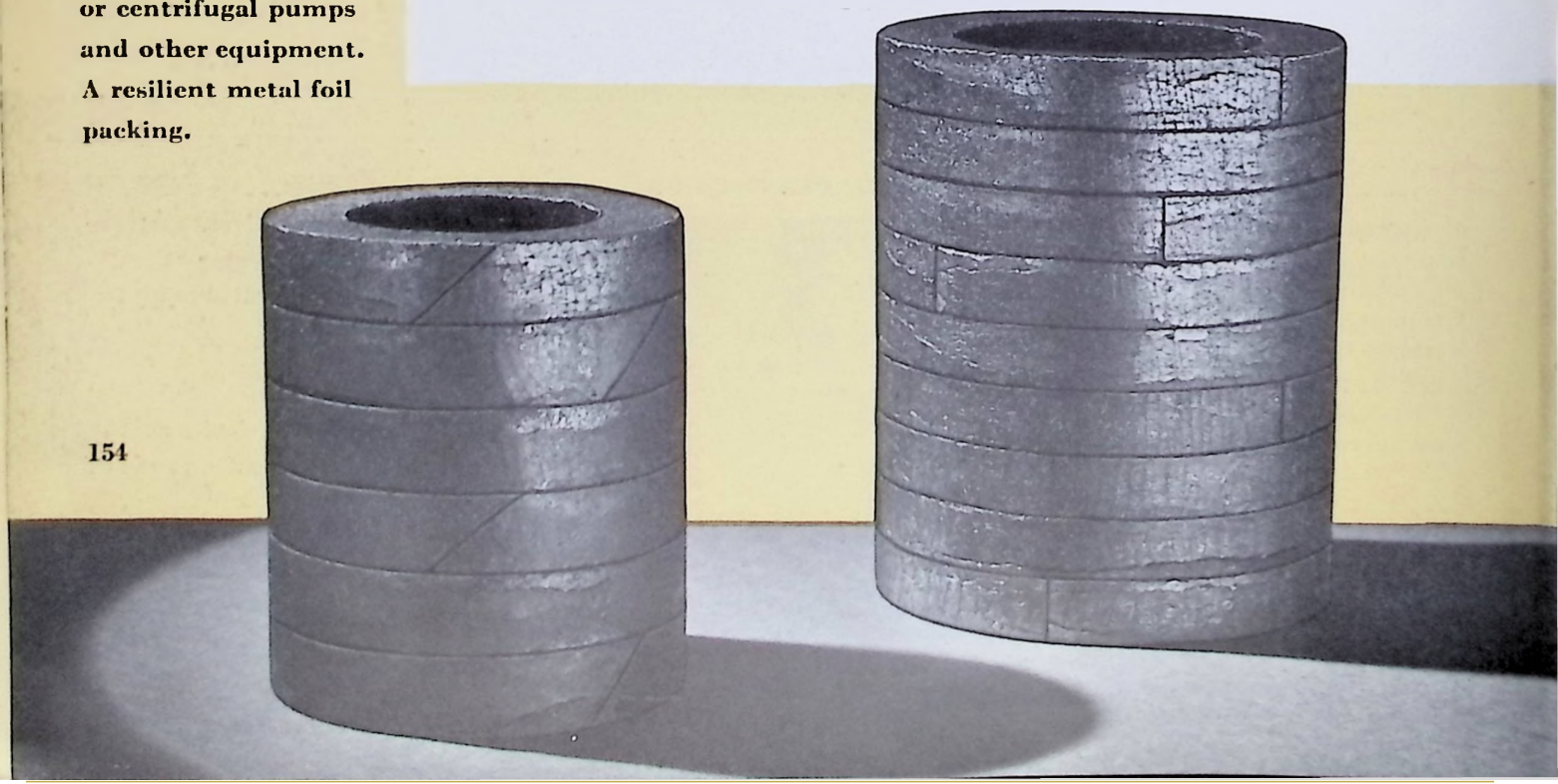
FOR...

Reciprocating, rotary or centrifugal pumps and other equipment. A resilient metal foil packing.

Construction—Garlock 916 is made of pleated lead foil wrapped around a core of braided asbestos, formed square in cross section. The lead foil is treated with a vegetable oil and graphite before pleating which provides internal lubrication in addition to the surface coating of graphite which the packing receives.

Form—Garlock 916 is made in ring form only, die-pressed and regularly cut open with a beveled joint. Rings are available in any size within the following limitations:

	Minimum	*Maximum*
Inside dia.	5/8"	10"
Outside dia.	1 1/8"	11 1/2"
Packing space	1/4"	1"



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 155 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/155

Braided Lead Foil Packing

Construction—Garlock 944 is made of cotton yarn covered with lead foil and braided over a round core of resilient rubber into a packing approximately square in cross section. It is covered with a skeleton-braided cotton jacket. This packing is lubricated and graphited throughout. The rubber core makes this a suitable packing for use on rods which are not in perfect alignment.

Forms—Garlock 944 Rings are made with square-cut, butt joint in any specified rod and stuffing box sizes.

Garlock 944 Coil is made in sizes from ¼" to 1½" advancing by sixteenths. Standard packaging for sizes up to 1" is shown in the table below.

GARLOCK 944 Coil

Packing Size	¼"	5/16"	3/8"	7/16"	½"	9/16"	5/8"	11/16"	¾"	13/16"	7/8"	15/16"	1"
Coils per Box	1	1	1	1	1	1	1	1	1	1	1	1	1
Feet per Box (approx.)	50	45	39	36	30	24	22	19	17	15	15	15	15
Pounds per Box (approx.)	6¼	7½	10	11¼	11¾	11¾	12	11¾	12¼	12½	14¾	17	19¾

FOR...

Use against steam, air, water, natural gas, ammonia or other gases at temperatures up to 550° F.

ON...

Reciprocating rods or rotary shafts of engines, compressors, pumps or other equipment. A resilient metal foil packing.

GARLOCK 944 RING

GARLOCK 944 COIL (Illustrated)



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 156 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/156



GARLOCK 945 RING
GARLOCK 945 COIL
(Illustrated)



Braided Lead Foil Packing

FOR . . .

Use against steam, air, water, natural gas, ammonia or other gases at temperatures up to 550° F.

ON . . .

Reciprocating rods or rotary shafts of engines, compressors, pumps or other equipment.

Construction—Garlock 945 is made of cotton yarn covered with lead foil, braided into approximately square cross section. This material is lubricated and graphited throughout.

Forms—Garlock 945 Rings are made with square-cut, butt joint in any specified rod and stuffing box sizes.

Garlock 945 Coil is made in sizes from ¼″ to 1½″ advancing by sixteenths. Standard packaging for sizes up to 1″ is shown in the table below.

GARLOCK 945 Coil

Packing Size	¼″	5/16″	3/8″	7/16″	½″	9/16″	5/8″	11/16″	¾″	13/16″	7/8″	15/16″	1″
Coils per Box	1	1	1	1	1	1	1	1	1	1	1	1	1
Feet per Box (approx.)	50	45	39	36	30	24	22	19	17	15	15	15	15
Pounds per Box (approx.)	6¾	8	10¼	12¾	12¾	12½	13¼	12¾	13¼	13¼	15½	17¾	20½

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 157 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/157



GARLOCK 5366 RING

GARLOCK 5366 COIL
(Illustrated)

Braided Aluminum Foil Packing

Construction—Garlock 5366 is made of cotton yarn covered with aluminum foil and braided over a center core into a packing approximately square in cross section. This material is thoroughly lubricated and receives a surface coating of graphite.

Forms—Garlock 5366 Rings are die-pressed to size and are cut open with butt joint. These rings are available in any size subject to the following limitations:

	Minimum	*Maximum*
Inside dia.	5/8″	10″
Outside dia.	1 1/8″	11 1/2″
Packing space	1/4″	1 1/2″

Garlock 5366 Coil is made in sizes from 1/4″ to 1 1/2″, advancing by sixteenths.

Standard packaging for sizes up to 1″ is shown in the table below.

GARLOCK 5366 Coil

Packing Size	1/4″	5/16″	3/8″	7/16″	1/2″	9/16″	5/8″	11/16″	3/4″	13/16″	7/8″	15/16″	1″
Coils per Box	5	5	4	3	3	3	3	3	3	1	1	1	1
Feet per Box (approx.)	120	100	116	72	66	60	51	45	42	26	24	22	20
Pounds per Box (approx.)	4 1/4	5	8 1/2	7 1/4	8 3/4	10	10	11 1/4	12 1/2	9	9 1/4	10 1/4	10 1/2

FOR . . .

Hot oil at temperatures up to 1000° F.

ON . . .

Rods and shafts of reciprocating, rotary and centrifugal pumps or other equipment and on valve stems.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 158 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/158



GARLOCK 5536 RING

GARLOCK 5536 COIL
(Illustrated)

Braided Lead Foil Packing

FOR . . .

Steam, air, water, natural gas, ammonia or other gases at temperatures up to 550° F.

ON . . .

Reciprocating rods or rotary shafts of engines, compressors, pumps or other equipment.

Construction—Garlock 5536 is made of asbestos yarn covered with composition lead foil and braided approximately square in cross section. This material is internally lubricated and graphited and, in addition, receives a surface coating of graphite.

Forms—Garlock 5536 Rings are made with square-cut, butt joint to specified rod and stuffing box dimensions.

Garlock 5536 Coil is produced in all sizes from ¼" to 1½" inclusive, advancing by sixteenths. Standard packaging for sizes up to 1" is shown in the table below.

GARLOCK 5536 Coil

Packing Size	¼"	5/16"	3/8"	7/16"	½"	9/16"	5/8"	11/16"	¾"	13/16"	7/8"	15/16"	1"
Coils per Box	1	1	1	1	1	1	1	1	1	1	1	1	1
Feet per Box (approx.)	50	45	39	36	30	24	22	19	17	15	15	15	15
Pounds per Box (approx.)	6¾	8	10½	12¾	12¾	12½	13¼	12¾	13¼	13¼	15½	17¾	20½

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 159 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/159

Braided Copper Tinsel Packing

Construction—Garlock 937 is made of special copper tinsel, bonded with a rubber cement and braided into a packing approximately square in cross section. The material receives a surface coating of graphite after braiding.

Forms—Garlock 937 Rings are supplied with square-cut, butt joint to specified rod and stuffing box sizes.

Garlock 937 Coil is made in sizes from 1/4" to 1 1/2" inclusive advancing by sixteenths. Standard packaging for sizes up to 1" is shown in the table below.

GARLOCK 937 Coil

Packing Size	1/4"	5/16"	3/8"	7/16"	1/2"	9/16"	5/8"	11/16"	3/4"	13/16"	7/8"	15/16"	1"
Coils per Box	1	1	1	1	1	1	1	1	1	1	1	1	1
Feet per Box (approx.)	50	45	39	36	30	24	22	19	17	15	15	15	15
Pounds per Box (approx.)	5	5 3/4	6 3/4	8 3/4	9	9 1/4	10 1/4	10 3/4	11 1/2	12	14	16 1/2	19 1/4

FOR...

Steam, air, water or gases (except ammonia) at temperatures up to 1500° F.

ON...

Reciprocating rods of compressors, engines or pumps; shafts of rotary or centrifugal pumps; and valve stems.



GARLOCK 937 RING
GARLOCK 937 COIL
(Illustrated)

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 160 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/160

Braided Lead Wire Packing

FOR...

Use against steam, water, ammonia or other gases at temperatures up to 550° F.

ON...

Reciprocating rods or rotary shafts. Generally used as top or bottom, anti-extrusion rings in combination with other packings.

Construction—Garlock Braided Lead Packing is made of composition lead wire, braided square in cross section. It is treated with a mineral fat lubricant after braiding and receives a surface coating of graphite. **Forms**—Garlock 943 Braided Lead Rings are made with square-cut, butt joint and are produced in specified rod and stuffing box sizes.

Garlock 933 Coil is made in sizes from ¼" to 1" inclusive advancing by sixteenths. Standard packaging is shown in the table below.

GARLOCK 933 Coil

Packing Size	¼"	5/16"	3/8"	7/16"	½"	9/16"	5/8"	11/16"	¾"	13/16"	7/8"	15/16"	1"
Coils per Box	1	1	1	1	1	1	1	1	1	1	1	1	1
Feet per Box (approx.)	50	45	39	36	30	24	22	19	17	15	15	15	15
Pounds per Box (approx.)	10¾	14¼	18	23	24½	25	28	29½	31½	32½	38	43	49



GARLOCK 943 RING
GARLOCK 933 COIL (Illustrated)

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 161 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/161

Shredded Metal Packing

Construction—Garlock 7050 is a set packing having conical-shaped center rings molded of shredded composition lead foil, alternated with conical-shaped separator rings molded of sheet lead $\frac{1}{16}$" thick. A convex-beveled top adapter ring and a concave-beveled bottom adapter ring, both machined from fine babbitt, cut in halves with butt joints and provided with garter springs, complete the set.

The lead foil rings are treated with a special compound and graphite before molding and are surfaced-coated with graphite.

Form—Garlock 7050 is supplied regularly in complete sets only. However, when so specified, center rings only without the top and bottom adapter rings will be furnished. These sets or rings are made to any specified sizes within the following limitations:

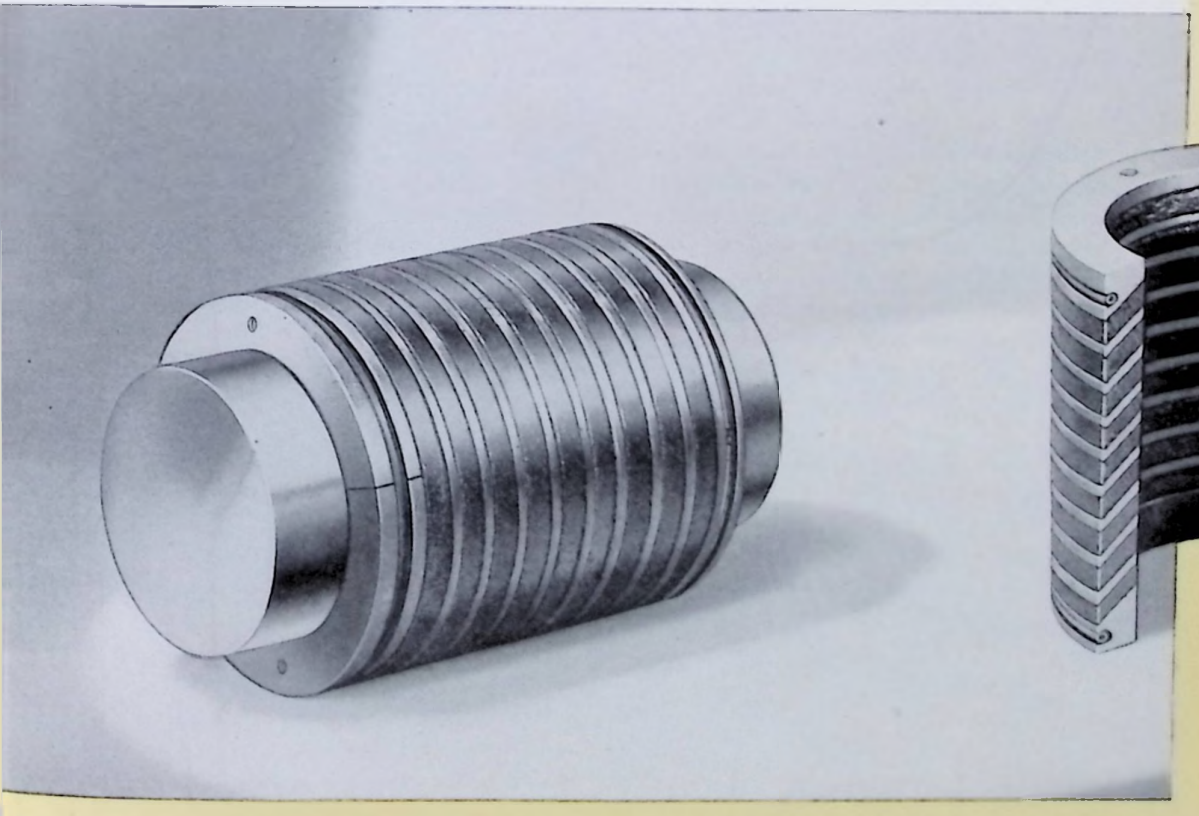
	Minimum	*Maximum*
Inside dia.	¼"	10"
Outside dia.	½"	11½"
Packing space	⅛"	1"
Ring thickness	¼"	....

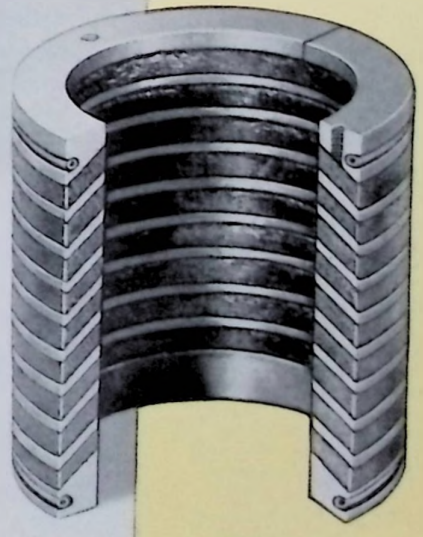
FOR...

Air, steam, oils, solvents or gases (such as carbon dioxide, methyl chloride or freon) at temperatures up to 550° F.

ON...

Reciprocating rods of high-pressure, high-speed air and gas compressors; on reciprocating rods or rotary shafts of pumps and other equipment; and on valve stems.

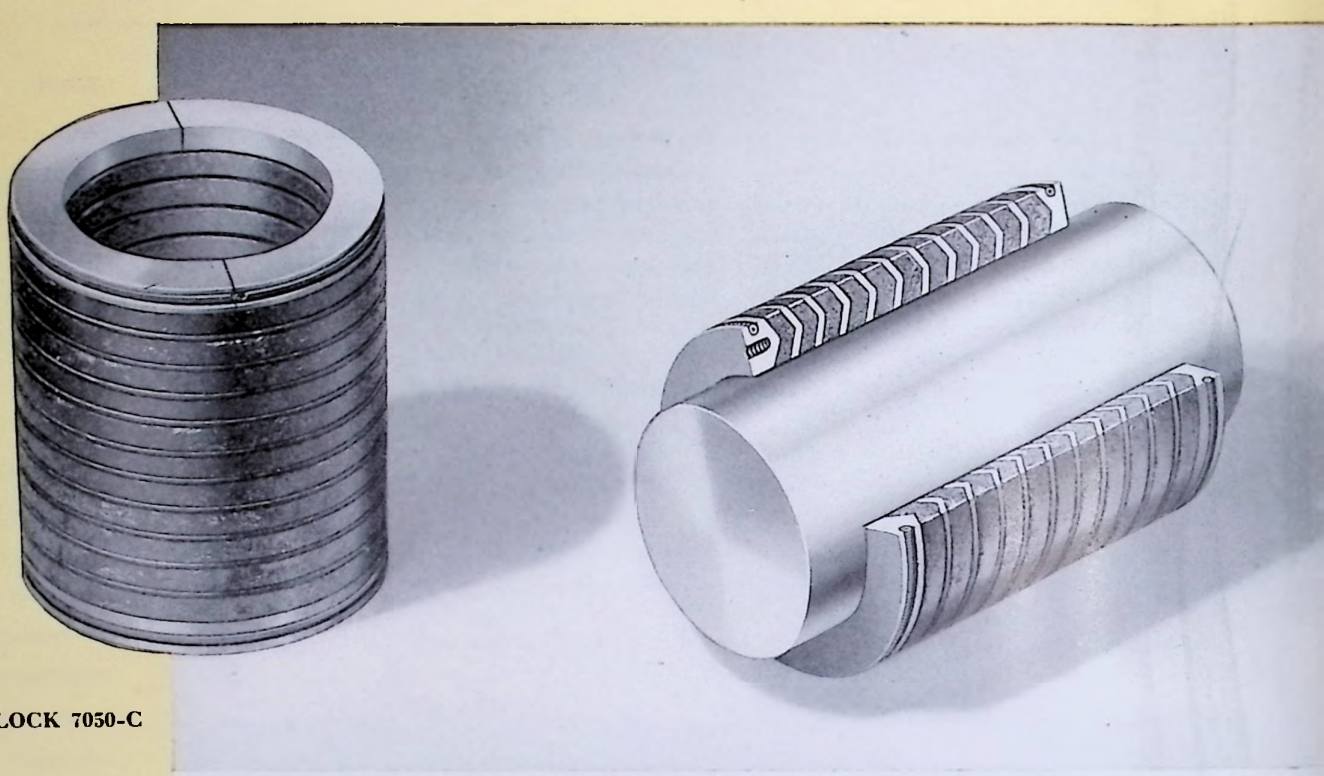




GARLOCK 7050

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 162 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/162

Shredded Metal Packing



GARLOCK 7050-C

FOR . . .

Air, steam, oils, solvents or gases (such as carbon dioxide, methyl chloride or freon) at temperatures up to 550° F.

ON . . .

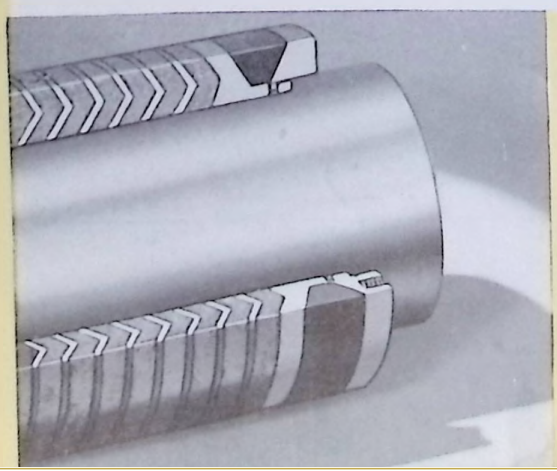
Reciprocating rods of high-pressure, high-speed air and gas compressors; on reciprocating rods or rotary shafts of pumps or other equipment; and on valve stems.

Construction—Garlock 7050-C is a set packing having V-shaped center rings molded from shredded composition lead foil, alternated with V-shaped separator rings $\frac{1}{16}$" thick molded from sheet lead. Top and bottom adapter rings with V-shaped inner faces, machined from fine babbitt, cut in halves with butt joints and provided with garter springs, complete the set.

The lead foil rings are treated with a special compound and graphite before molding and are surface-coated with graphite.

Forms—Garlock 7050-C is supplied regularly in complete sets only. However, when so specified, center rings only without the top and bottom adapter rings, will be furnished. These sets or rings are made to any specified sizes within the following limitations:

	Minimum	*Maximum*
Inside dia.	¼"	10"
Outside dia.	½"	11½"
Packing space	⅛"	1"
Ring thickness	¼"	....



SPECIAL CONSTRUCTIONS

For service on enclosed type CO_2 compressors at high pressures a special, two-piece bronze top adapter ring with rubber insert is recommended, as illustrated.

For use on outside packed plungers of boiler feed pumps handling high-pressure hot water, bronze adapters and bronze separator rings are recommended.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 163 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/163

Shredded Metal Packings

GARLOCK 934

Construction—Garlock 934 is made of copper tinsel treated with a special rubber cement and molded to shape. This material is graphited throughout.

Form—Garlock 934 is made in ring form only, molded to specified size and shape and cut open with a beveled joint.

Rings are available in any sizes within the following limitations:

	Minimum	*Maximum*
Inside dia.	1/8"	10"
Outside dia.	5/16"	11 1/2"
Packing space	3/32"	1"
Ring thickness	1/8"	....

FOR...

Steam, air, water, or gases, (except ammonia) at temperatures up to 1500° F.

ON...

Valve stems and reciprocating rods or rotary shafts of pumps, blowers, turbines, compressors or other equipment.

GARLOCK 935

Construction—Garlock 935 is a set packing having conical-shaped center rings molded of copper tinsel treated with a special rubber cement, graphited throughout and molded to shape.

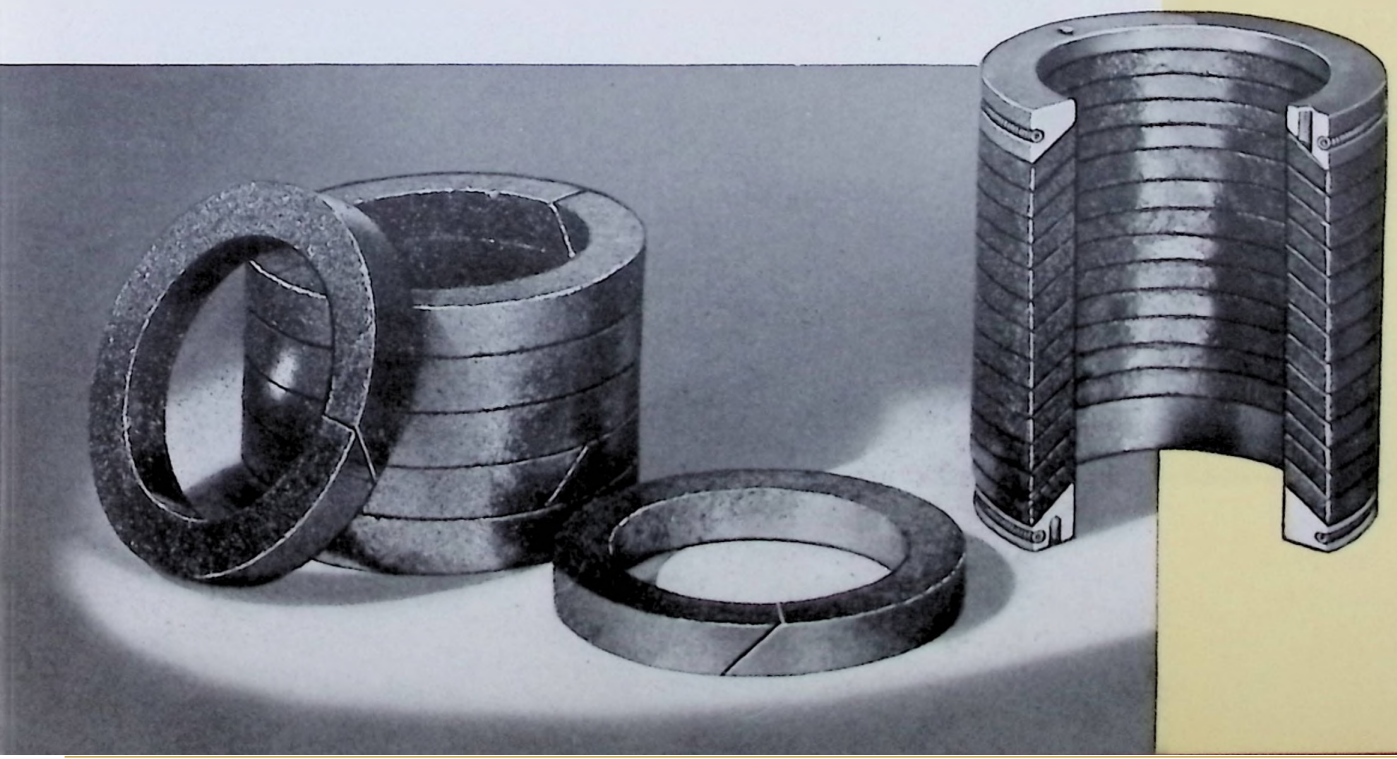
Top and bottom adapter rings, machined from red metal with convex and concave inner faces respectively, cut in halves with butt joints and provided with garter springs, complete the set. Bronze end rings are supplied for temperatures in excess of 600°F.

Form—Garlock 935 is regularly supplied in complete sets only. When so specified, however, sets will be furnished with end rings of 935 material, or conical-shaped center rings only, without any end rings will be supplied.

These sets or rings are made to any specified size within the following limitations:

	Minimum	*Maximum*
Inside dia.	1/4"	10"
Outside dia.	1/2"	11 1/2"
Packing space	1/8"	1"
Ring thickness	1/4"	....

GARLOCK 934 RING (left)
GARLOCK 935 RING (below)



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 164 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/164

Shredded Metal Packing

FOR . . .

Freon, ammonia, carbon dioxide, or methyl chloride gases.

ON . . .

Rotary shafts of compressors.

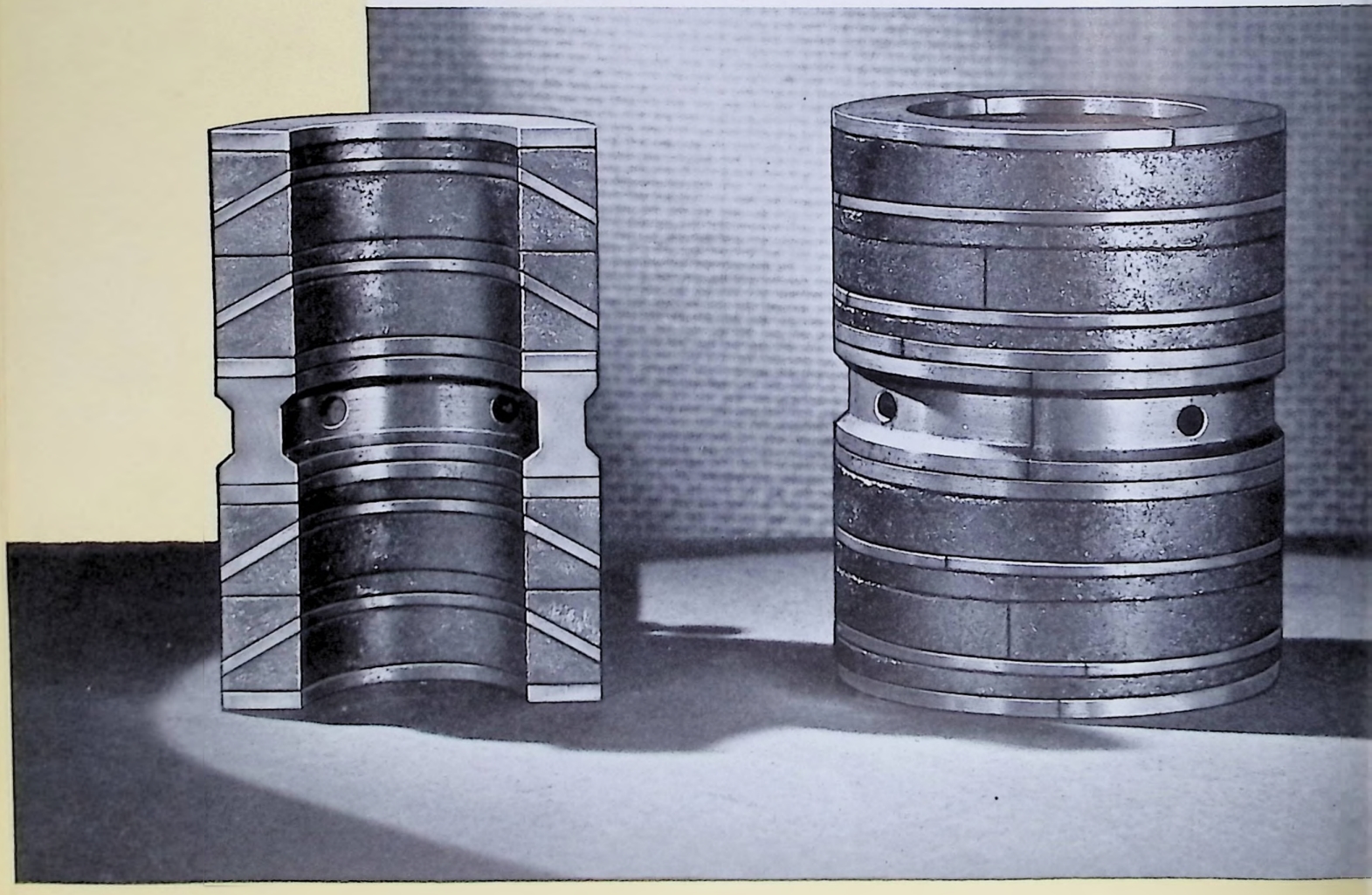
Construction—Garlock 941 is a set packing made up of two-part, diagonal-shaped rings molded from shredded composition lead foil bonded with a special compound and graphited throughout.

A machined babbitt separator ring $\frac{3}{32}''$ thick is placed between the two diagonal surfaces of each ring. Thin rings of machined babbitt are also located at the top and bottom of each set.

Form—Garlock 941 is supplied in complete sets only to specified rod and stuffing box dimensions.

The oil lantern (shown in the illustration) is furnished only when the order so specifies.

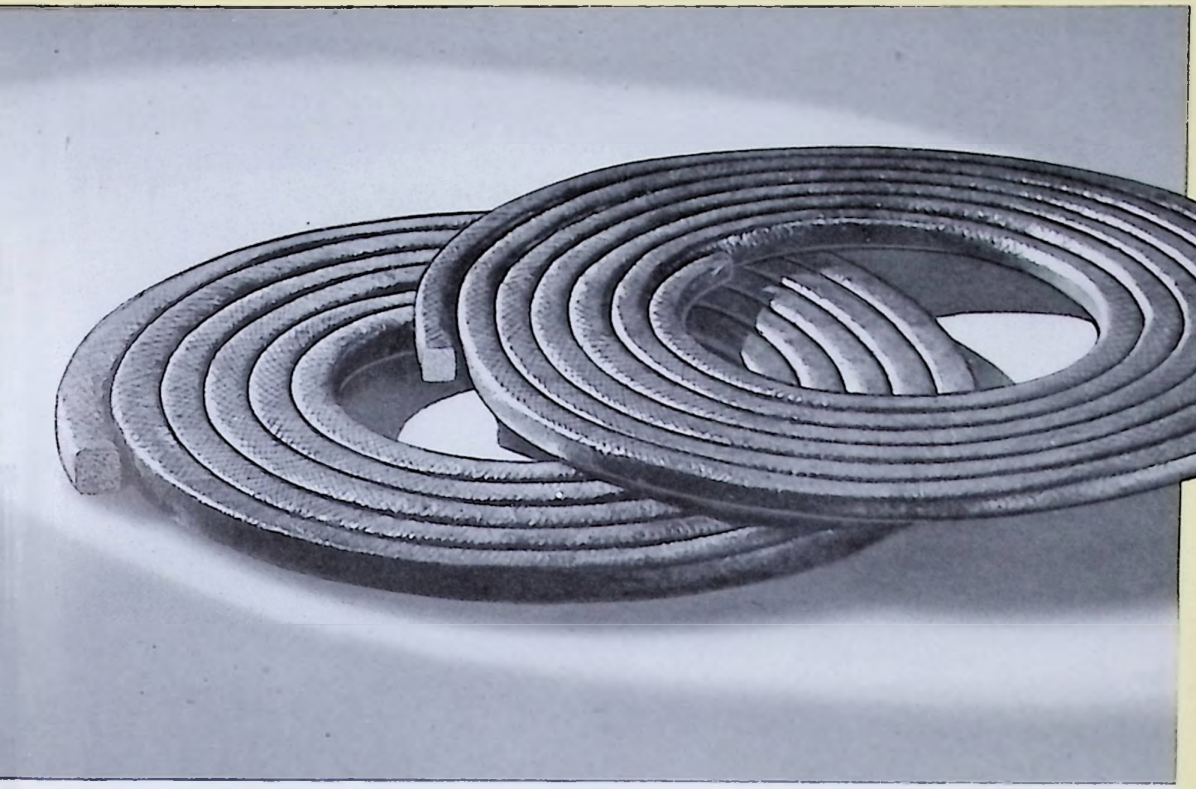
All rings are cut open for application around the shaft.



GARLOCK 941

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 165 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/165

Shredded Metal Packing



GARLOCK 991 RING
GARLOCK 981 COIL
(Illustrated)

Construction—Garlock Flexomet Packing is made of strands of composition lead foil bonded with a special rubber cement, twisted to size and graphited. A cotton yarn cover is braided over this material which is formed into square cross-section and surface coated with graphite.

Forms—Garlock 991 Flexomet Rings are supplied with square-cut, butt joints, die-pressed to specified rod and stuffing box dimensions, subject to the following size limitations:

	Minimum	*Maximum*
Inside dia.	3/8″	10″
Outside dia.	5/8″	11½″
Packing space	1/8″	1¼″

Garlock 981 Flexomet Coil is made in sizes from 1/8″ to 1″ inclusive, advancing by sixteenths. Packaging data is shown in the table below.

GARLOCK 981 Coil

Packing Size	1/8″	3/16″	1/4″	5/16″	3/8″	7/16″	1/2″	9/16″	5/8″	11/16″	3/4″	13/16″	7/8″	15/16″	1″
Coils per Box	*	*	2	2	2	2	2	1	1	1	1	1	1	1	1
Feet per Box (approx.)	25†	12†	30	30	30	30	30	15	15	15	15	15	10	10	10
Pounds per Box (approx.)			4½	6	11	15¾	20½	11¾	14½	17½	21	24½	19	22	25

*On 1, 2 or 5 pound spools †Feet per pound—approx.

FOR . . .

Steam, air, water, ammonia or other gases at temperatures up to 550° F.

ON . . .

Shafts of rotary or centrifugal pumps; outside packed plungers of reciprocating pumps; reciprocating rods of other equipment; and valve stems.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 166 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/166

Shredded Metal Packings

FOR . . .

Steam, air, water, ammonia or other gases at temperatures up to 550° F.

ON . . .

Reciprocating rods of engines, compressors or pumps; shafts of centrifugal or rotary pumps; valve stems and other equipment.

Construction—The several shredded metal packings included on this page represent the original group of materials of this general type manufactured by this company.

In the manufacture of the "Fine-Strand" and "Grooved Strand" types, shredded composition lead foil is bonded with a special rubber cement, graphited throughout and molded into rings or formed into coil.

The "Lead Wool" types are of similar construction except that lead wool instead of lead foil is used in their manufacture.

Forms—Plain rings, diagonal rings and diagonal rings with lead separators are molded from these shredded metal materials as shown in the table below. All rings are regularly supplied with cut-open, beveled joint. Rings are available in any size within the following limitations:

	Minimum	*Maximum*
Inside dia.	1/8″	10″
Outside dia.	5/16″	11½″
Packing space	3/32″	1″

Coil forms of these materials are available in the sizes and standard box quantities shown in the table below.

RING AND COIL FORMS OF SHREDDED METAL PACKINGS

Description and Form	Fine Strand	Grooved Strand	Lead Wool
	Garlock No.	Garlock No.	Garlock No.
Diagonal Ring with lead separator	938	932	939
Diagonal Ring—no separator	948	942	949
Plain Ring	968	962	969
Twisted Coil—rolled	988	982	
Straight Coil—loose	998	992	999

GARLOCK 982 and GARLOCK 988 Coils

Packing Size		1/8″	3/16″	1/4″	5/16″	3/8″	7/16″	1/2″	9/16″	5/8″	11/16″	3/4″	13/16″	7/8″	15/16″	1″
Coils per Box		*	*	2	2	2	2	2	1	1	1	1	1	1	1	1
Feet per Box (approx.)		20†	9†	30	30	30	30	30	15	15	15	15	15	10	10	10
Pounds per Box (approx.)	982			5¾	9¼	12½	17½	23	15	17	20½	24	28	22	24	27
	988			6	9½	13¾	19¼	26	16¼	18½	23	27	31	24	27	31

*On 1, 2 or 5 pound spools. †Feet per pound—approx.

GARLOCK 992—GARLOCK 998—GARLOCK 999 Coils

Garlock 992	Available only in approximate 3/8″ packing space. Standard coil 6 feet long.
Garlock 998	Available only in approximate 3/8″ packing space. Standard coil 6 feet long.
Garlock 999	Available only in approximate 5/8″ packing space. Standard coil 2 feet long.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 167 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/167



Plastic Packings

GARLOCK 924

Construction—Garlock 924 Plastallic is a nonmetallic plastic packing made of African blue asbestos fibre and a special bonding material containing lubricant and graphite. Coil and ring forms of this packing have a skeleton-braided cover of glass yarn.

Forms—Garlock 924 Rings are molded to specified inside diameter, outside diameter and thickness. Rings are supplied with square-cut, butt joint. Garlock 924 Coil is made in round, rectangular and square sizes shown in the table below.

Garlock 924 in loose or bulk form is supplied in cans of 1¾ pounds net weight, each can containing a coil of shredded lead material for use in forming bottom rings.

GARLOCK 924 Coil

For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Coils per Box	Feet per Box—approx.	Pounds per Box—approx.
3/16" or smaller	OX	3/32" Round	*	435	5
1/4" to 5/16" inclusive	X	1/4" x 1/4"	*	73	5
3/8" to 7/16" inclusive	3-8X	3/8" x 1/16"	*	43	5
1/2" to 11/16" inclusive	2X	1/2" x 3/4"	3	51	10 3/4
3/4" to 15/16" inclusive	3X	3/4" x 7/8"	2	26	11
1" and above	4X	1" Square	1	20	11 1/2

*Size OX on 1, 2 or 5 pound spools; size X on 2 or 5 pound spools; size 3-8X on 5 pound spools.

FOR...

Use against strong mineral acids.

ON...

Shafts of centrifugal or rotary pumps and on valve stems.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 168 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/168

Plastic Packings

GARLOCK 926

FOR . . .
Steam, water or air at temperatures up to 550° F.

ON . . .
Shafts of centrifugal or rotary pumps and on valve stems.

Construction—Garlock 926 Plastallic packing is made of shredded composition lead foil, asbestos fibre and a special bonding compound containing lubricant and graphite.

Coil and ring forms of this material have a skeleton braided cover of black cotton yarn, containing one strand each of red and yellow yarn.

Forms—Garlock 926 Rings are molded to specified inside diameter, outside diameter and thickness, with square-cut, butt joint.

Garlock 926 Coil is made in the round, rectangular and square sizes shown in the table below. Garlock 926 in loose or bulk form is supplied in cans of 2½ pounds net weight, each can containing a coil of shredded lead material for use in forming bottom rings.

GARLOCK 927

FOR . . .
Oils, solvents, gases, steam or dilute aqueous solutions (except strong mineral acids or alkalies) at temperatures to 550°F.

ON . . .
Shafts of centrifugal or rotary pumps and on valve stems.

Construction—Garlock 927 Plastallic packing is made of shredded composition lead foil, asbestos fibre and a special bonding compound containing lubricant and graphite.

Coil and ring forms of this material have a skeleton-braided cover of black cotton yarn containing a single red strand.

Forms—Garlock 927 Rings are furnished with square-cut, butt joint molded to specified inside diameter, outside diameter and thickness.

Garlock 927 Coil is made in the round, rectangular and square sizes shown in the table below. Garlock 927 in loose or bulk form is supplied in cans of 2½ pounds net weight, each can containing a coil of shredded lead material for use in forming bottom rings.

GARLOCK 928

FOR . . .
Oils, solvents, gases, steam or dilute aqueous solutions (except strong mineral acids or alkalies) at temperatures to 700°F.

ON . . .
Shafts of centrifugal or rotary pumps and on valve stems.

Construction—Garlock 928 Plastallic packing is made of shredded copper foil and asbestos fibre with a special bonding compound containing lubricant and graphite.

Coil and ring forms of this material have a skeleton-braided cover of black cotton yarn with a single yellow strand.

Forms—Garlock 928 Rings are furnished with square-cut, butt joint, molded to specified inside diameter, outside diameter and thickness.

Garlock 928 Coil is made in the round, rectangular and square sizes shown in the table below. Garlock 928 in loose or bulk form is supplied in cans of 2 pound net weight.

GARLOCK 926, 927 and 928 Coil

For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Coils per Box	Feet per Box—Approx.			Pounds per Box—Approx.		
				926	927	928	926	927	928
1/16" or smaller	OX	1/32" Round	*	235	225	265	5	5	5
1/16" to 1/8" inclusive	X	1/8" x 1/16"	*	45	43	51	5	5	5
3/16" to 1/4" inclusive	3-8X	3/16" x 1/16"	*	26	25	30	5	5	5
1/4" to 13/32" inclusive	2X	1/4" x 5/32"	3	51	51	51	19	20½	15
7/16" to 13/16" inclusive	3X	3/4" x 7/16"	2	26	26	26	20	21½	16
1" and above	4X	1" Square	1	20	20	20	22	23½	18

*Size OX on 1, 2 or 5 pound spools; size X on 2 or 5 pound spools; size 3-8X on 5 pound spools.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 169 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/169

Plastic Packings

GARLOCK 929

Construction—Garlock 929 Plastallic packing is made of shredded composition lead foil, asbestos fibre and a special bonding compound containing lubricant and graphite.

Coil and ring forms of this material have a skeleton-braided cover of black cotton yarn containing a single green strand.

Forms—Garlock 929 Rings are supplied with square-cut, butt joint, molded to specified inside diameter, outside diameter and thickness.

Garlock 929 Coil is made in the round, rectangular and square sizes shown in the table below.

Garlock 929 in loose or bulk form is supplied in cans of 2½ pounds net weight, each can containing a coil of shredded lead material for use in forming bottom rings.

FOR...

Steam, water or dilute aqueous solutions (except mineral acids) at temperatures to 550° F.

ON...

Shafts of centrifugal or rotary pumps, reciprocating rods and valve stems.

GARLOCK 930

Construction—Garlock 930 Plastallic is a nonmetallic plastic packing made of asbestos fibre and a special bonding compound containing lubricant and graphite.

Coil, spiral and ring forms of this material have a skeleton-braided cover of black cotton yarn containing two red strands.

Forms—Garlock 930 Rings are supplied with butt joint, molded to specified diameters and thickness.

Garlock 930 Coil is made in the round, rectangular and square sizes shown in the table below. In sizes "X" and above this material is also available in spiral form, packaged one 12½ foot spiral per box.

Garlock 930 loose or bulk form is supplied in cans of 2-pounds net weight, each can containing a coil of shredded lead material for use in forming bottom rings.

FOR...

Oils, solvents, gases, steam, water or dilute aqueous solutions (except strong mineral acids and alkalies) at temperatures to 700°F.

ON...

Shafts of centrifugal or rotary pumps and valve stems.

GARLOCK 931

Construction—Garlock 931 Plastallic is a nonmetallic plastic packing made of asbestos fibre bonded with a special compound containing lubricant and graphite.

Coil and ring forms of this material have a skeleton-braided cover of black cotton yarn containing two green strands.

Forms—Garlock 931 Rings are made with butt joint and are molded to specified diameters and thickness.

Garlock 931 Coil is made in the round, rectangular and square sizes shown in the table below.

Garlock 931 in loose or bulk form is supplied in cans of 2-pounds net weight, each can containing a coil of shredded lead material for use in forming bottom rings.

FOR...

Steam, water or dilute aqueous solutions (except mineral acids) at temperatures to 700° F.

ON...

Shafts of centrifugal or rotary pumps, reciprocating rods and valve stems.

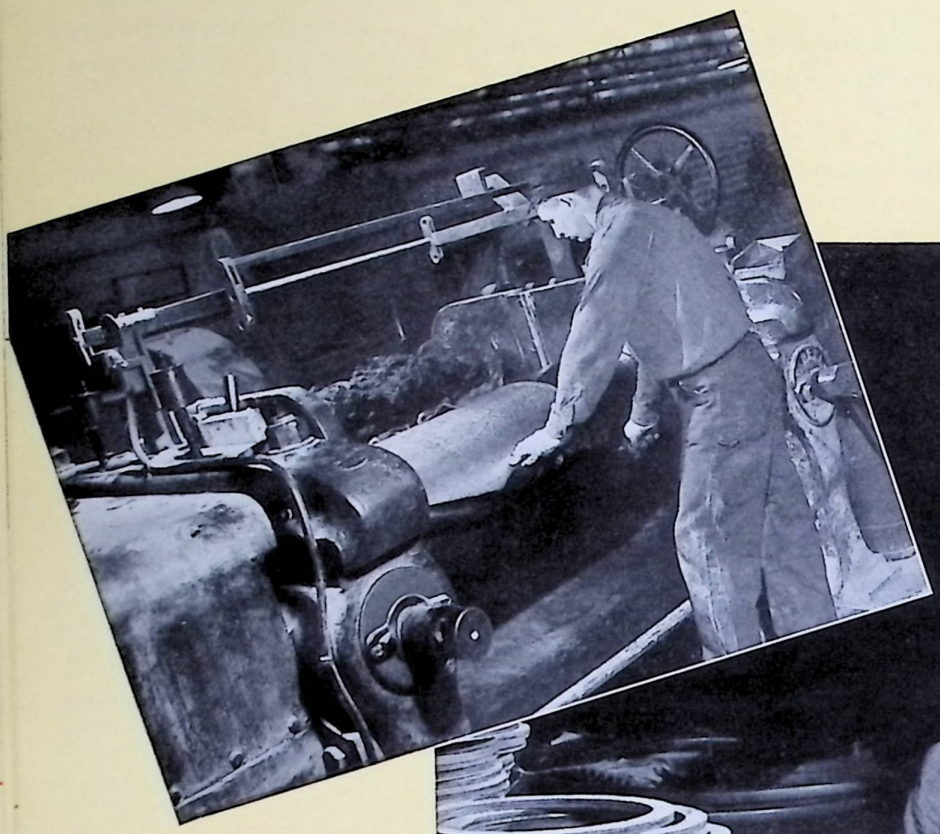
GARLOCK 929, 930 and 931 Coil

For Packing Spaces Measuring	Specify Size	Nominal Size of Packing	Coils per Box	Feet per Box—approx.			Pounds per Box—approx.		
				929	930	931	929	930	931
1/16" or smaller	OX	1/16" Round	*	255	420	395	5	5	5
1/16" to 1/8" inclusive	X	1/4" x 1/8"	*	49	70	66	5	5	5
3/16" to 1/4" inclusive	3-8X	3/8" x 1/16"	*	29	41	38	5	5	5
1/2" to 3/8" inclusive	2X	1/2" x 5/16"	3	51	51	51	16	11	11 1/4
3/4" to 1/2" inclusive	3X	3/4" x 7/8"	2	26	26	26	17	11 1/4	11 1/4
1" and above	4X	1" Square	1	20	20	20	19	12	12 1/2

*Size OX on 1, 2 or 5 pound spools; size X on 2 or 5 pound spools; size 3-4X on 5 pound spools.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 170 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/170

PUMP VALVES, DISCS,





Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 171 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/171

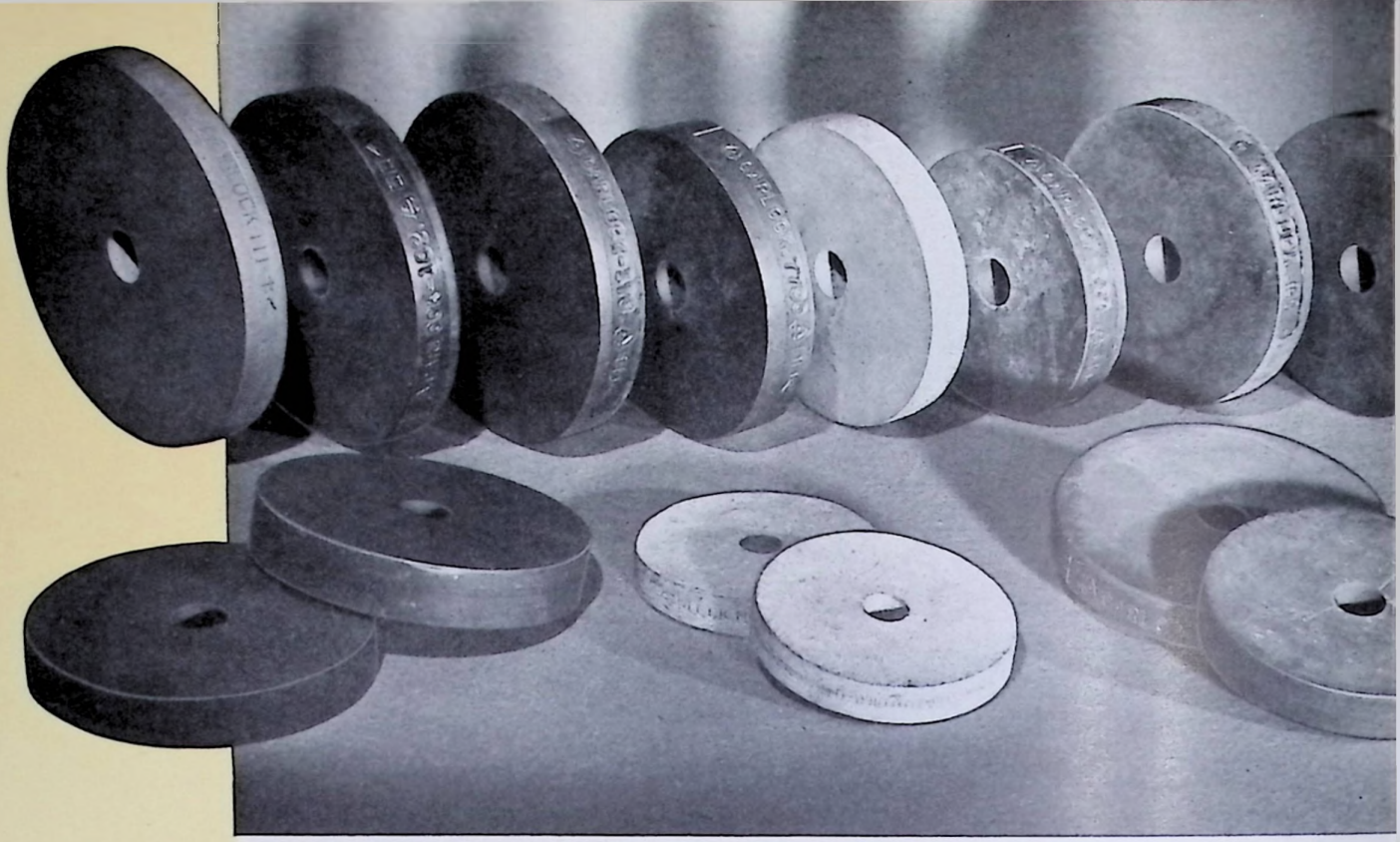
TUBING and RUBBER PRODUCTS

	PAGE
PUMP VALVES—*general*	172
PUMP VALVES—*hard*	173
PUMP VALVES—*medium hard*	173
PUMP VALVES—*medium soft*	174
PUMP VALVES—*soft*	174
VALVE DISCS	175
TUBING	176
GAUGE GLASS RINGS	177
EVAPORATOR TUBE GASKETS	178
HYDRANT VALVES	179
MOLDED RUBBER GOODS	180
BUNA-N RUBBER COMPOUNDS	181
NEOPRENE RUBBER COMPOUNDS	181
THIOKOL RUBBER COMPOUNDS	181

NOTE: Durometer hardnesses shown in this catalog refer to readings taken with a durometer calibrated and used in accordance with A.S.T.M. Specification D-676.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 172 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/172



Pump Valves

GARLOCK PUMP VALVES

For pump valve service we manufacture a complete line of high grade rubber compounds ranging from very soft compounds of a nominal 40 durometer hardness to the hard rubber and phenolic resin valves which are beyond measurable durometer hardness.

The services for which pump valves most commonly are required are:

Acids	Hot Oils or Solvents
Air (Vacuum Pump)	Cold Water
Alkalies	Warm Water
Aqueous Solutions	Hot Water
Cane Juices	Gritty or Muddy Water
Fruit Juices	
Cold Oils or Solvents	

For high pressures and elevated temperatures hard valves generally are required and for pressures and temperatures in the lower brackets softer valves usually are the most suitable. In determining the proper hardness of a pump valve for a specific application, however, consideration should also be given to the diameter and thickness of the valve itself and to the nature of the liquid handled by the pump.

From the data on the following pages it should be possible to select a suitable valve for almost any service condition. However, if there is any doubt as to the proper valve to use it is recommended that a Garlock Representative be consulted. If inconvenient to have a survey of the equipment and surrounding operating conditions made by our representative a specific recommendation will be made by mail or telephone upon receipt of information as to the diameter and thickness of the valve and size of the hole; the nature and temperature of the liquid; the pressure against the valve; and advice as to whether the equipment is a straight- or curved-guard pump.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 173 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/173

Pump Valves

HARD VALVES

Description	Garlock No.	Service
Very hard black rubber compound.	108	Hot water or aqueous solutions (except concentrated sulphuric or nitric acid) at temperatures up to 212° F. and pressures up to 200 p.s.i.
Very hard red rubber compound containing asbestos fibre.	111	
Plies of wire-inserted asbestos cloth bonded with phenolic resin and with outer covers of plain asbestos cloth.	113 Amberite	Hot oils or solvents at temperatures up to 600° F. and at any pressure.
Plies of strong cotton duck bonded with phenolic resin.	155 Amberite	Hot oils, solvents or water at temperatures up to 400° F. and at any pressure.

MEDIUM HARD VALVES

Description	Garlock No.	Service
Black rubber compound having a nominal 90 durometer hardness.	182	Cold water or aqueous solutions (except concentrated sulphuric or nitric acid) at pressures up to 200 p.s.i.
Black rubber compound having a nominal 90 durometer hardness.	7862	
Black rubber compound having a nominal 95 durometer hardness.	188	Cold water or aqueous solutions (except concentrated sulphuric or nitric acid) at pressures up to 300 p.s.i.
Black rubber compound having a nominal 98 durometer hardness.	7593	Water or aqueous solutions (except concentrated sulphuric or nitric acid) where temperatures alternate or change from cold to 212° F. and at pressures up to 200 p.s.i.

When ordering pump valves specify diameter and thickness of the valve and diameter of center hole.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 174 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/174

Pump Valves

MEDIUM SOFT VALVES

Service	Garlock No.	Description
Cold water or aqueous solutions (except concentrated sulphuric or nitric acid) at pressures up to 75 p.s.i.	175	Black rubber compound having a nominal 60 durometer hardness. A good valve for use where sand or grit is present.
	189	Black rubber compound having a nominal 60 durometer hardness.
	7505	Black rubber compound having a nominal 60 durometer hardness.
Cold water or aqueous solutions (except concentrated sulphuric or nitric acid) at pressures up to 125 p.s.i.	139	Black rubber compound having a nominal 80 durometer hardness.
	359	Black rubber compound having a nominal 80 durometer hardness.
	7790	Black rubber compound having a nominal 80 durometer hardness.

SOFT VALVES

Service	Garlock No.	Description
Air and water mixtures up to atmospheric pressure, on wet vacuum pumps—particularly on curved guard pumps in marine service.	154	Extra high grade red rubber compound having a nominal 40 durometer hardness.
Air and water mixtures up to atmospheric pressure, on wet vacuum pumps.	151	Black rubber compound having a nominal 50 durometer hardness.
	152	Black rubber compound having a nominal 50 durometer hardness.
	197	Black rubber compound having a nominal 50 durometer hardness.
	7224	Extra high grade black rubber compound having a nominal 50 durometer hardness.

When ordering pump valves specify diameter and thickness of the valve and diameter of center hole.

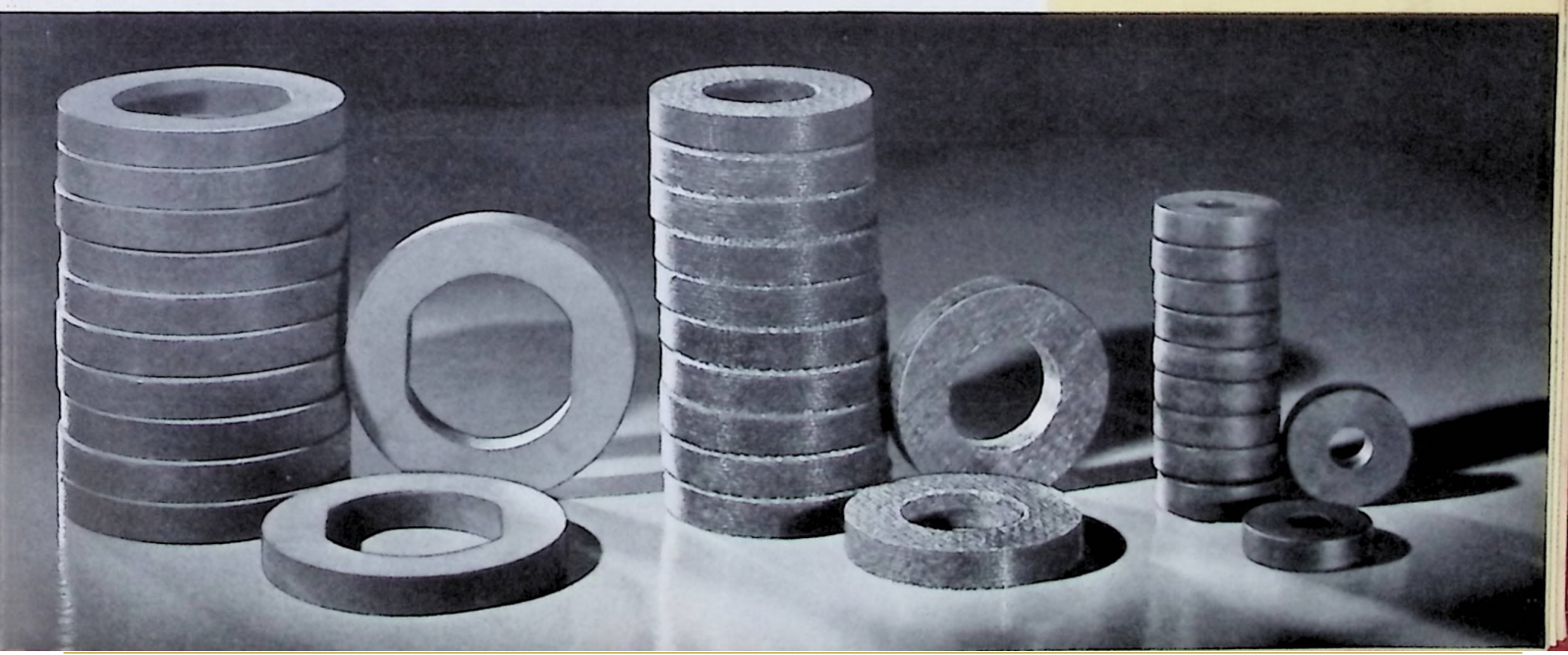
Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 175 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/175

Valve Discs

The Garlock Valve Discs described on this page are those most commonly used for the several classes of service indicated. If, for some unusual service condition, none of these discs appears to be entirely suitable we are prepared to develop and produce a special disc to meet those operating requirements.

These valve discs are made both in the round and oval hole types except as noted in the table below. Round hole discs are regularly made in all standard sizes from ¼″ to 12″ inclusive and oval hole types in sizes from ¾″ to 6″ inclusive. Special sizes and shapes to customer's specifications also are procurable.

Description	Garlock No.	Service
Plies of wire-inserted asbestos cloth bonded with phenolic resin and with outer covers of plain asbestos cloth. Not made with oval hole but are supplied with round holes sufficiently large to fit oval disc holders.	113 Amberite	Steam, oils or solvents at temperatures up to 600° F. and at any pressure.
Very hard red rubber compound containing asbestos fibre.	111	Steam up to 150 p.s.i. and hot water or aqueous solutions at any pressure.
Black rubber compound having a nominal 90 durometer hardness.	182	Cold water or aqueous solutions at any pressure.
Black rubber compound having a nominal 80 durometer hardness.	7790	Cold water or aqueous solutions at any pressure.
Black Buna-N rubber compound having a nominal 80 durometer hardness.	8459	Cold oils or solvents at any pressure.



Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/176

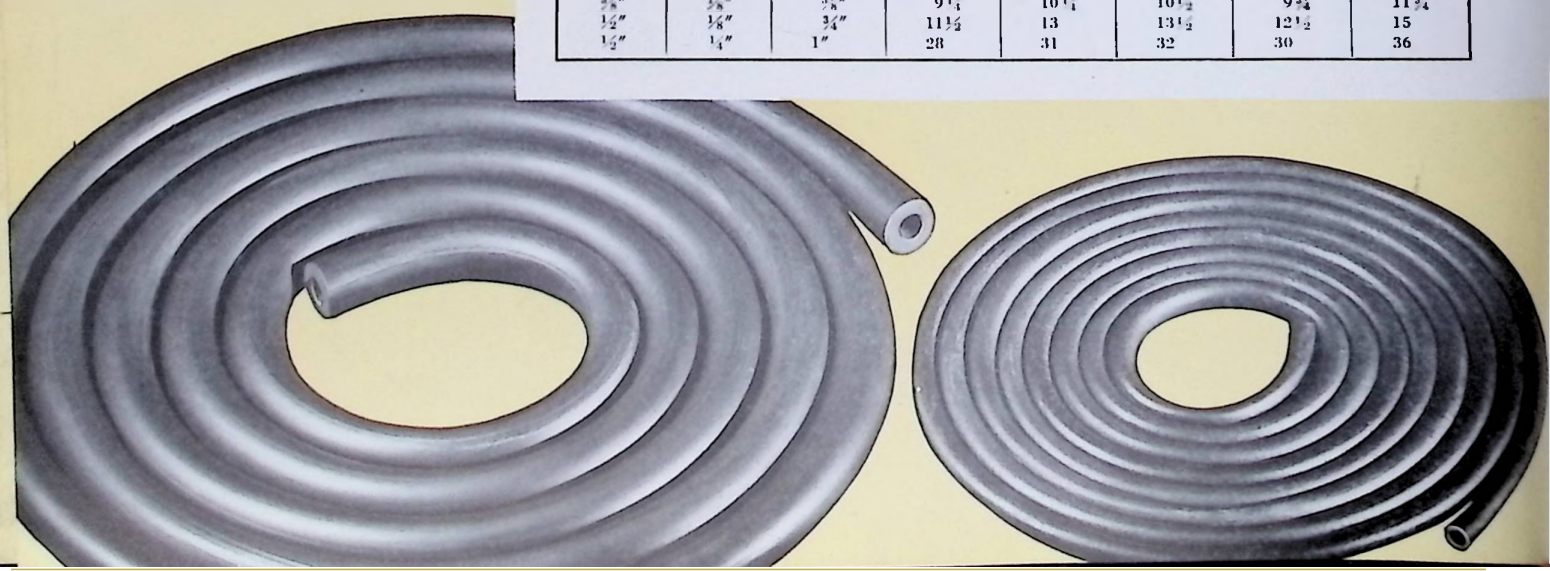
Rubber Tubings

Garlock Rubber Tubings are made from compounds developed in the Garlock laboratories specially for this group of products. Data on the most popular tubings in the Garlock line appears below.

Service	Garlock No.	Description
Water, aqueous solutions (except concentrated sulphuric or nitric acid) air or gas at low pressures.	1	A soft, black rubber compound having a nominal 40 durometer hardness. Recommended for raw water ice plants, laboratories or other services requiring a soft tubing.
Water, aqueous solutions (except concentrated sulphuric or nitric acid) air or gas at low pressures.	2	A soft, white rubber compound having a nominal 50 durometer hardness. Recommended for hospitals, dairies or other services where a white tubing is desired.
Water, aqueous solutions (except concentrated sulphuric or nitric acid) air or gas at moderate pressures.	3	A black rubber compound having a nominal 80 durometer hardness. A medium hard tubing for chemical or dye plants, laboratories or other services. Usually applied with hose clamps.
Water, aqueous solutions (except concentrated sulphuric or nitric acid) air or gas at low pressures.	4	A soft, red rubber compound having a nominal 40 durometer hardness. Recommended for laboratories, raw water ice plants or other applications where a soft, red tubing is desired.
Oil, or solvents (except aromatic, chlorinated or keytone types) at moderate pressures.	8	A black, neoprene compound having a nominal 80 durometer hardness. Recommended for chemical plants, laboratories or other services involving oil or solvents. Usually applied with hose clamps.

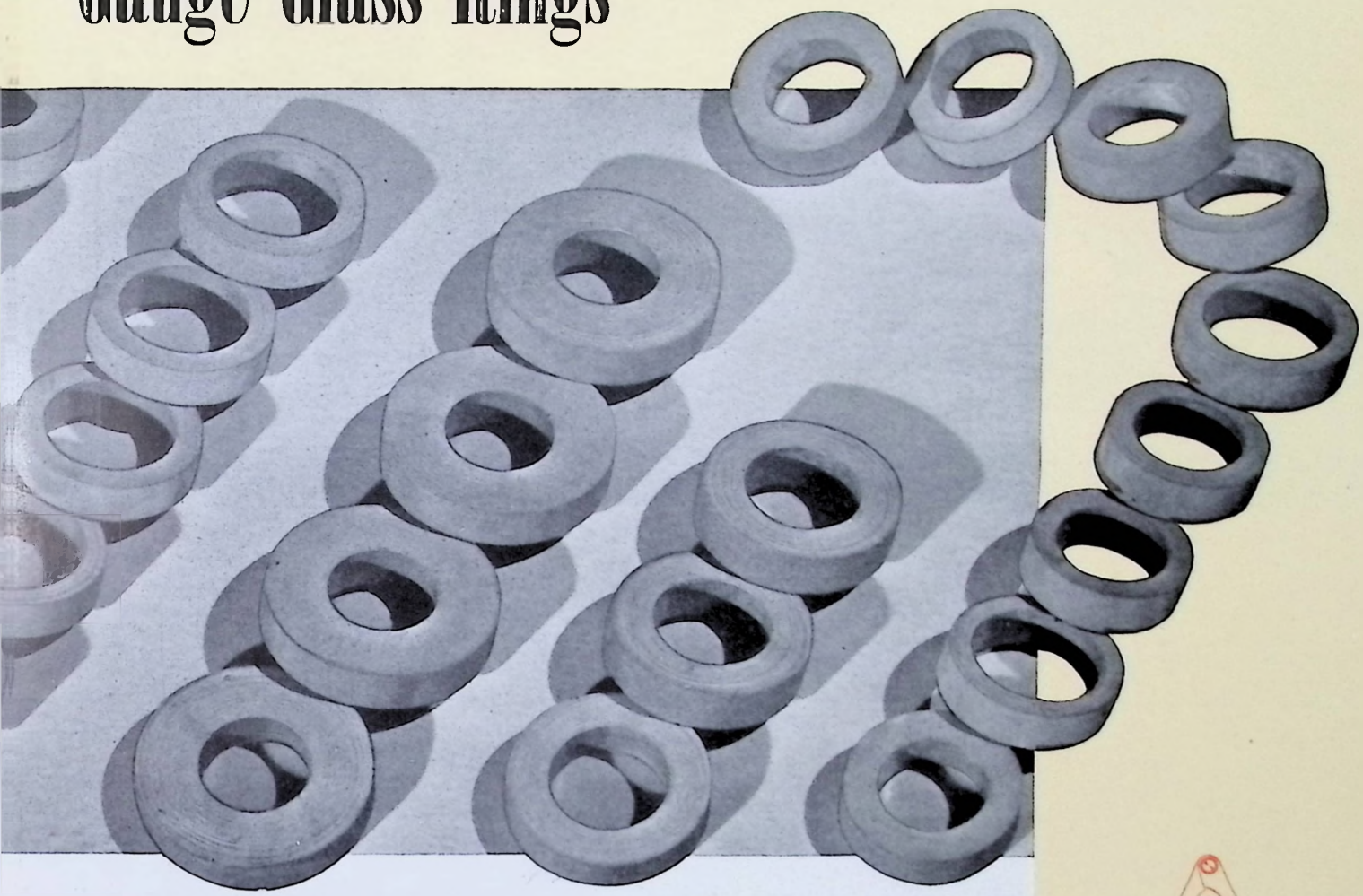
Garlock rubber tubings are made in an extensive range of diameters and wall thicknesses. Approximate weights on a few of the most common sizes are shown at right.

I.D.	Wall Thickness	O.D.	APPROXIMATE WEIGHT PER 100 FEET—POUNDS				
			No. 1	No. 2	No. 3	No. 4	No. 8
1/16"	1/32"	3/16"	3/4	3/4	7/8	3/4	1
3/16"	1/16"	5/16"	2 1/4	2 1/2	2 3/4	2 1/2	3
1/4"	1/16"	3/8"	2 3/4	3 1/4	3 1/2	3	3 3/4
5/16"	1/16"	1/2"	5 3/4	6 1/4	6 1/2	6	7 1/4
3/8"	1/32"	5/16"	6 1/2	7 1/4	7 1/2	7	8 1/4
3/8"	1/8"	5/8"	9 1/4	10 1/4	10 1/2	9 3/4	11 3/4
1/2"	1/8"	3/4"	11 1/2	13	13 1/2	12 1/2	15
1/2"	1/4"	1"	28	31	32	30	36



Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/177

Gauge Glass Rings



Garlock Gauge Glass Rings are manufactured from high-grade rubber compounds and are available in a variety of types and styles of which the following are the most popular.

Garlock 95 Rings, made from a black rubber compound having a nominal 60 durometer hardness.

Garlock 122 Rings, made from a red rubber compound having a nominal 80 durometer hardness.

Garlock 953 Rings, made from a black rubber compound having a nominal 80 durometer hardness.

Garlock 7790 Rings, made from a black rubber compound having a nominal 80 durometer hardness.

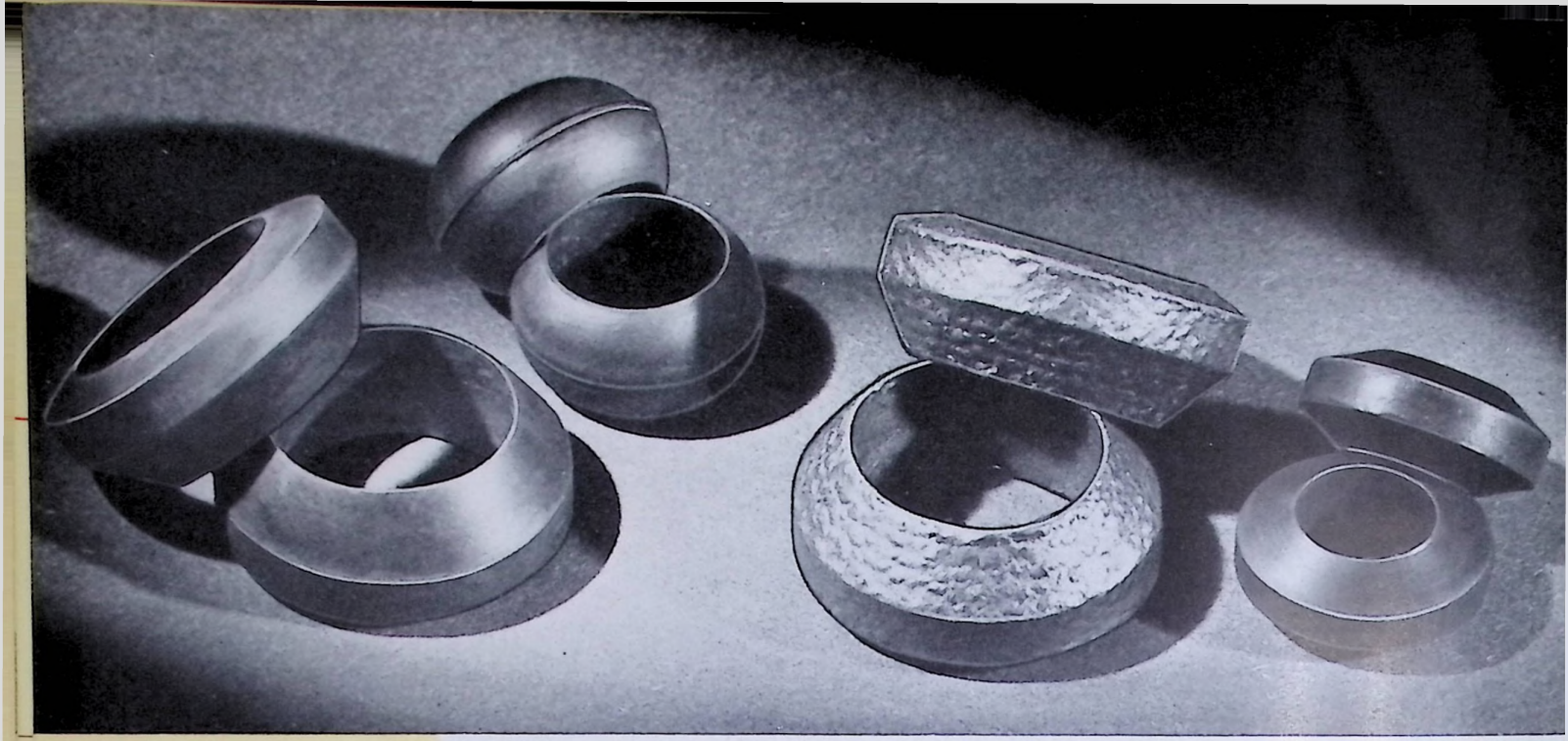
For special services, for which none of these regular rubber rings may be suitable, rings with cotton cloth or asbestos cloth insertion, and rings made of oil-resisting neoprene or Buna-N rubber compounds are available.

Garlock gauge glass rings are made in any required size. However, the following standard sizes are recommended for standing fittings and will be furnished unless otherwise specified.

Glass Size	*Ring Size*
3/8"	11/32" x 5/8" x 1/4" thick
1/2"	15/32" x 3/4" x 1/4" thick
5/8"	19/32" x 7/8" x 1/4" thick
3/4"	23/32" x 1" x 1/4" thick
1"	31/32" x 1 1/4" x 1/4" thick

Gauge glass rings are regularly furnished with flat top and bottom surfaces. When so specified, however, rings with beveled faces will be supplied. Rings with hexagonal outside diameter are also available if required.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 178 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/178



Evaporator Tube Gaskets



GARLOCK 95

Garlock 95 Evaporator Tube Gaskets are molded from a Garlock black rubber compound having a nominal 60 durometer hardness. Gaskets made from this compound are used extensively in sugar factories and in other industries.

Molds are available for producing Garlock 95 gaskets in all standard evaporator tube sizes from 5/8" to 2" inclusive and in all standard shapes. When required these gaskets can also be made in special sizes and shapes.

GARLOCK 953

Garlock 953 Evaporator Tube Gaskets are molded from a Garlock black rubber compound having a nominal 80 durometer hardness. Gaskets made from this compound are also available in all standard sizes and in special sizes and shapes and generally are used when a gasket harder than Garlock 95 is desired.

GARLOCK 6044

Garlock 6044 Evaporator Tube Gaskets are special molded gaskets made of asbestos cloth and a Garlock rubber compound. These gaskets are available in a limited range of sizes and are used on applications where rubber gaskets may not be entirely suitable because of high temperatures or for other reasons.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 179 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/179

Hydrant Valves

LEATHER HYDRANT VALVES

Garlock Leather Hydrant Valves are usually made of oak leather but are also available in chrome leather or in the exclusive Bitan leather described on page 132.

Leather hydrant valves are produced for practically all makes of standard hydrants the only exceptions being those few types requiring valves of odd shapes which obviously could not readily be made of leather.

RUBBER HYDRANT VALVES

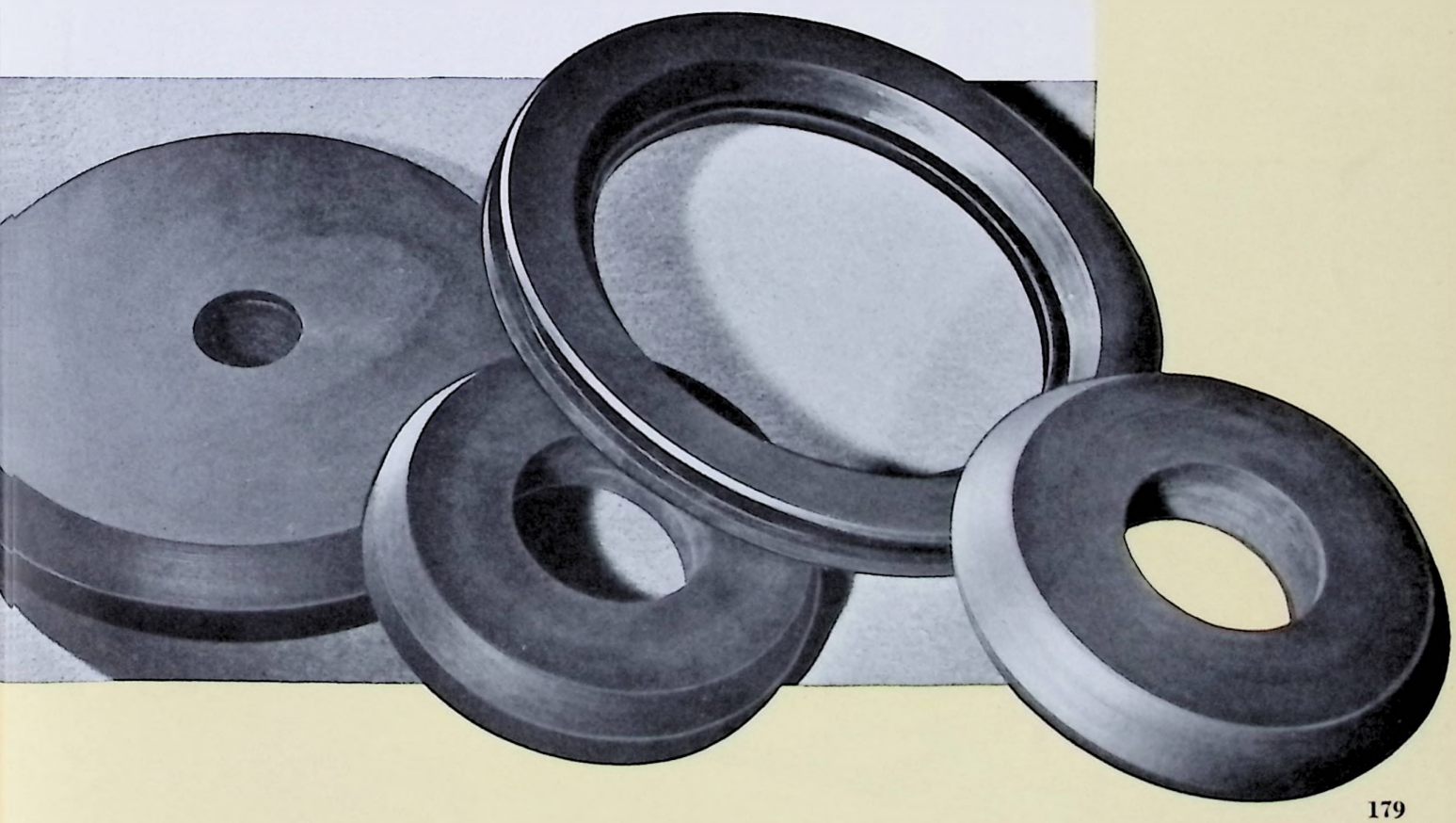
Garlock Rubber Hydrant Valves are made of high-grade Garlock rubber compounds. The three following compounds are most commonly used in the production of these valves.

Garlock 139 is a black rubber compound having a nominal 80 durometer hardness.

Garlock 175 is a black rubber compound having a nominal 60 durometer hardness.

Garlock 182 is a black rubber compound having a nominal 90 durometer hardness.

These rubber hydrant valves are molded or otherwise fabricated to the sizes and shapes required for use on practically any standard hydrant including American, Bourbon, Coffin, Cory, Darling, Detroit, Eclipse, Eddy, Greenberg, Iowa, Ludlow, Matteson, Matthews, Michigan, National, Pratt & Cady, Smith, Tamaqua, Traverse City, United Iron Works, Vogt, Watrous and Wood hydrants.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 180 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/180

Molded Rubber Products

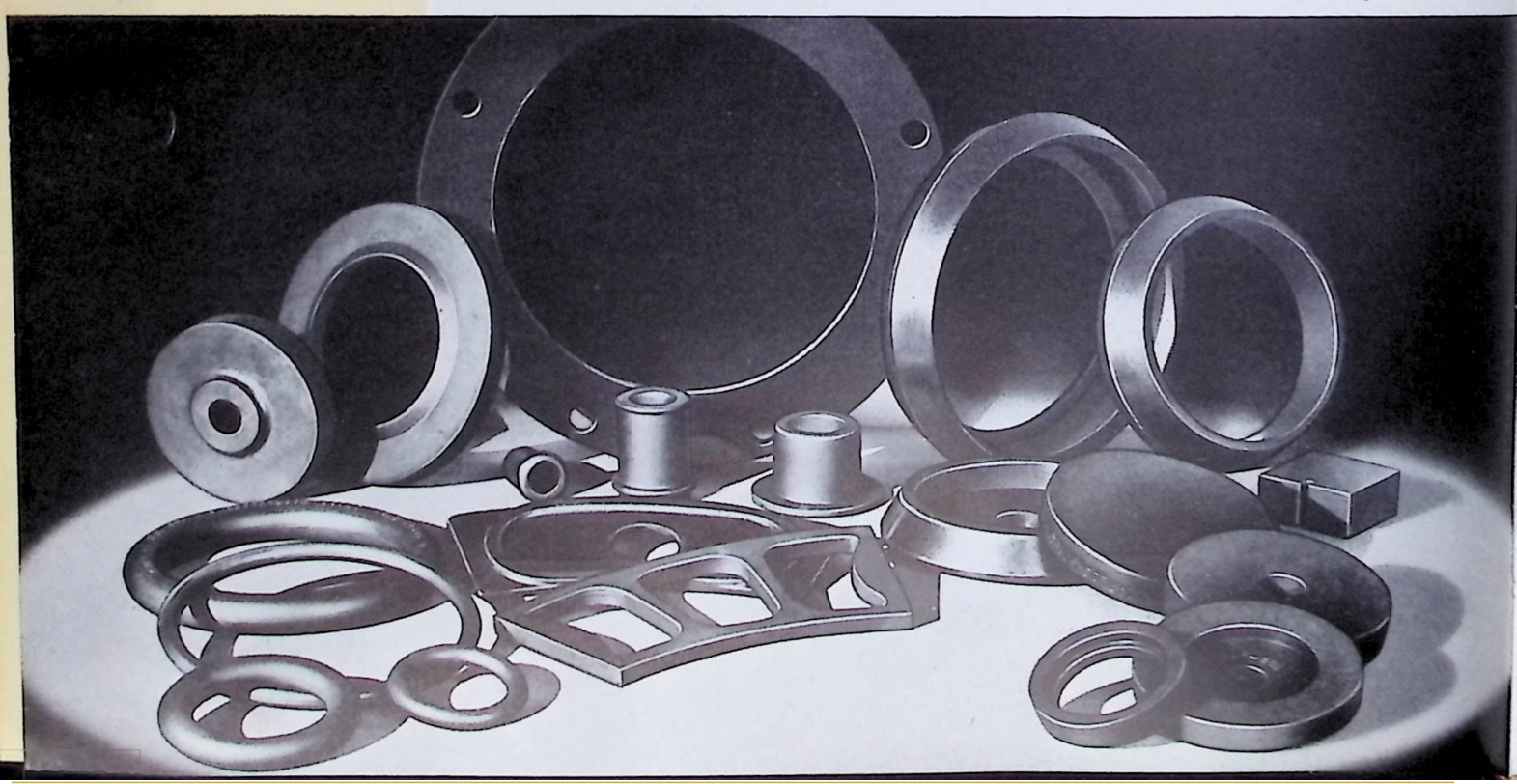
A comprehensive line of rubber compounds, developed in the Garlock laboratories, is available for use in the production of molded rubber goods. Many of these compounds are also regularly made into sheet, slab, coil, strip, gasket, ring, sleeves, tubing, pump valve and discs.

These compounds range from very soft stocks, such as Garlock 6023 having a nominal 35 durometer hardness up to a stock like Garlock 188 with a nominal 95 durometer hardness. Characteristics of the carbon black stocks included in these compounds are exceptional toughness and splendid aging qualities.

The most popular compounds and the several forms in which each is regularly available are shown in the table below.

COMPOUND		AVAILABLE FORMS (Specify Garlock Number Indicated)								
Color	Nominal Duro. Hardness	Sheet	Slab	Coil or Strip	Gasket	Ring or Sleeve	Tubing	Pump Valve	Disc	Special Molded Shapes
Brown	35	6023	6023	6023	6023	6023	6023	6023	6023	6023
Black	40	1	1	1	1	1	1	1	1	1
Red	40	154	154	154	154	154	4	154	154	154
Black	50	152	152	152	152	152	152	152	152	152
White	50	197	197	197	197	197	2	197	197	197
Black	60	91	91	91	96	95	91	175	175	175
Black	60	189	189	189	189	189	189	189	189	189
Black	60	7505	7505	7505	7505	7505	7505	7505	7505	7505
Black	70	8627	8627	8627	8627	8627	8627	8627	8627	8627
Black	80	139	139	139	139	139	139	139	139	139
Black	80	7790	7790	7790	7790	7790	3	7790	7790	7790
Black	80	353	353	353	953	953	353	359	359	359
Red	80	22	22	22	122	122	22	122	122	122
Black	90			182	182	182		182	182	182
Brown*	90				7815	7815		7815	7815	7815
Black	95					188		188	188	188

*7815 Compound contains asbestos fibre.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 181 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/181

Molded Buna-N, Neoprene and Thiokol Goods



BUNA-N COMPOUNDS

For use against oils and solvents at temperatures up to 300° F several Buna-N rubber compounds have been developed by the Garlock laboratories. Sheet packings made from the most popular of these compounds are described on page 96. In addition to sheet packings these carbon black stocks are regularly available in molded shapes and in other forms as shown in the table below.

COMPOUND			AVAILABLE FORMS (Indicated by asterisk)							
Garlock No.	Color	Nominal Duro. Hardness	Sheet	Slab	Coil or Strip	Gasket	Ring or Sleeve	Tubing	Disc	Special Molded Shapes
8474	Black	60	*		*	*	*		*	*
8495	Black	70	*	*	*	*	*		*	*
8459	Black	80	*	*	*	*	*	*	*	*
8452	Black	90	*	*	*	*	*	*	*	*

NEOPRENE COMPOUNDS

Several neoprene rubber compounds, which are suitable for use against oils and solvents at temperatures up to 250° F., have been developed in the Garlock laboratories and are employed in combination with other materials in the manufacture of a number of Garlock products referred to in this catalog. These compounds are also regularly available in molded shapes and in other forms as shown in the table below.

COMPOUND			AVAILABLE FORMS (Indicated by asterisk)							
Garlock No.	Color	Nominal Duro. Hardness	Sheet	Slab	Coil or Strip	Gasket	Ring or Sleeve	Tubing	Disc	Special Molded Shapes
7491	Black	40				*	*		*	*
8312	Black	50	*	*	*	*	*		*	*
7986	Black	60	*	*	*	*	*	*	*	*
7797	Black	80	*	*	*	*	*	*	*	*
7300	Black	90	*	*	*	*	*	*	*	*

Note—No. 7797 in tubing form is designated Garlock No. 8 tubing.

THIOKOL COMPOUNDS

Garlock compounds containing Thiokol which are resistant to oils and solvents at low temperatures are available for the manufacture of some molded shapes and other products. Information concerning any specific requirement for a Thiokol product will be supplied promptly upon request.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 182 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/182

KLOZURES AND



Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/183

MISCELLANEOUS PRODUCTS

	PAGE
Klozure Oil Seals	184
Klozures—Model 51	185
Klozures—*Double Type V-1*	185
Klozures—*Double Type V-2*	185
Klozures—*Duplex Type V-2*	185
Klozures—*Felt Washer Type*	186
Split Klozures	186
Klozures—Model 53	186-187
Klozures—Model 63	186-187
Klozures—Model 64	187
Klozures—Model 70	187
Industrial Brake Lining	188
Rubber Transmission Belting	189
Rubber Expansion Joints	190
Asbestos Tinning Machine Brushes	191
Asbestos Tubing	192
Coupling Discs and Tractor Links	192
Condenser Tube Cleaning Plugs	192
Lubricating Compound—No. 2	193
Lubricating Compound—No. 3	193
Luball Lubricating Compound	194
Gasket Paste	194
Pipe Thread Compound	195
Flexible Packing Hooks	195



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 184 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/184

Garlock Klozures

• Garlock Klozures, which are briefly described in this catalog on the pages immediately following, have gained widespread recognition and acceptance of engineers as dependable oil seals. Outstanding service records have been established by these oil seals on many kinds and types of equipment where the sealing of the lubricant in a bearing and the exclusion of dirt and foreign matter from a bearing has presented a difficult problem.

Garlock Klozures are produced in a variety of types and models and in a wide range of sizes. For most applications one of our regular designs is entirely suitable but, when necessary to do so, we are prepared to engineer and produce a special seal to take care of a specific service requirement.

One of the most important factors contributing to the success of Garlock Klozures is the sealing member itself. This sealing ring is accurately molded from a special compound developed in the Garlock laboratories for oil seal usage. The material possesses the following physical properties which are of the utmost importance in an oil sealing element:

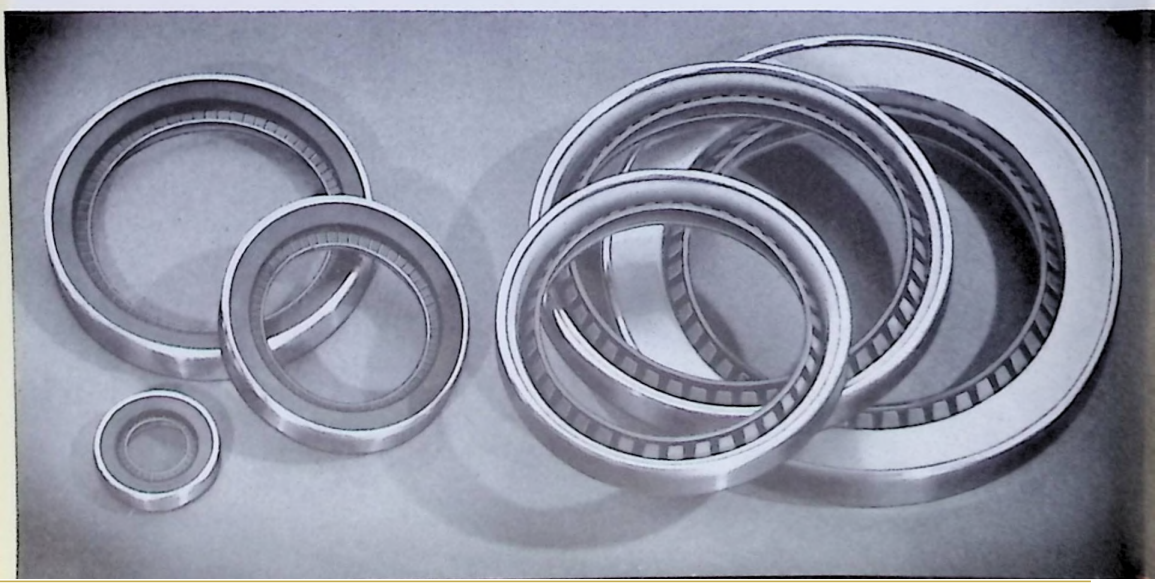
1. It is a homogeneous, nonporous and grainless structure.
2. It is tough, durable and resilient.
3. It is oil- and grease-resistant.
4. It is impervious to water, mild acids and alkalies.
5. It is heat- and cold-resistant.
6. It is nonabrasive and has a low coefficient of friction.

The metal, finger-type spring used in Garlock Klozures is formed in precision dies and is heat-treated and tempered to predetermined, exacting standards. Its flexibility does not deteriorate with age and is unaffected by temperatures encountered under normal operating conditions. Each finger of this sensitive spring delivers independently its required pressure to the tip of the sealing element where the spring pressure must be exerted to obtain proper sealing efficiency.

The metal case, into which the other parts of the Klozure are assembled, is precision-formed from sheet metal, carefully selected and sorted to close thickness tolerances. Dies of the most modern type produce the case to such a high degree of precision that the outer diameter has a surface finish comparable to a polished finish and no grinding or other sizing operation is required. In this metal case, therefore, the thickness of the metal is uniform throughout with no thick and thin areas such as result from grinding. Furthermore, the danger of trapping in the assembly destructive abrasives, metal particles or dust resulting from a grinding operation, is eliminated.

The adapter or filler ring, which completes the Klozure assembly, is accurately made and varies in size, shape and material according to the model and type of Klozure in which it is to be assembled.

Brief descriptions of the regular types and models of Garlock Klozures follow. Complete information on these items appears in our Klozure catalogs which will be supplied on request.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 185 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/185

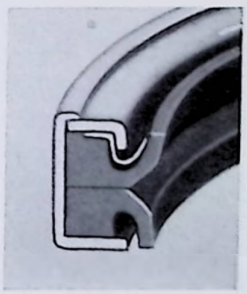
MODEL 51 KLOZURES



The Model 51 Klozure consists of a steel case in which is assembled a molded sealing element, a finger-type steel spring and a steel adapter. When required the case and adapter will be made of cadmium-plated, tin-plated, zinc-plated or stainless steel or of brass. When plated steel, stainless steel or brass parts are supplied tempered beryllium copper springs are furnished.

Model 51 Klozures are suitable for use on most applications where the surface speed of the shaft does not exceed 750 feet per minute. These seals are used successfully against reasonable pressures on many applications. Model 51 Klozures are produced in thousands of sizes to fit shafts from ¼″ to 45″ diameter. Also made in metric outside diameter sizes to press-fit into bearing housings bored to SAE or International MM dimensions. Complete information on this line of Klozures is contained in a special catalog which will be supplied on request.

DOUBLE TYPE V-1 KLOZURES



Double Type V-1 Klozures are constructed with two sealing elements opposed or facing in opposite directions assembled in a single metal case. One sealing ring is mounted with a finger-type spring and the other ring without a spring. Klozures of this type are applied with the spring-mounted sealing ring toward the bearing.

Double Type V-1 Klozures generally are used where it is necessary both to retain the lubricant in the bearing and to exclude free water or dust from the bearing. They are available in the same kinds of metals and in the same general range of sizes as the Model 51 Klozure.

DOUBLE TYPE V-2 KLOZURES



Double Type V-2 Klozures consist of two opposed sealing elements assembled in a single case. In this assembly both sealing elements are provided with finger-type springs whereas one spring only is used in Type V-1 Klozures.

Double Type V-2 Klozures frequently are employed where it is necessary to seal oil in both directions as, for example, on a shaft extending through a crank case into a bearing housing. These seals are available in the same kinds of metals and in the same general size range as the Model 51 Klozures.

DUPLEX TYPE V-2 KLOZURES

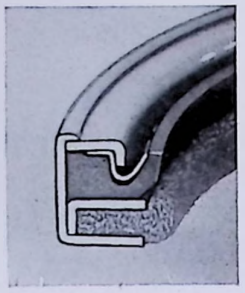


Duplex Type V-2 Klozures consist of two sealing elements, each provided with a finger-type spring, mounted in a single metal case in tandem or facing in the same direction.

Klozures of this type generally are used on difficult conditions where a single seal might not be entirely satisfactory such as, for example, on a vertical shaft with a head of oil. These seals are available in the same kinds of metals and in the same general range of sizes as the Model 51 Klozures.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 186 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/186

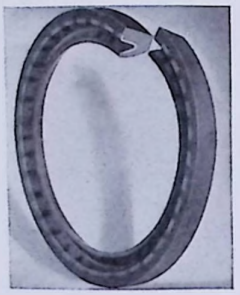
Garlock Klozures



FELT WASHER TYPE KLOZURES

Felt Washer Type Klozures consist of a sealing element and finger-type spring mounted in a single case with a felt ring or washer and having a metal divider between the two rings.

Klozures of this type generally are used where an excessive amount of dirt and dust is encountered and usually are mounted with the sealing element toward the bearing. These seals are available in the same kinds of metals and in the same general size range as Model 51 Klozures.



SPLIT-KLOZURES

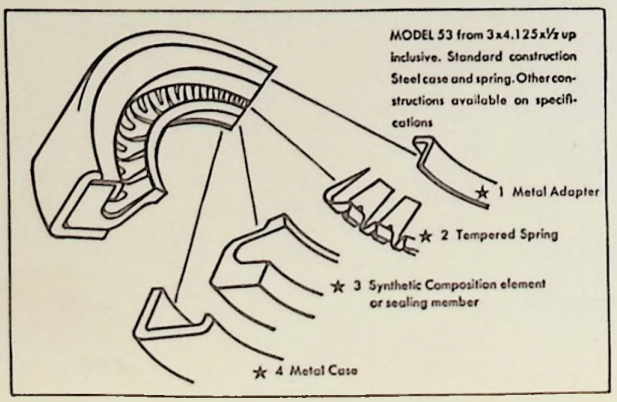
The Garlock Split-Klozure consists of a cut-open sealing ring and a finger-type spring pressure-bonded together with a special cement. This is an effective oil seal and, because of its split or cut-open construction can be readily applied around the shaft without dismantling the equipment as frequently is necessary with a solid seal which must be applied over the end of the shaft. Split Klozures are made in practically any size from 3″ shaft diameter up to the largest shafts.

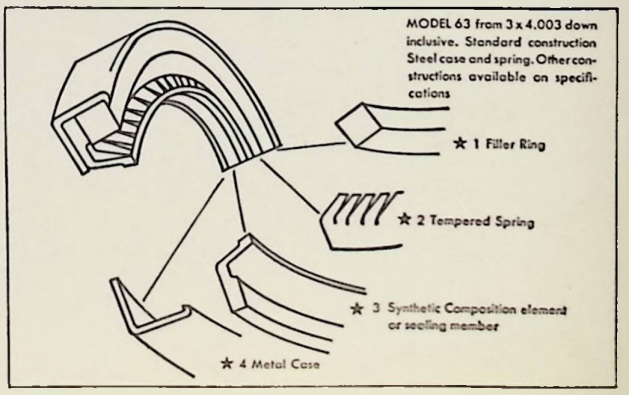
MODEL 53 and MODEL 63 KLOZURES

Models 53 and 63 Klozures, which are companion seals employing the same engineering principles but differing in certain details of design, were developed primarily for use on those applications where the shaft speed is greater than the speed for which Klozures of the Model 51 type are recommended.

These two models may be safely used on shafts having surface speeds of 2000 feet per minute and are regularly operating on some applications at much higher speeds. The extremely flexible and sensitive action of the spring on the sealing member provides an efficient seal with frictional heating reduced to an absolute minimum. Because of this extreme flexibility little, if any, "wear-in" period is required, thus making these seals suitable for static or slow-speed applications and effective where shaft misalignment or "whip" exists. Models 53 and 63 are fully described in a special catalog which will be supplied on request.

Each of these models is produced in its own range of sizes, and size is the factor that determines which of the two models shall be used on a given application. Brief descriptions of each model, with the size range in which it is produced, follow.





Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 187 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/187

MODEL 53 KLOZURES

Model 53 Klozures are made in sizes from 3″ diameter shaft x 4.125″ bore to 10″ diameter shaft x 11.250″ bore inclusive. These seals are also made in millimeter sizes (within that size range) to press-fit into bearing housings bored to SAE or International millimeter dimensions.

Model 53 Klozures consist of a steel case, a steel adapter, a steel finger-type spring and a molded sealing element. When so specified the case and adapter will be made of cadmium-plated, tin-plated, zinc-plated or stainless steel or of brass and the finger-type spring of tempered beryllium copper.

MODEL 63 KLOZURES

Model 63 Klozures are made in sizes from ¼″ diameter shaft x .750″ bore to 3″ diameter shaft x 4.003″ bore inclusive. Also made in millimeter sizes (within that size range) to press-fit into bearing housings bored to SAE or International millimeter dimensions.

This model consists of a steel case, a fibrous-composition adapter or filler ring, a steel finger-type spring and a molded sealing element. When so specified the case will be made of cadmium-plated, tin-plated, zinc-plated or stainless steel and the spring of tempered beryllium copper.

MODEL 64 KLOZURES

The range of the Model 64 Klozures is from an 8″ shaft through a 45″ shaft.

These unique Klozures incorporate the most advanced design of oil seal engineering research. They meet the exacting demands imposed on large size seals today where high speeds are now common, as for example, the modern rolling mill roll neck bearing seal.

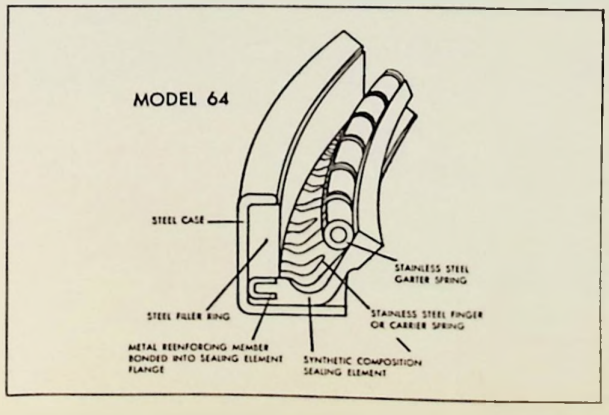
The Model 64 Klozure sealing element design is basically similar to the Model 53 and 63 except that its flange is reinforced by a bonded-in metal insert. This flexible stepped lip is activated by a stainless steel coil-finger spring arrangement. The finger spring acts as a carrier much like a bearing for the coil spring. This feature insures maximum action and response to shaft movement. The finger spring also distributes the coil spring load over a flat area which is accurately located at the tip of the sealing lip. The assembly of the Klozure is completed in a heavy steel case with solid steel filler ring, this all increasing the general ruggedness of the Klozure.

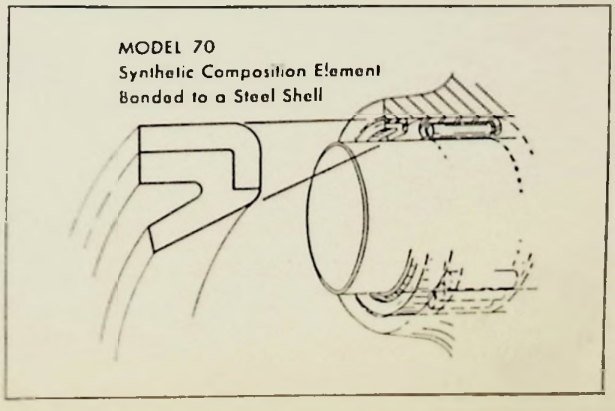
MODEL 70 KLOZURES

Model 70 Klozures are specially designed to meet space limitations which exclude consideration of the conventional spring loaded seal. They fill the need for small cross sectional seals for needle and plain bushing bearings. These Klozures are particularly suited for use as grease and/or dirt seals. Model 70 Klozures are not recommended in place of the more efficient conventional spring loaded seals against light fluid lubricants.

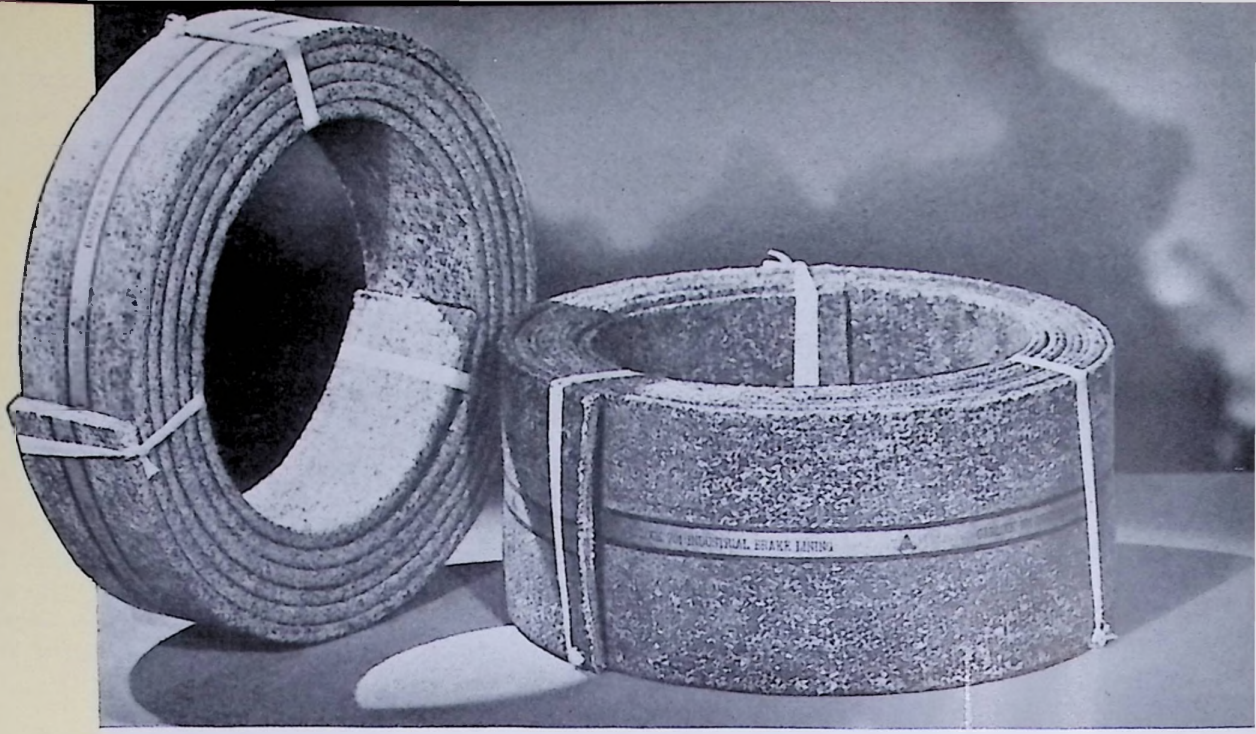
The extremely compact and sturdy design of this Klozure is accomplished through bonding the synthetic element into a steel case resulting in a one piece unit.

SPECIAL CONSTRUCTIONS—In addition to the Klozure types and models briefly described herein we supply many special seals designed and engineered to meet the individual requirements of a specific job. Our representatives and engineering department will welcome the opportunity of working with you on your bearing sealing problems. Special catalogs containing complete information on the types of Klozures referred to herein will be supplied promptly on request.





Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 188 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/188



Industrial Brake Lining

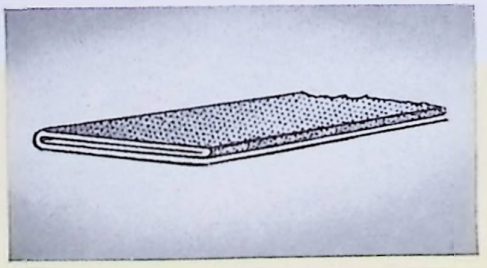
GARLOCK 701

Construction—Garlock 701 Inudstrial Brake Lining is made of high-grade, wire-inserted asbestos cloth manufactured in the Garlock factories, impregnated with a special Garlock rubber compound. The treated cloth is folded and compressed under great pressure in vulcanizing presses into a rugged, serviceable brake lining which gives long and dependable service under the severe operating conditions frequently encountered on industrial equipment.

Form—Garlock 701 is made in standard industrial brake lining sizes from 1″ wide x $\frac{5}{32}$″ thick to 12″ wide x 1″ thick inclusive. Widths up to 6″ and thicknesses up to $\frac{1}{2}$″ both inclusive are available in specified lengths up to 50 feet and greater widths or thicknesses in specified lengths up to 25 feet maximum length.

Service—Garlock 701 Brake Lining is for use on all types of industrial equipment such as

Steam Shovels	*Elevators*
Excavating Machines	*Lift Bridges*
Industrial Locomotives	*Ditchers*
Hoists and Derricks	*Drag Lines*
Concrete Mixers	*Steam Rollers*
Airplane Catapults	*Graders*
Logging Equipment	*Cranes*
Road Building Machinery	*Car Pullers*



GARLOCK 701

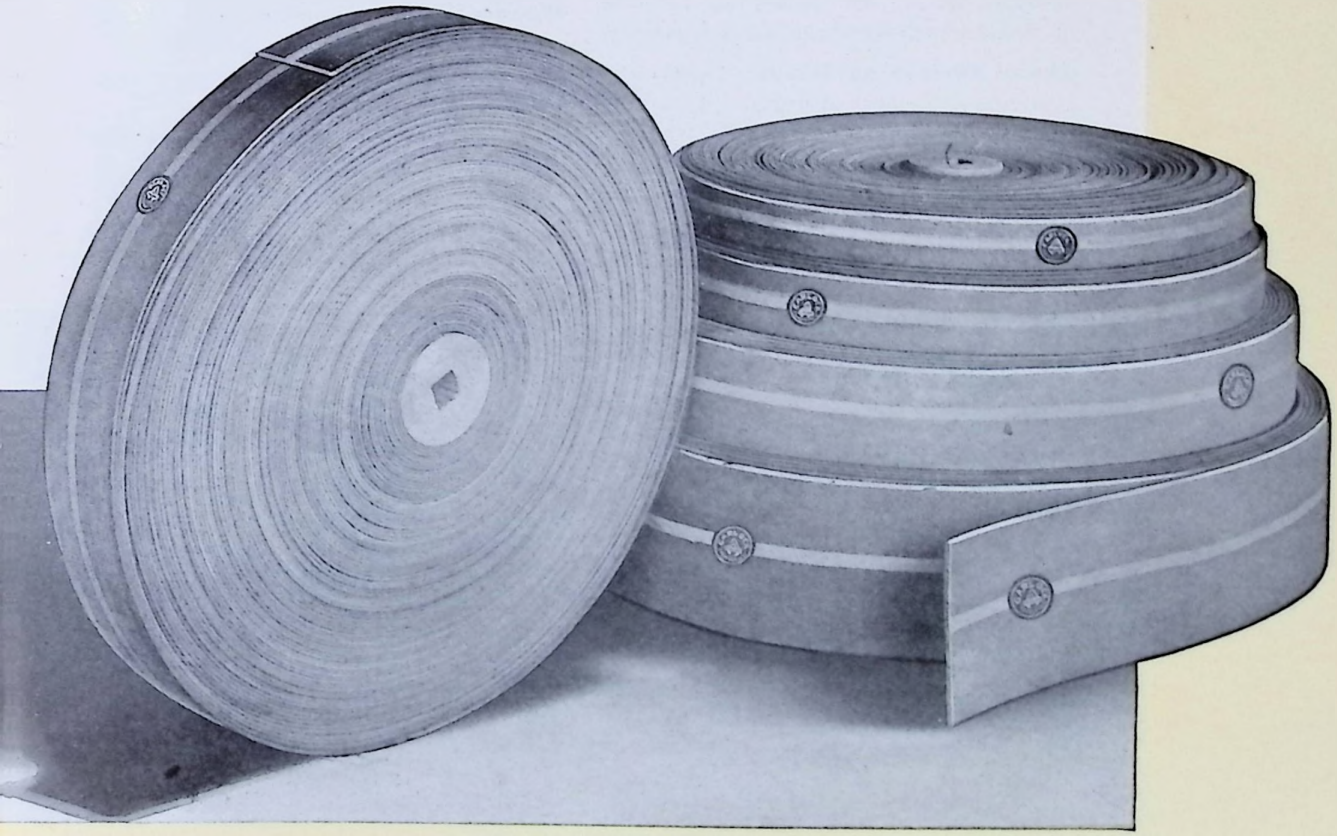
Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 189 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/189

Rubber Transmission Belting

RUBBER TRANSMISSION BELTING

Garlock 725 Rubber Transmission Belting is made of the highest-grade, heavy cotton belt duck treated with a special rubber compound, folded to size and vulcanized.

Garlock 725 belting is recommended for any service where a flat, transmission belting is required. It has unusual flexibility, exceptional gripping power and extremely long life. Its superior wearing qualities have been demonstrated on thousands of applications. Garlock 725 is manufactured in all standard belt sizes from 1″ x 2 ply up to 28″ x 12 ply belt. It is available either in roll lots or in cut lengths. When ordering cut lengths the exact length desired must be specified.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 190 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/190

Garlock Rubber Expansion Joints

Construction—Garlock Rubber Expansion Joints are spool-type joints made of a high-grade rubber compound combined with plies of sturdy cotton duck and reinforced with steel rings. A central arch in the body of the joint provides flexibility to compensate for expansion and contraction in the line. For installations where oil resistance is necessary joints are made with a tube or liner of neoprene.

Styles—Garlock Rubber Expansion Joints are made in three styles: Style No. 204 for pressure; Style No. 205 for vacuum; and Style No. 206 for pressure and vacuum.

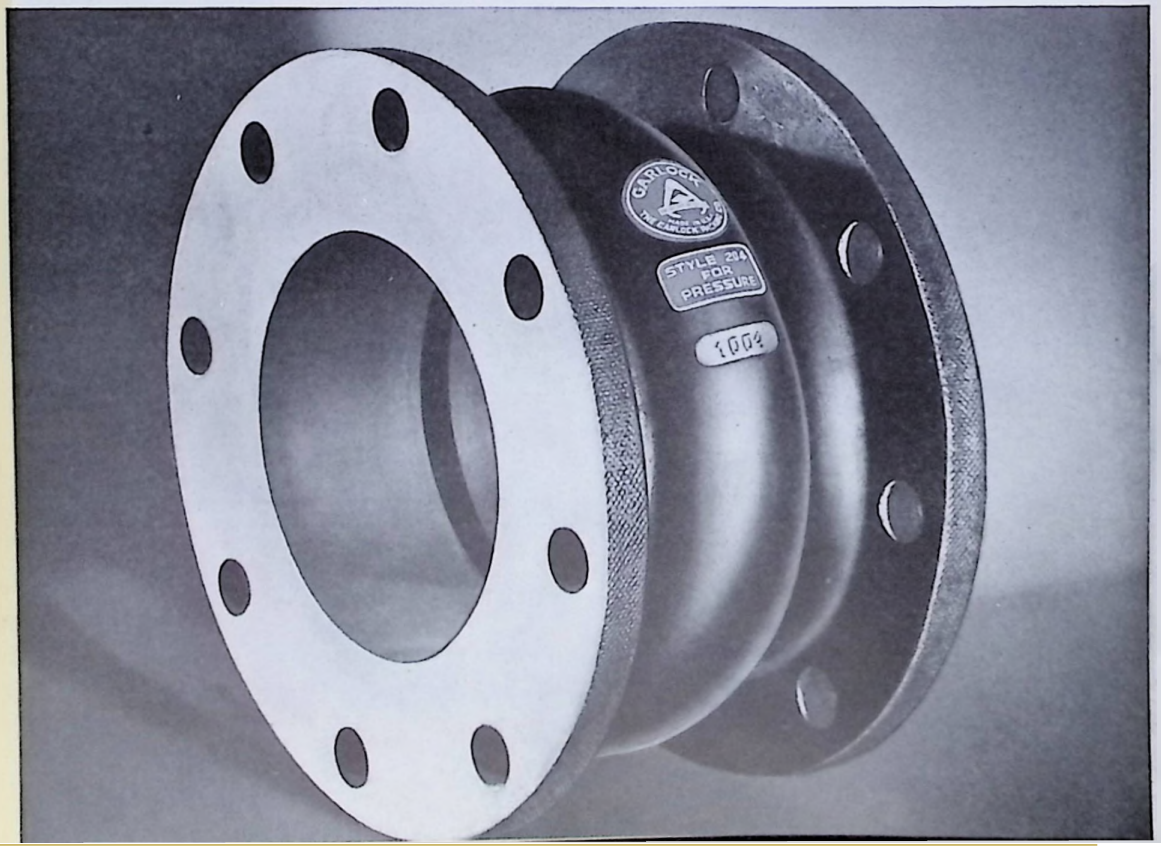
Sizes—Garlock Rubber Expansion Joints are made in all standard pipe sizes from 2″ to 72″ inclusive and lengths (face-to-face of flanges) from 6″ to 16″. Unless otherwise specified flanges are drilled for bolts in accordance with American Standard drilling.

Metal Retaining Rings — Split metal retaining rings made of zinc-plated steel 3/8″ thick and drilled to match the joint are regularly installed against the inner face of each of the rubber flanges of the joint. These rings provide metal surfaces in contact with the bolt heads and prevent the possibility of damage to the rubber flanges when the bolts are tightened.

Service — Garlock Rubber Expansion Joints are suitable for operating pressures from 40 to 125 p.s.i. (depending upon size of joint) and for temperatures up to 180° F. on lines handling hot or cold water, brine or exhaust steam. Vacuum-type joints are suitable for a vacuum of 30 inches of mercury. For service involving oils, acids or mild caustic solutions joints with synthetic rubber lining are recommended.

Advantages—Garlock Rubber Expansion Joints are long-lasting; do not crack or fracture under repeated flexing; do not take a permanent set after compression; do not corrode or erode; are light in weight; can be installed in limited space; require no gaskets; do not induce electrolysis.

Where Used — Garlock Rubber Expansion Joints are commonly installed in vacuum and water lines to and from surface condensers; turbine to condenser lines; pump suction and discharge lines; jet condenser injection and discharge lines; brine tanks in refrigeration plants; ventilating and air conditioning systems; and in other piping installations.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 191 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/191

Asbestos Tinning Machine Brushes

Garlock asbestos brushes, which are used for removing excess tin from the rolls of tinning machines, are made of Garlock asbestos cloth fabricated into sturdy, durable brushes.

These brushes are manufactured in the types described below and in sizes to fit any equipment. Orders should specify width, thickness and length of brush required.

GARLOCK 7954

Garlock 7954 asbestos brushes are made of Garlock brass wire inserted asbestos cloth laid up in plies and securely stitched together with iron wire. These brushes have a raw wearing edge. If desired, this brush made of plain asbestos cloth, without wire insertion, will be supplied.

GARLOCK 8380

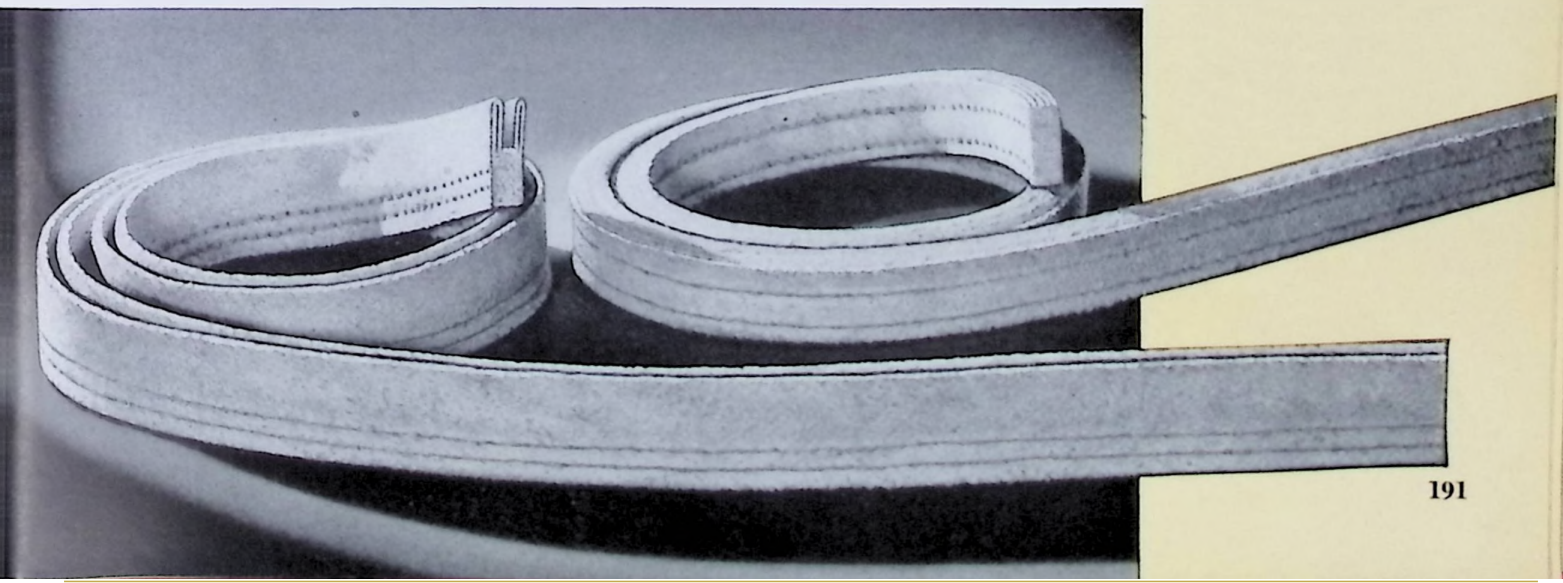
Garlock 8380 asbestos brushes are made of Garlock plain asbestos cloth without wire insertion. These brushes are reinforced by two strips of soft steel interlaminated between the plies of asbestos cloth and extending to and flush with the raw wearing edge of the brush. Strong iron wire is used in stitching these brushes.

GARLOCK 8525

Garlock 8525 brushes are of the same construction as Garlock 8380 brushes except that the soft steel reinforcing strips in Garlock 8525 brushes are approximately $\frac{1}{8}$" narrower than the plies of asbestos cloth and do not extend to the wearing edge of the brush. These metal strips, therefore, do not contact the tinning rolls.

GARLOCK 8735

Garlock 8735 hollow-back asbestos brushes are made of Garlock brass wire inserted asbestos cloth, laid up in plies with the outer plies on each side of the brush wider than the center plies, thus forming a channel along the back edge of the brush. This construction effects a reduction in the weight of the asbestos cloth required as compared with a conventional, solid brush. These brushes are securely stitched together and have a raw wearing edge. A guide or filler bar, usually of metal, is inserted in the channel in the brush when applied to the equipment.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 192 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/192

Garlock 5420 Asbestos Tubing

Garlock 5420 asbestos tubing is made of special Garlock wire inserted asbestos cloth braided into tubular form. This material is available in any practicable inside diameter, outside diameter and length.

Garlock 5420 was developed for use as an insulating covering on the handles of tongs or other hand tools used in glass plants, steel mills or other operations where hot materials are handled. It is an effective material for such usage and its tubular construction, which permits the user to slip it over the handle to be insulated, makes its application easy and quick.

Garlock 7024 Coupling Discs and Tractor Links

Garlock 7024 is made of plies of heavy belt duck treated with a special Garlock rubber compound and vulcanized in a press.

Garlock 7024 was developed for and is generally used in the manufacture of flexible disc couplings and tractor links. Excellent service is obtained from this material on those applications.

Coupling discs and tractor links are fabricated from Garlock 7024 slab to the sizes and shapes specified by the customer.

Condenser Tube Cleaning Plugs



Garlock 341 Cord Plugs for cleaning condenser tubes are made of plies of a special, open-weave, strong cotton fabric coated with a Garlock rubber compound, vulcanized in a press and cut to accurate size.

These plugs are shot through the condenser tube with an air gun. As they pass through the tube the exposed surfaces of the fabric plies clean and scour the inside of the tubes quickly and effectively. Because of their sturdy construction plugs can be used many times without losing their efficiency. Best results are obtained if plugs are soaked in water for several hours before using.

The air gun for shooting Garlock cord plugs is a simple tool which can readily be made in any shop equipped with a lathe. Complete instructions for making these tools will be supplied on request.

Garlock 341 cord plugs are ¾" in thickness and are made in all sizes to fit standard condenser tubes from ⅝" to 1" outside diameter. Numbers designating sizes are assigned to Garlock 341 plugs as shown in the table below.

Outside Diameter of tube	Wall Gauge (Birmingham or Stubbs Iron Wire)	Size Number of Plug	Outside Diameter of tube	Wall Gauge (Birmingham or Stubbs Iron Wire)	Size Number of Plug
1"	16	1016	¾"	17	3417
1"	18	1018	¾"	18	3418
⅞"	16	7816	⅝"	16	5816
⅞"	18	7818	⅝"	17	5817
¾"	16	3116	⅝"	18	5818

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 193 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/193

Garlock Lubricating Pastes

COMPOUND NO. 2

Garlock No. 2 Lubricating Compound is a special paste containing graphite developed in the Garlock laboratories for use with rod or plunger packings operating against steam, hot or cold water or aqueous solutions. It has a high lubricating value, maintains proper viscosity under heat and is a rust and corrosion preventive.

The efficiency and serviceable life of packing may be greatly increased by coating the packing with Garlock No. 2 compound at the time of installation and by making subsequent applications regularly, either through a pressure fitting or by swabbing the rod.

Garlock No. 2 compound is regularly packaged in 12-ounce, 24-ounce and 5-pound cans and is available in large containers for bulk users.



COMPOUND NO. 3

Garlock No. 3 Lubricating Compound was developed in the Garlock laboratories for use with rod or plunger packings operating against oils, gasoline, solvents and vapors or chemicals of an oily nature. It has a high lubricating value and its usage retards or prevents seepage through the packing and makes leakproof operation possible without excessive gland pressure.

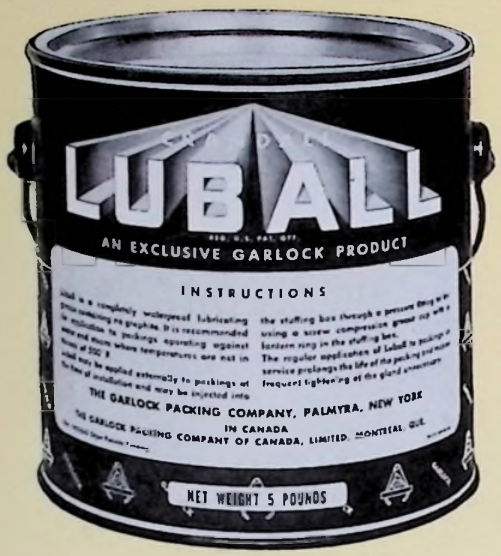
The serviceable life of packings may be greatly increased by applying Garlock No. 3 Compound to the packing at the time it is installed and by making subsequent applications at regular intervals, either through a pressure fitting or by swabbing the rod.

Garlock No. 3 Compound is regularly packaged in 12-ounce, 24-ounce and 4¼ -pound cans and is available in large containers for bulk users.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 194 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/194

Garlock Lubricating and Gasket Pastes



CRANDALL LUBALL

Crandall Luball is a patented packing lubricant containing no graphite, sold exclusively by The Garlock Packing Company. It is for use with rod or plunger packings operating against steam, hot or cold water or aqueous solutions at temperatures up to 500° F. This material has a high lubricating value and will not corrode chromium steel rods.

The serviceable life of packings may be increased by applying Luball to the packing when it is installed and by making subsequent applications either through a pressure fitting or a grease cup with a lantern ring.

Luball is regularly packaged in 1-pound, 5-pound and 10-pound cans and is available in large containers for bulk users.



COMPOUND NO. 1

Garlock Compound No. 1 is a gasket paste for application to gaskets on flanged joints operating against steam, water, hot or cold oils or solvents. This compound helps to make a tight joint and facilitates the breaking of the joint. It does not discolor liquids, requires no thinning and will not ferment in storage.

Garlock No. 1 gasket compound is regularly packaged in 12-ounce, 24-ounce and 5-pound cans and is available in large containers for bulk users.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 195 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/195

Garlock Pipe Thread Compound

This is a special compound developed in the Garlock laboratories for application to threaded joints of pipe lines or other equipment operating against steam, hot or cold water, air, gas, alcohol, oils or solvents. This compound is ready to apply, requiring no thinning or other treatment. It makes a tight joint immediately, is non-corrosive and does not harden or shrink in service. This compound will not drip even when the pipe gets hot and joints on which it is used can be broken easily.

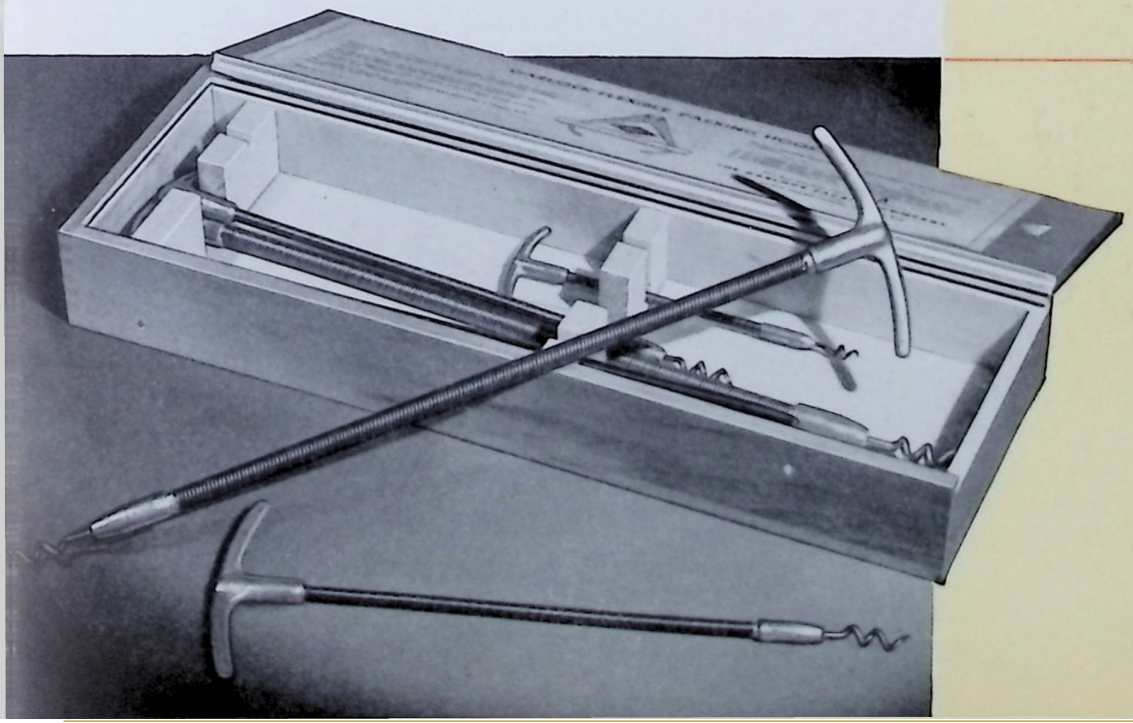
Garlock pipe joint compound is packaged in 1-pound, 2-pound and 4-pound cans and is also available in large containers for bulk users.



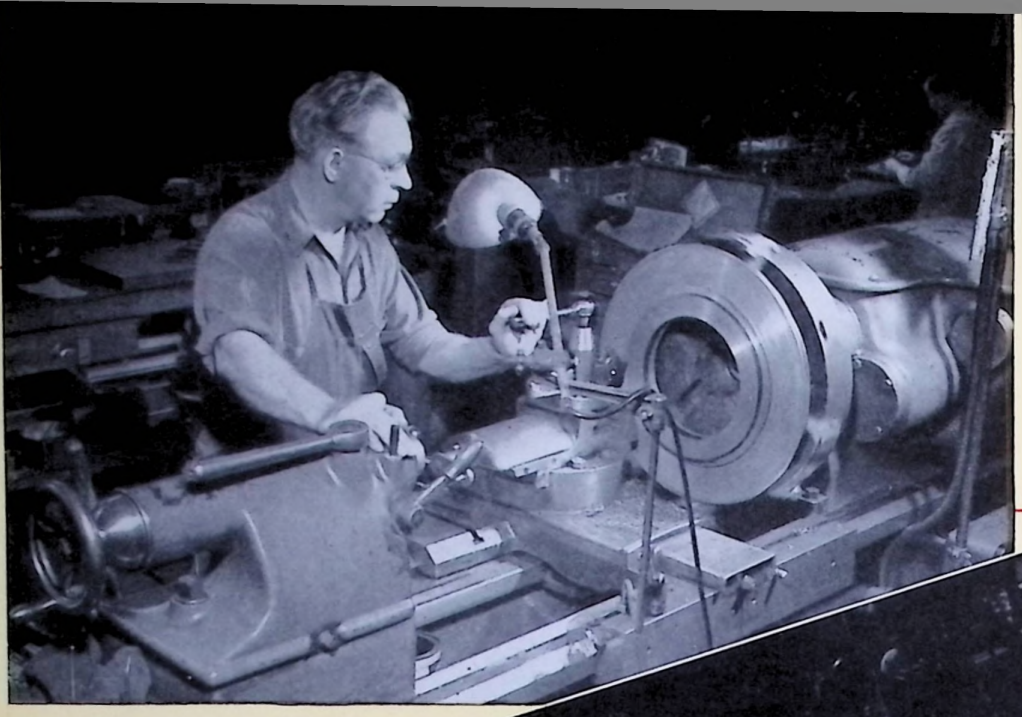
Flexible Packing Hooks

Garlock Flexible Packing Hooks are high grade, sturdy tools for use in removing old packing from stuffing boxes. The flexible shaft permits the usage of these hooks in cramped quarters and makes the removal of old packing a much easier and quicker job than when ordinary tools are used.

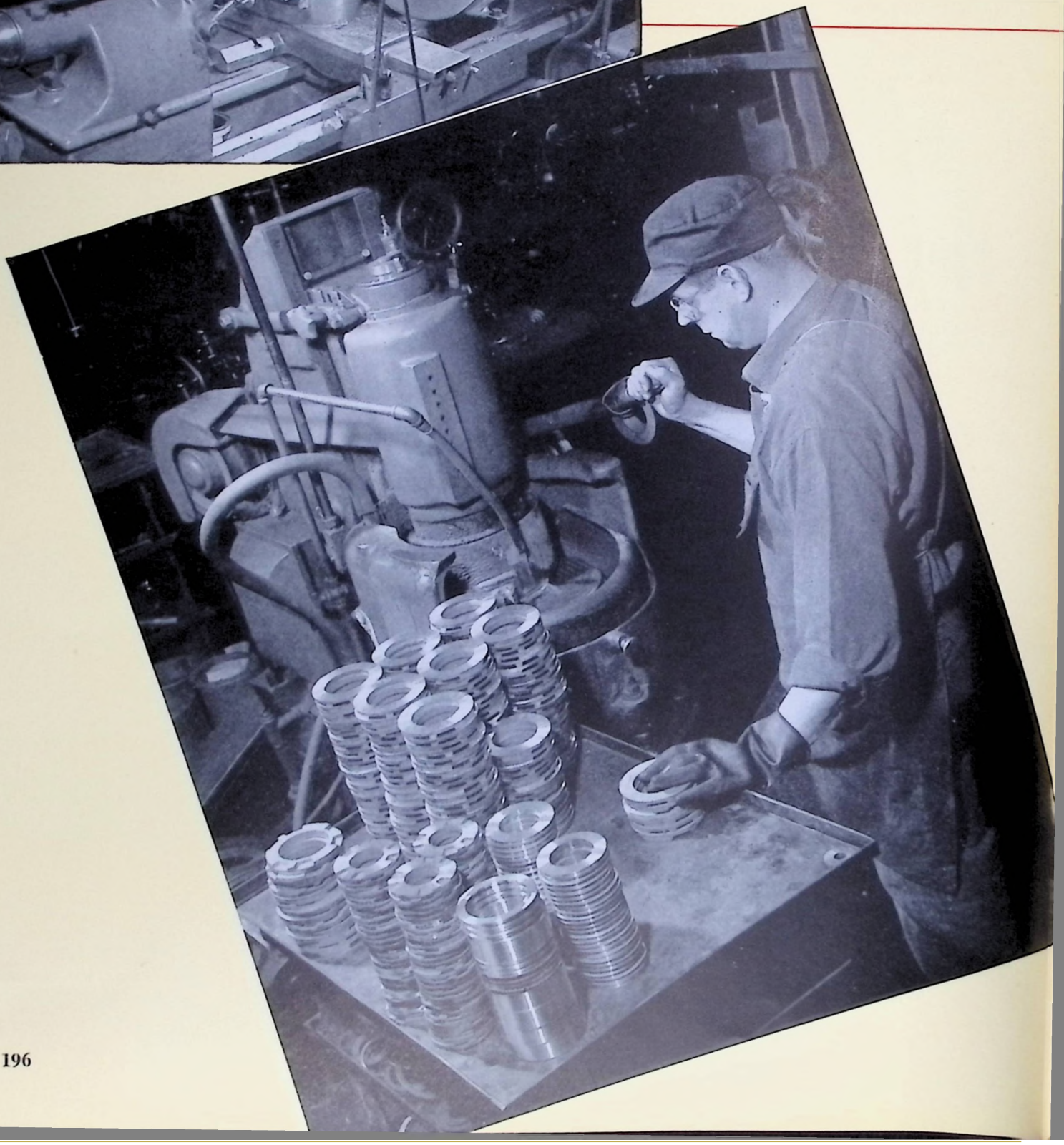
These hooks are regularly packaged in combination sets. Set "A" contains 1 flexible hook 6¼" long; 2 flexible hooks 10⅝" long; 2 flexible hooks 15" long and 1 double-end packing tool 12" long. Set "B" is the same as Set "A" except that a solid hook 8" long is included in place of the 6¼" flexible hook.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 196 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/196



FLOATING



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 197 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/197

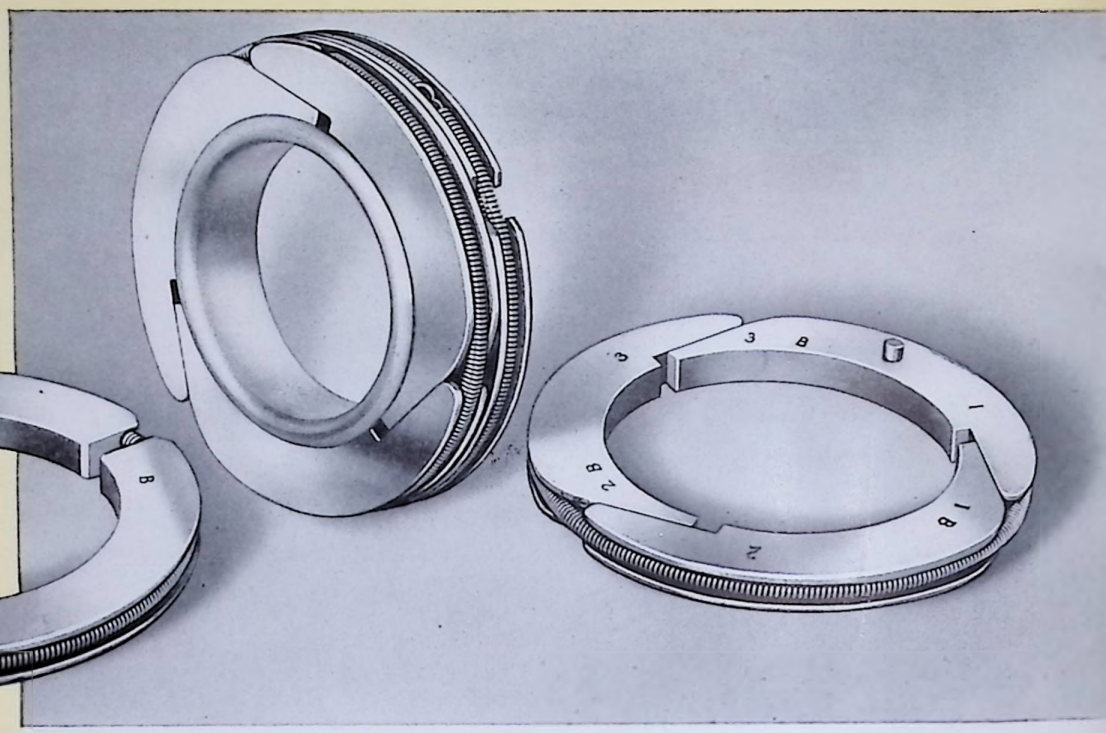
METAL PACKINGS



	PAGE
Tangential type metal packing rings	198
Flexible type metal packing rings	199
Triangular type metal packing rings	199
Fox type metal packing and piston rings	199
Instructions for ordering Garlock Floating Metal Packings	200
Specification sheet for Garlock Floating Metal Packings	201
Care, operation and servicing of Garlock Floating Metal Packings	202-203
Ammonia Compressor Packing—Garlock 800	204
Refrigeration Compressor Packing—Garlock 835	205
Gas Compressor Packing—Garlock 875	206
Combination Metal Packing (non-floating) Garlock 870	207
Gas Engine Packing—Garlock 860	208
Steam or Air Packing—Garlock 861	209
Steam, Air or Gas Compressor Packing—Garlock 805	210
Steam Packing—Garlock 806	211
Steam, Air or Gas Compressor Packing—Garlock 808	212
Steam or Air Packing—Garlock 809	213
Oil Scraper Rings—Garlock 891	214
Oil Scraper Rings—Garlock 892, 893, 894 and 890	215
Steam or Air Packing—Garlock 810	216
Vertical or Marine Engine Packing—Garlock 821	216
Metal Bushing Rings	217

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 198 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/198

Garlock Metal Packings

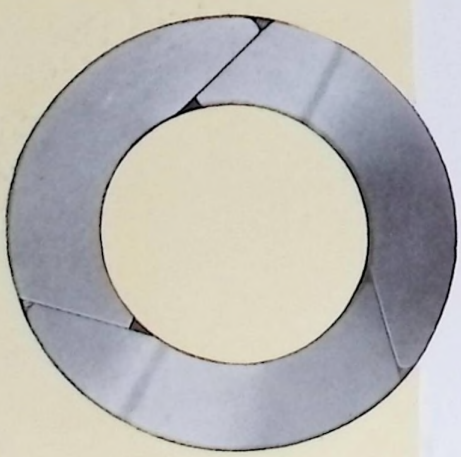


TYPES OF RINGS

GARLOCK floating metal packing rings are available in several different types and in various metals. The principal factors which determine the type of ring and kind of metal best suited for a given application are the nature of the service, the kind of equipment and the radial width of the packing space.

GARLOCK floating metal packing rings are precision made by skilled mechanics. Special metals, developed by us and produced to our own rigid specifications, are used in their manufacture thus insuring uniform performance, maximum service and minimum rod wear.

Descriptions of the several types of GARLOCK floating metal packing rings follow.



TANGENTIAL RINGS

A GARLOCK tangential metal packing ring is made in segments having tangential-cut joints. This tangential ring is assembled with a companion ring, also made in segments usually having radial cut joints. These two rings together comprise a section of tangential packing.

Tangential rings generally are composed of three segments. For large rods, however, a greater number of segments may be employed. Segments are held in proper assembly around the rod by a garter spring located in a groove in the outer periphery of the ring.

Tangential rings are suitable for most applications requiring floating metal packings and can be employed on applications where the radial packing space is too limited to permit the installation of rings of other types. These rings are available in cast iron, bronze, bakelite, carbon or babbitt.

Tangential rings usually are supplied unless some other type is specified.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 199 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/199

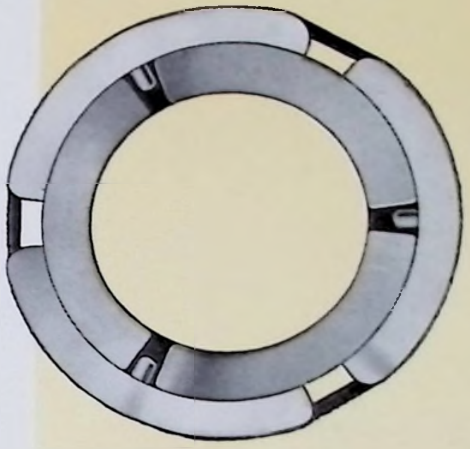
Garlock Metal Packings

FLEXIBLE RINGS

A GARLOCK flexible metal packing ring consists of an inner ring, made in segments with radial-cut joints, which contacts the rod, and an outer or cap ring, also made in segments, which surrounds the inner ring. This combination flexible ring is assembled with a companion ring having radial-cut segments, the complete assembly comprising a section of flexible metal packing.

Flexible metal rings usually are composed of three segments. These segments are held in proper position around the rod by a garter spring located in a groove in their outer periphery.

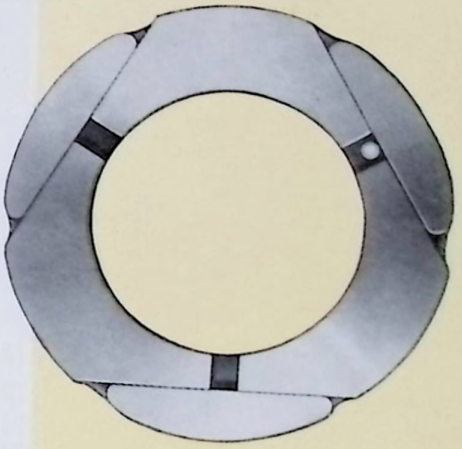
Flexible type rings are suitable for many applications but these rings require a greater radial packing space than rings of other types. These rings are available in cast iron, bronze, bakelite, carbon or babbitt.



TRIANGULAR RINGS

GARLOCK triangular metal packing rings consist of three or more rod-contacting segments, depending upon the diameter of the rod, and an equal number of cap segments which are located on flat areas machined on the outer periphery and at each end of the rod-contacting segments. A garter spring placed in a groove holds these segments in proper relationship with each other. This triangular ring is assembled with a companion ring having radial-cut segments, the complete assembly comprising a section of triangular metal packing.

Triangular rings are available in cast iron, bronze, bakelite, carbon or babbitt.



FOX TYPE RINGS

The GARLOCK Fox type metal packing ring is a patented ring made with interlocking tongue and groove, tangential cut joints. This ring is made in three segments for rod sizes up to 12″ diameter. Fox type rings are made either with a single or double garter spring or with a flat band spring.

These rings have fewer parts than other types of floating metal packings and pack pressure in both directions. They are available in cast iron or bronze.

Fox type piston rings employ the same patented constuction as the Fox type packing ring. Piston rings are equipped with a steel expander spring which provides an even pressure throughout the circumference of the ring.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 200 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/200

Garlock Metal Packings

INSTRUCTIONS FOR ORDERING

To permit proper handling of orders for GARLOCK metal packings it is necessary to have certain accurate measurements and other data concerning the service conditions and the equipment on which the packing is to be installed.

On the opposite page is shown a typical metal packing specification sheet containing a total of thirty items. Indicated below are the specification sheet items on which data is required for each of the GARLOCK metal packings listed.

Garlock Style	*Supply complete answers to the specification items indicated*
800	1 to 6 inclusive, 8, 16, 19, 20, 23, 27, and 28
805	1 to 22 inclusive and 26
805 with screw gland	1 to 6 inclusive, 8, 10, 14, 16, 17, 18, 19, 20, 22, 24, 25 and 26
806	1 to 22 inclusive and 26
806 with screw gland	1 to 6 inclusive, 8, 10, 14, 16, 17, 18, 19, 20, 22, 24, 25 and 26
808	1 to 6 inclusive, 8, 10, 15, 16, 17, 18, 19, 20, 26 and 27
809	1 to 6 inclusive, 8, 10, 15, 16, 17, 18, 19, 20, 26 and 27
810	1 to 22 inclusive and 26
821	1 to 21 inclusive, 26 and 27
835	1 to 17 inclusive, 19, 20, 22, 27, 28, 29 and 30
860	1 to 15 inclusive and 20
861	1 to 20 inclusive and 26
870	1 to 6 inclusive, 8, 19, 26 and 27
875	1 to 7 inclusive, 19, 20, 22 and 27
875 combination	1 to 7 inclusive, 19, 20, 22 and 27

NOTE: *Garlock metal packings are made with extreme precision. It is important, therefore, that all measurements be accurately taken.*

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 201 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/201

Garlock Metal Packings

TYPICAL SPECIFICATION BLANK FOR ORDERING

1. Name and number of engine.....
2. Name of rod.....
3. Number of sets.....
4. GARLOCK style number.....
5. Diameter of rod.....
6. Diameter of stuffing box, inside.....
7. Diameter of stuffing box or flange of gland, outside.....
8. Depth of stuffing box measured along bore.....
9. Is gland round or elliptical?.....
10. Diameter of opening into cylinder or chest.....
11. Number and size of stud bolts.....
12. Length of stud bolts.....
13. Diameter of stud circle.....
14. Clearance between face of stuffing box and crosshead.....
15. Is face of stuffing box or cylinder head machined?.....
16. Is engine vertical or horizontal?.....
17. If vertical, does piston come through bottom or top head of cylinder?.....
18. Does water enter cylinder in large quantities?.....
19. Give pressure—steam, air, gas or ammonia.....
20. Piston speed.....
21. Is old gland to be left on engine?.....
22. What is largest diameter case can be?.....
23. Single or double acting?.....
24. Outside diameter of threads on stuffing box.....
25. Number of threads per inch on stuffing box.....
26. If superheated steam, give temperature.....
27. Is bottom of box flat or bevelled?.....
28. Distance from face of stuffing box to vent (or lubrication connection).....
29. Pressure range (suction and discharge).....
30. Temperature range (suction and discharge).....

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 202 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/202

Care and Operation of Floating

GARLOCK floating metal packings are quite simple in design, construction and operation. Lack of familiarity with floating metal packings probably is responsible for the impression in the minds of many operators and engineers that such packings operate on some mysterious principle which cannot be understood or explained.

PRINCIPLES OF FLOATING METAL PACKING

Actually the fundamental factors entering into the construction and successful operation of floating metal packings are so simple and clear cut that they are perfectly obvious. These basic factors are:

1. The rings must be made of a material that will not deform in operation, will not score the rod and will not contribute to corrosion in service.
2. The rings must be of proper, segmental design providing free and uniform closure with wear in service, and held to the rod by suitable springs.
3. The rings must be bored accurately to rod size, smooth ground on the flat sides, and free to float at all times in case grooves.
4. The cup or groove faces (b-b) where the sides of the rings contact and seal must be smooth, flat and perfectly square to the rod.
5. A sufficient number of rings to take care of the operating pressure must be provided.
6. Suitable lubrication must be provided.

SERVICING FLOATING METAL PACKING

When and if operating difficulties develop with a set of floating metal packing the location and correction of the trouble usually is a simple matter as there are only four places where floating metal packings can leak, as follows (see sketch):

a. Between the cups or across gasket (or case joint if split case is used).
b. Along the ring bore, between the ring and the rod.
c. Through the joints of the ring.
d. Between the ring and the cup (across face b-b).

In the event of a leak observe the packing in operation, if possible, and determine whether the leakage is around the case or along the rod. Excessive water in the steam will cause steam packings to leak and can be detected from observation of the engine.

If the leakage is around the case it may be across the gasket, between the cups, through the joint of a split case or through the oiler connection. If leakage is along the rod the set must be pulled to permit examination of the rings. Split-case packings can be removed from the rod easily and solid case packings can be pulled out of the box for ring examination without disconnecting the crosshead for removal of the cups.

Check first the side clearance and diametral clearance of the rings in the cups. Cast iron rings should have .006″ side clearance and bronze rings should have .009″. If the rings do not float freely they become locked in the cups and leak.

The cylinder-side face (a-a) of the ring closer to the cylinder in each groove (usually a "C" ring) should be dull and dark and coated with "carbon" from the oil and gas. In normal operation, where the cylinder pressure is above atmospheric pressure, this ring face (a-a) should never contact the adjacent cup face (F). If, instead of being dull, this surface of the ring is clean and bright it is slapping back and forth in the groove and leaking from some cause to be found.

If this ring face (a-a) shows the machine imprints of the adjacent cup face (F) the ring has been locked in the cup due to insufficient side clearance. The remedy

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 203 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/203

is to machine the cups to provide proper side clearance.

The outside circumference of the rings should never contact the inside of the cups or case grooves. An examination of the cups and rings will readily reveal if there is any contact in these areas.

If the side clearance and diametral clearance of the rings are okay then check for leaks through the cup joints, across the gasket or in the case joint if a split case is used. Discoloration, rust or grease in these areas indicates a leak which will require a new gasket or the regrinding or lapping of the cup joint or case joint, as the case may be.

Check next for leakage between the rings and the rod. The entire bore or rod-contacting surface of the rings should be clean and bright. Dull spots on the ring bore indicate leakage. A further check can be made by cleaning the ring in kerosene, reassembling it properly on the rod and holding a light behind the ring. If light shows between the ring and rod leakage is indicated. Note that all rings are lettered or numbered and all ring joints are numbered and must be reassembled accordingly.

If the ring segments show wear in the middle area but not on the ends the rings are too large for the rod. If the reverse is true and the wear is on the ends of the segments, the rings are too small for the rod.

The sliding joints of the ring segments should be examined for leakage. If these joints are discolored or have shoulders on them leakage probably is taking place through the joints.

Finally check for leakage between the ring face (b-b) and the cup face. A pressure-tight seal between the ring and cup is necessary and leakage across this face can result from any one of the following causes:

1. Rust or corrosion on the cup face which can be corrected by remachining or regrinding the cup.
2. Wear of the cup face so it is not at a true right angle to the piston rod. Remachining or regrinding the cup will correct this defect.
3. Shoulder on the cup face which can be corrected by remachining or regrinding the cup.
4. Piston rod not running true through the packing. This must be corrected by the equipment operator.
5. Deflection of cup face due to cup wall being too thin which can be corrected only by providing cups with greater wall thickness.

GENERAL COMMENTS

Springs—The garter springs usually employed for holding the rings to the rod do not require much tension. The steam or gas pressure holds the rings to the rod under a much greater load than the springs can possibly exert.

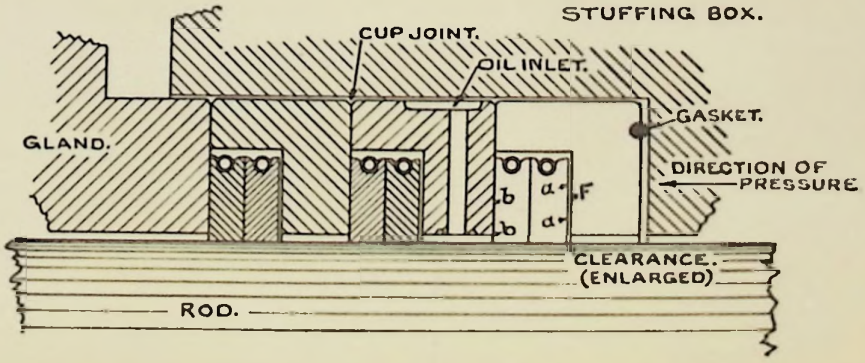
Lubrication—Metal packings will not operate without lubrication. When possible, a suitable oil is introduced between the first and second rings from the cylinder end of the box where the pressure of the rings bearing on the rod is greatest and lubrication most needed. Oil introduced at that point will be carried automatically outward toward the gland with the decreasing pressure and thus lubricate the other packing rings.

Two or three drops of oil per minute provide sufficient lubrication for the average set of packing after the run-in period. Ample lubrication for steam packings often is provided by the oil fed to the steam.

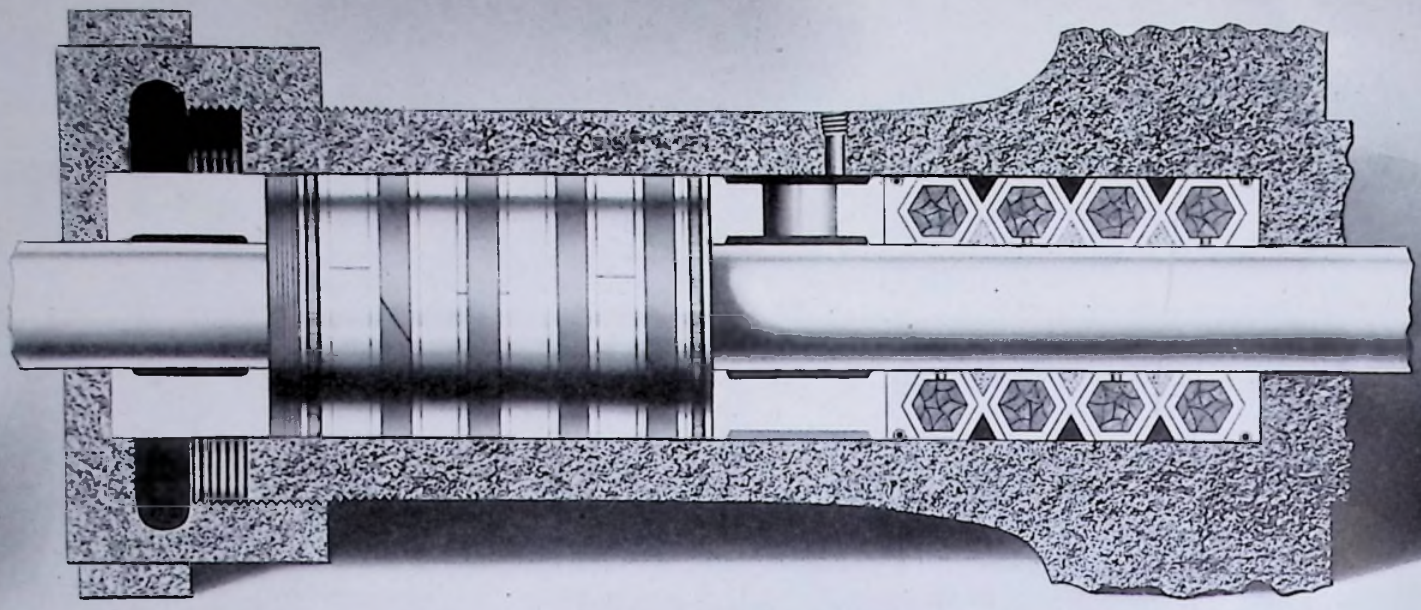
Number of Ring Sections—Metal packings are precision made and their success in sealing pressures is due more to the precision and care with which they are made and installed than to the number of ring sections employed. However, it is not good practice to use less than three ring sections in a set and it should never be necessary to use more than ten sections for pressures up to 15,000 pounds per square inch.

Auxiliary Stuffing Boxes—For more effective sealing against leakage along the rod when the machine is shut down, as on ammonia compressors or natural gas compressors, auxiliary stuffing boxes containing fibrous packings frequently are used in conjunction with floating metal packings. GARLOCK 835 (page 201) and GARLOCK 875-Combination (page 202) are examples.

On such installations the space between the floating metal rings and the auxiliary stuffing box is vented to the suction side of the compressor or to some other low pressure. Complete failures of installations which otherwise would be entirely satisfactory may be caused by plugging or closing the valve in this vent pipe. If the vent pipe is closed leakage through the metal rings has no escape as it is sealed by the packing in the auxiliary box. Pressure then may build up to approximately cylinder pressure, thus balancing the pressure across the metal rings and rendering them ineffective. When the compressor is in operation the vent line must be open to the suction or even to the atmosphere.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 204 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/204



Varitemp Ammonia Packing

GARLOCK 800

GARLOCK 800 Varitemp Ammonia Packing is recommended for service on the piston rods of single or double acting ammonia compressors of the anhydrous type. The design of this packing provides an all-metal wearing surface on the rod and at the same time allows for expansion and contraction of the packing with the rapidly changing temperatures encountered in ammonia compressor operation.

GARLOCK 800 is made up of a series of rings as follows:

Hollow hexagonal cushion rings of machined babbitt, filled with a heavily lubricated fibrous material and provided with holes on the inner surface through which the lubricant feeds onto the rod.

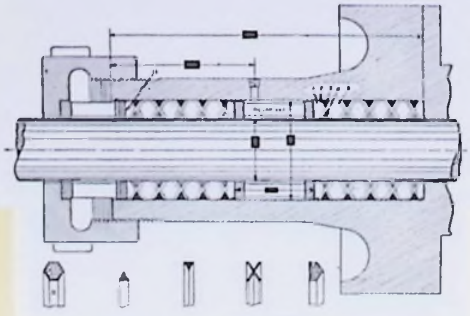
Expansion or X-shaped rings made of machined babbitt, located between the hexagonal rings.

Molded, triangular-shaped shredded metal rings which are located in the inner recesses of the X rings and contact the rod.

Molded triangular shaped rubber rings which are located in the outer recesses of the X rings.

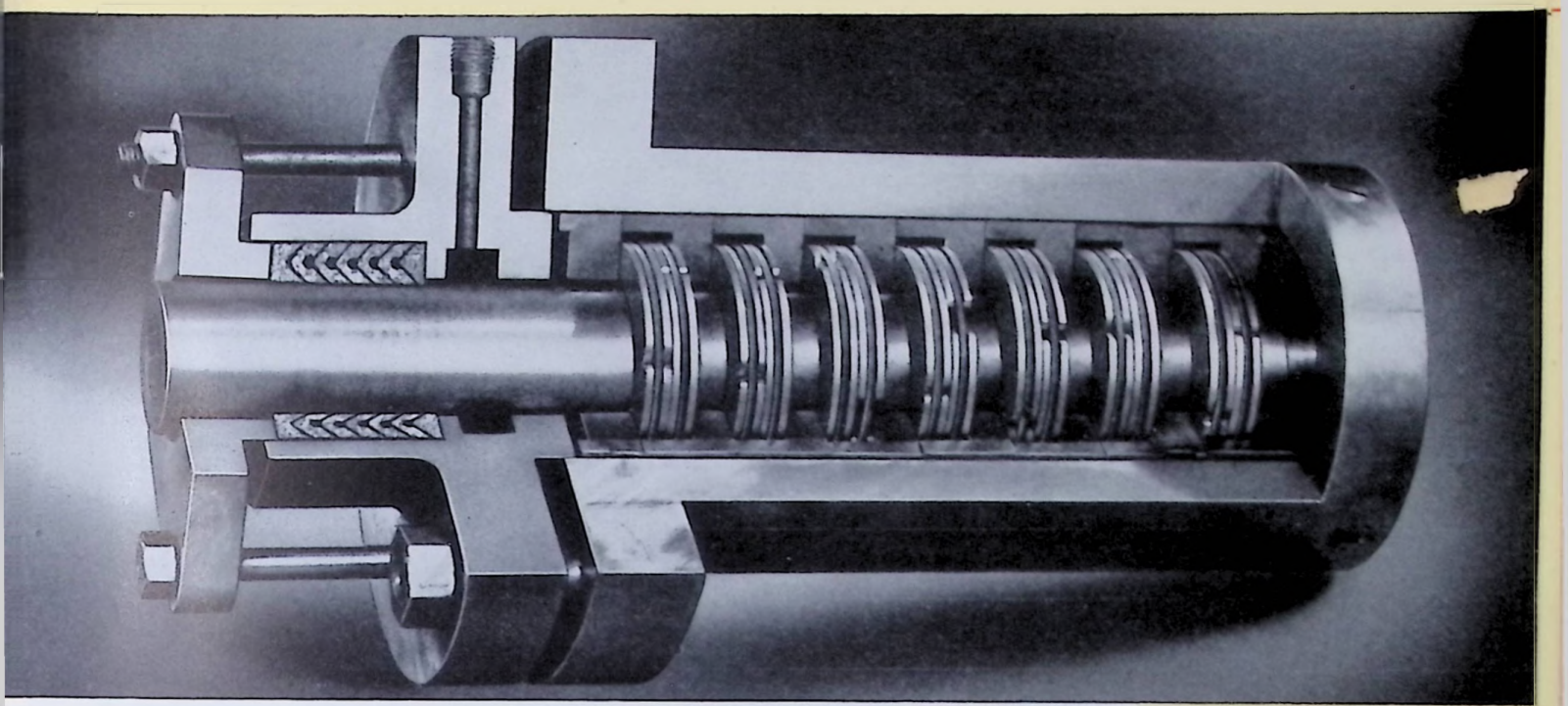
End rings of machined babbitt fitting flat or bevelled gland and stuffing box and equipped with garter springs.

All rings are made in two halves making it unnecessary to disconnect the rod to apply the packing.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 205 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/205

Refrigeration Compressor Metal Packing



GARLOCK 835



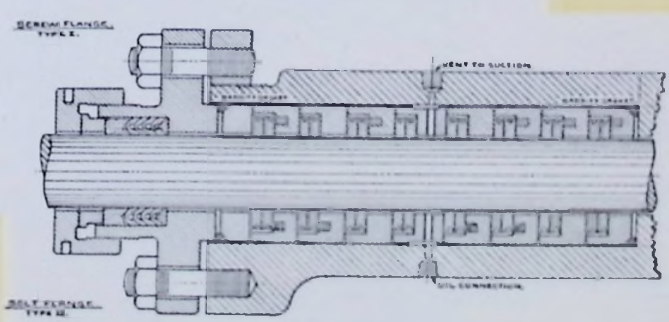
GARLOCK 835 Floating Metal Packing is recommended for service on the piston rods of ammonia or freon refrigeration compressors.

This packing usually consists of eight sections of floating metal packing rings, each assembled in a solid cup and all installed inside the stuffing box. The number of ring sections may be more or less than eight depending upon the depth of the stuffing box. Tangential type rings generally are supplied although rings of other types may be furnished if desired and if the width of the radial packing space permits. Bronze packing rings usually are supplied although if adequate lubrication is provided cast iron rings may be used.

GARLOCK 835 generally is constructed with a lantern ring located near the center of the set. Lubrication is provided through a force feed lubricator connection with a vent from the top of the set running back to the suction side of the compressor.

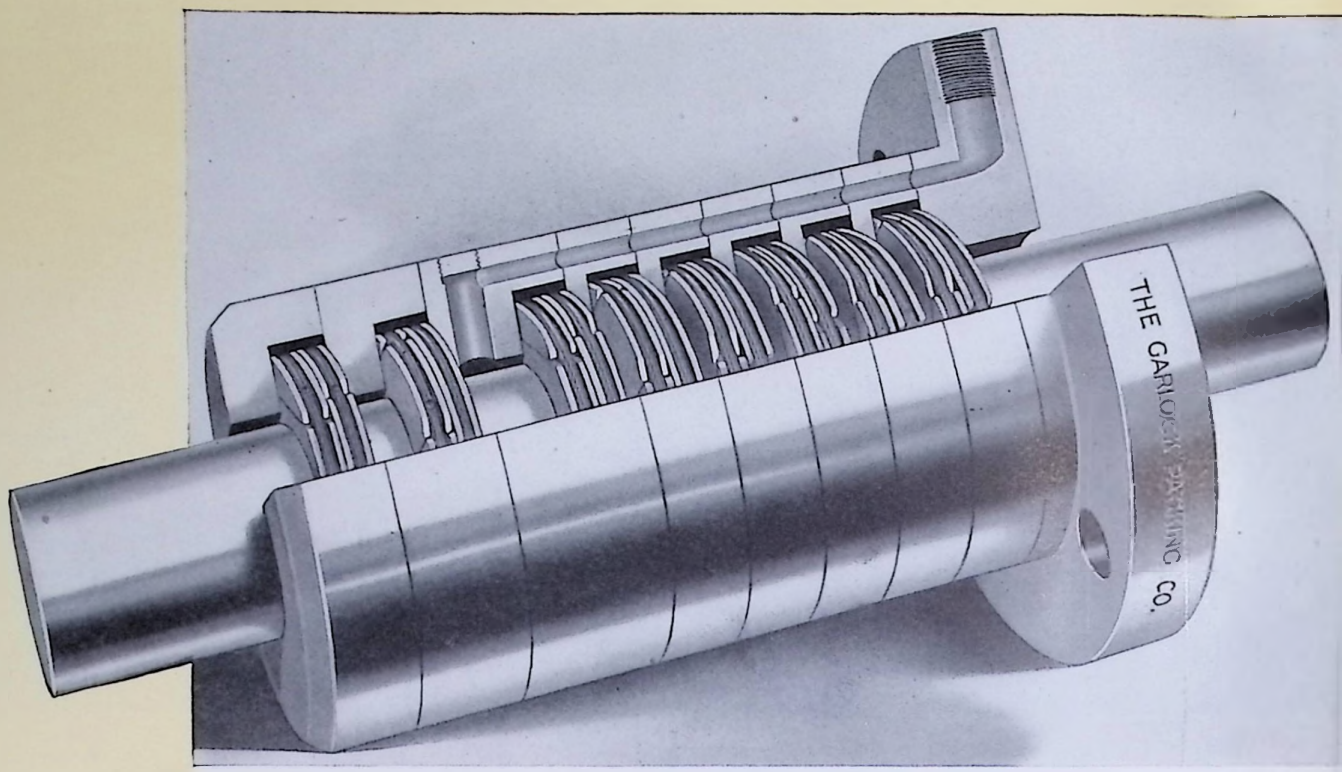
To prevent seepage of gases when the compressor is shut down a gland containing an auxilliary stuffing box usually is provided. GARLOCK 7815 Chevron packing (page 81) is recommended for use in this auxilliary box.

Where a screw flange now exists a threaded ring, machined to fit the threads on the box and drilled for bolt holes to accommodate the Garlock 835 flange, can be supplied either by us or by the customer.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 206 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/206

Gas Compressor Metal Packings



GARLOCK 875

GARLOCK 875 Floating Metal Packing was designed for gas compressor service and, when properly installed on piston rods in good condition it becomes, in effect, an integral part of the compressor.

GARLOCK 875 is generally furnished in an eight section case for high-stage service and in a five section case for low-stage service. Where conditions are especially severe, however, sets containing more than eight sections may be used.

Each section of rings in a set of GARLOCK 875 is placed in a solid retainer cup. If the cups become worn in service they can be reground thus increasing the life of the set.

GARLOCK 875 packing rings are made of cast iron, bronze, carbon or bakelite material to suit operating conditions.

GARLOCK 875 COMBINATION

GARLOCK 875 Combination Packing consists of a set of GARLOCK 875 Metal Packing and a supplementary stuffing box packed with GARLOCK Chevron packing (page 77).

This combination set is for service where batteries of gas compressors are hooked into a header, the purpose of the Chevron packing being to prevent leakage due to back pressure from the header when the compressor is idle. It is necessary to tighten the gland on the Chevron packing only when the compressor is not operating.

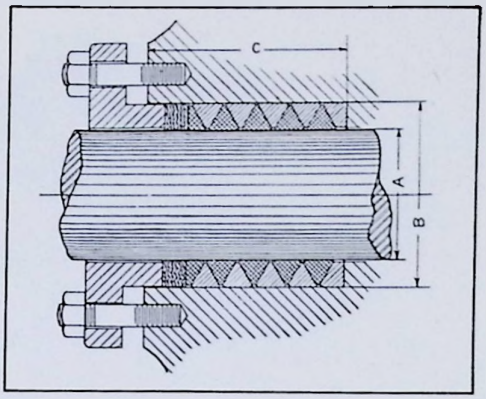
Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 207 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/207

Combination Metal Packings

GARLOCK 870

GARLOCK 870 Combination Packing is installed in a stuffing box without the use of a metal case and is recommended for use on small piston rods or valve stems where a metal packing is desired but where the stuffing boxes do not provide sufficient packing space to permit the installation of a floating type metal packing.

GARLOCK 870 consists of triangular-shaped wearing rings, regularly made of babbitt, and triangular-shaped filler rings, regularly made of cast iron or babbitt. One or more duck and rubber rings for installation next to the gland are provided with each set; these serve as cushioning rings and serve to prevent the packing from setting up too tight.

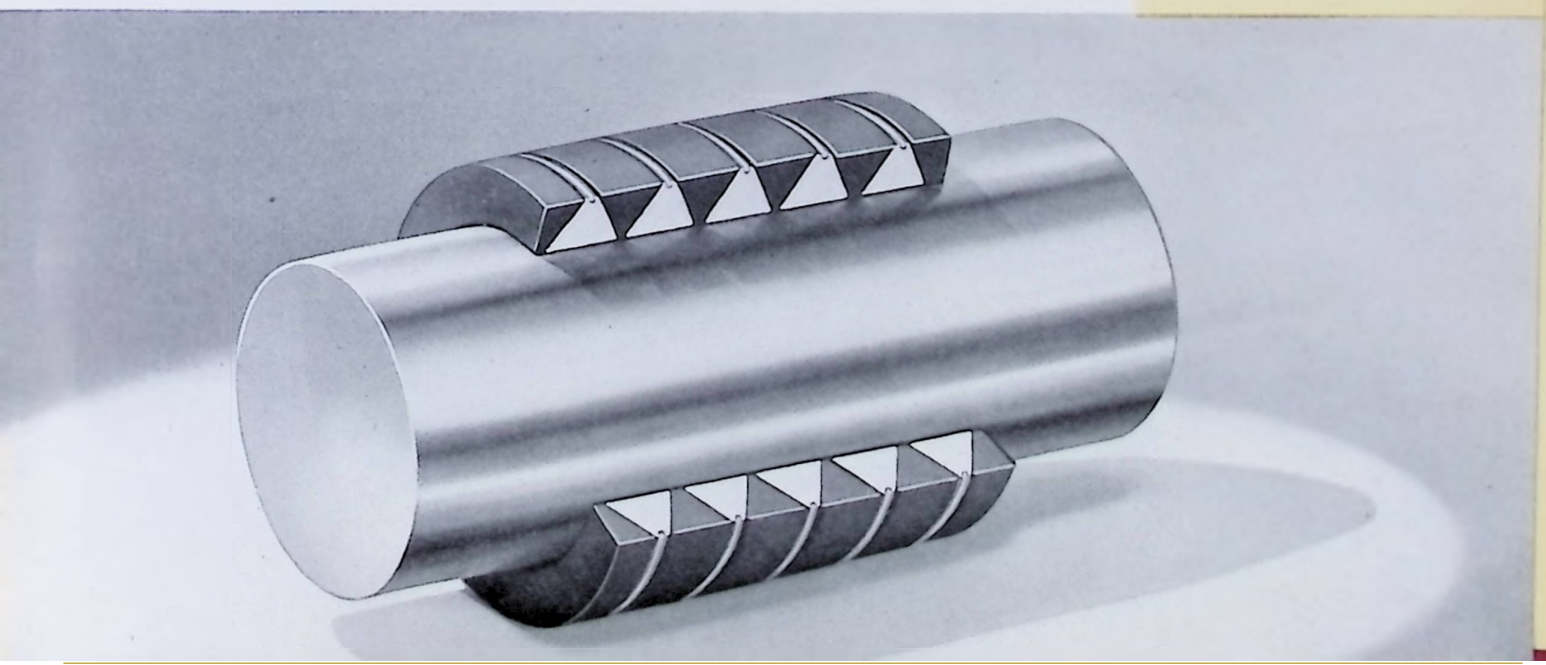


For high-temperature service GARLOCK 870 is made with red metal wearing rings and with asbestos cushion rings.

GARLOCK 870 SPECIAL

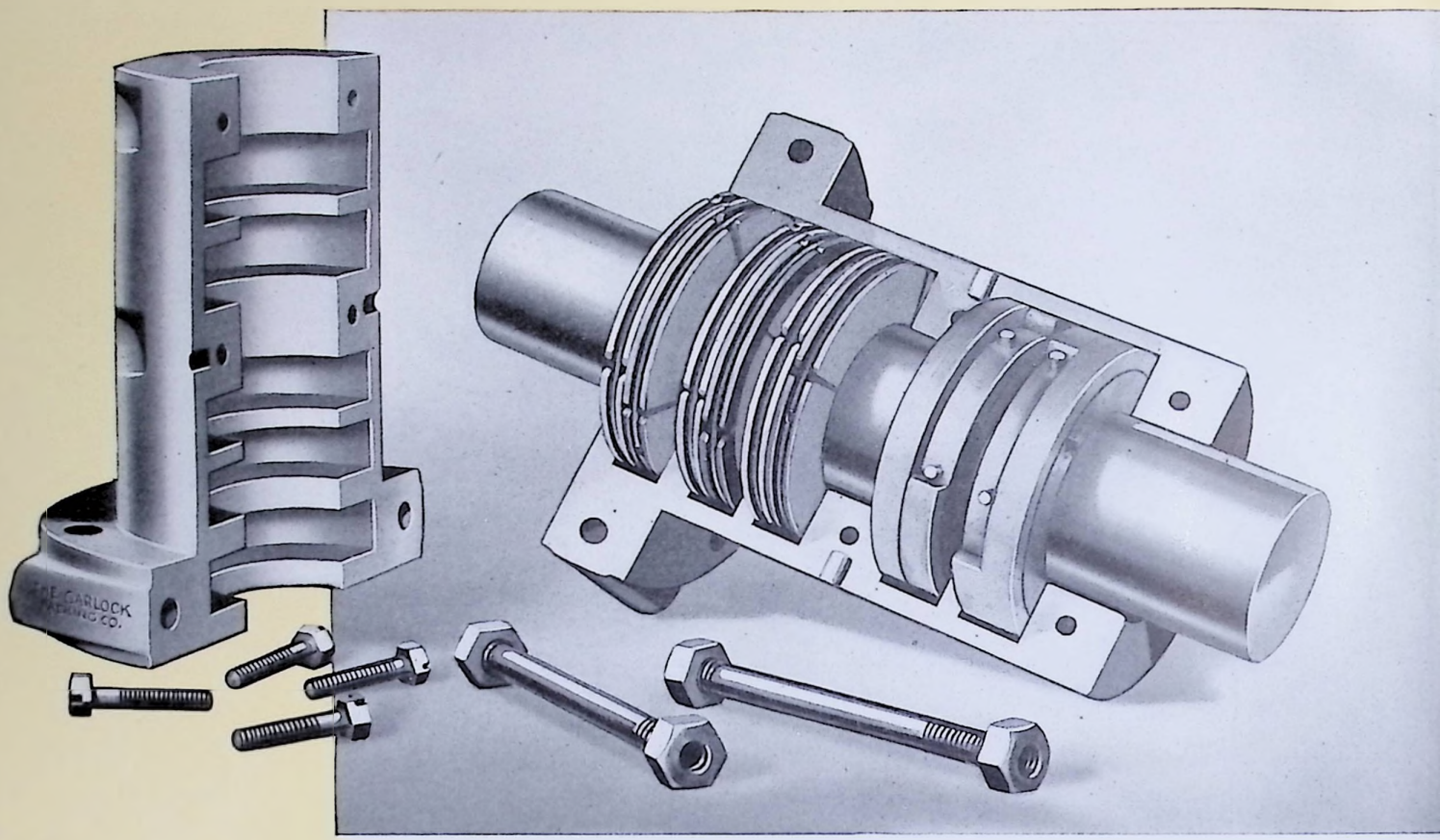
GARLOCK 870 Special is similar in construction to GARLOCK 870 except that rubber filler rings are provided instead of cast iron or babbitt filler rings, and the cushion rings are omitted.

The rubber filler rings in this set impart unusual resiliency to the packing and make it particularly suitable for use where the piston has a long stroke resulting in rod "whip," or where rods are not in good alignment.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 208 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/208

Floating Metal Packing

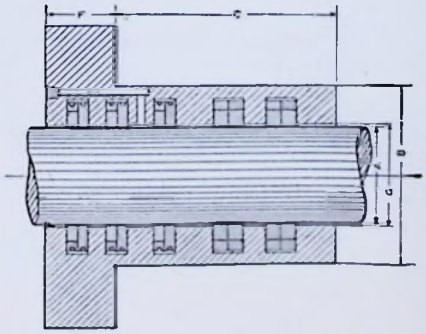


GARLOCK 860

GARLOCK 860 Floating Metal Packing is intended for use on the piston rods of double-acting gas engines.

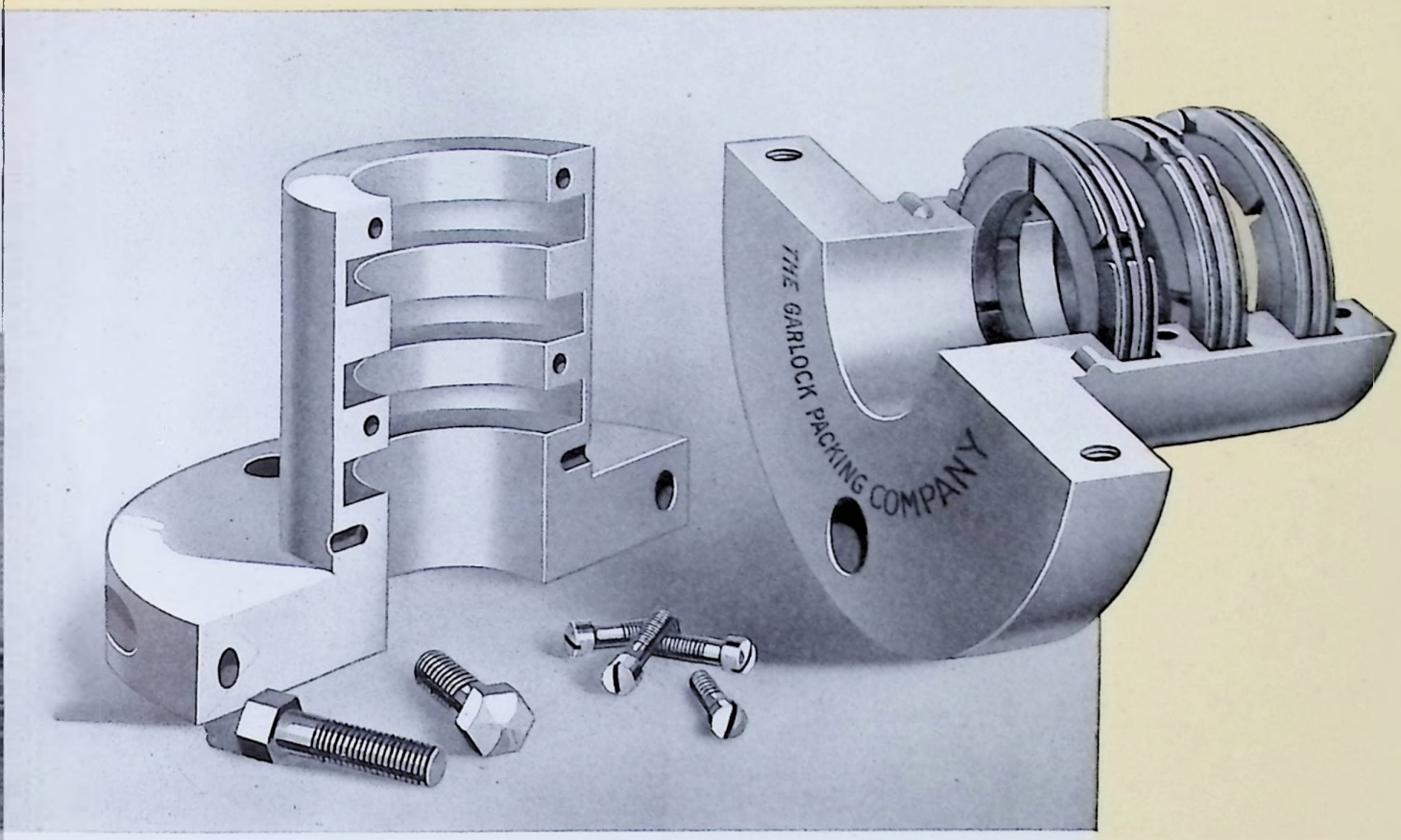
A set of GARLOCK 860 usually consists of three sections of special iron packing rings and two cast iron breaker or fire-check rings although the number of rings may be increased or decreased as conditions require. The breaker rings are made with a special cut which reduces the clearance space to a minimum and permits maximum wear before the ends of the segments meet or butt together.

GARLOCK 860 is preferably supplied with a split case. However, this packing can be furnished with a solid case if desired.



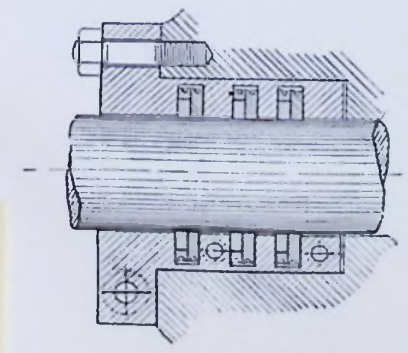
Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 209 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/209

Floating Metal Packing



GARLOCK 861

GARLOCK 861 Floating Metal Packing is particularly recommended for use by engine builders on original air or steam equipment because the stud bolt flange which is integral with the split case makes it unnecessary to furnish a stuffing box gland.

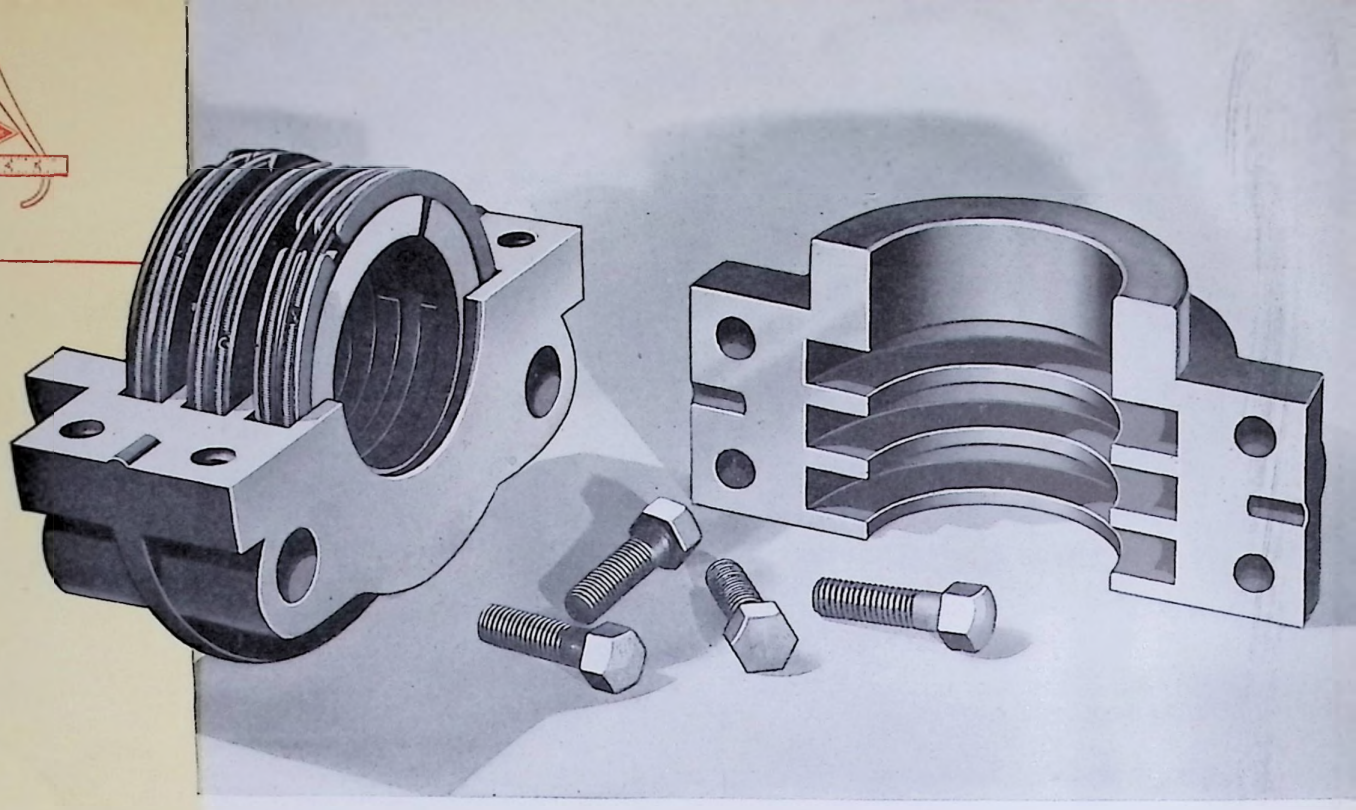


This packing can be installed or removed without disconnecting the rod.

GARLOCK 861 is regularly furnished with three sections of packing rings but for high pressure service additional sections may be required. The width of the radial packing space usually determines the type of floating packing ring supplied.

Suitable oil-ways and drain connections are provided.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 210 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/210



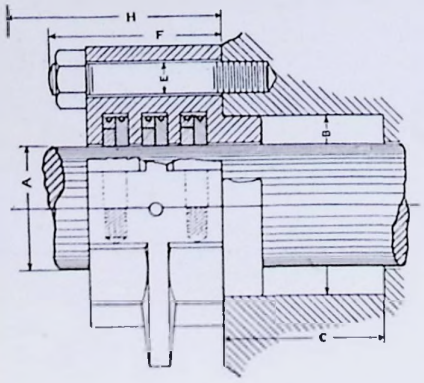
Floating Metal Packing

GARLOCK 805

GARLOCK 805 Floating Metal Packing is recommended for use on the piston rods and valve stems of steam engines, air or gas compressors and steam driven pumps.

GARLOCK 805 is a split-case type and can be applied or removed without disconnecting the piston. When applying this packing the flange of the stuffing box gland may be bolted against the face of the stuffing box or the gland may be removed entirely. If the gland is removed a hub, which enters the stuffing box approximately one inch, is provided on the packing case. The case therefore serves as a gland in the event that an emergency should require the usage of soft packing in the stuffing box.

GARLOCK 805 is regularly furnished with three sections of rings but additional sections are provided if service conditions require. Round, square or elliptical-shaped cases are available. Provision is made for lubrication and for draining condensation from the case.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 211 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/211

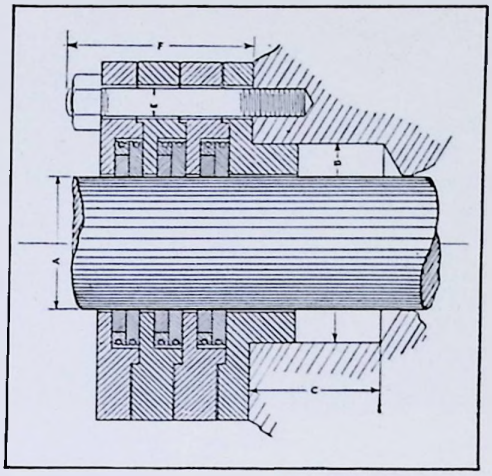
Floating Metal Packing

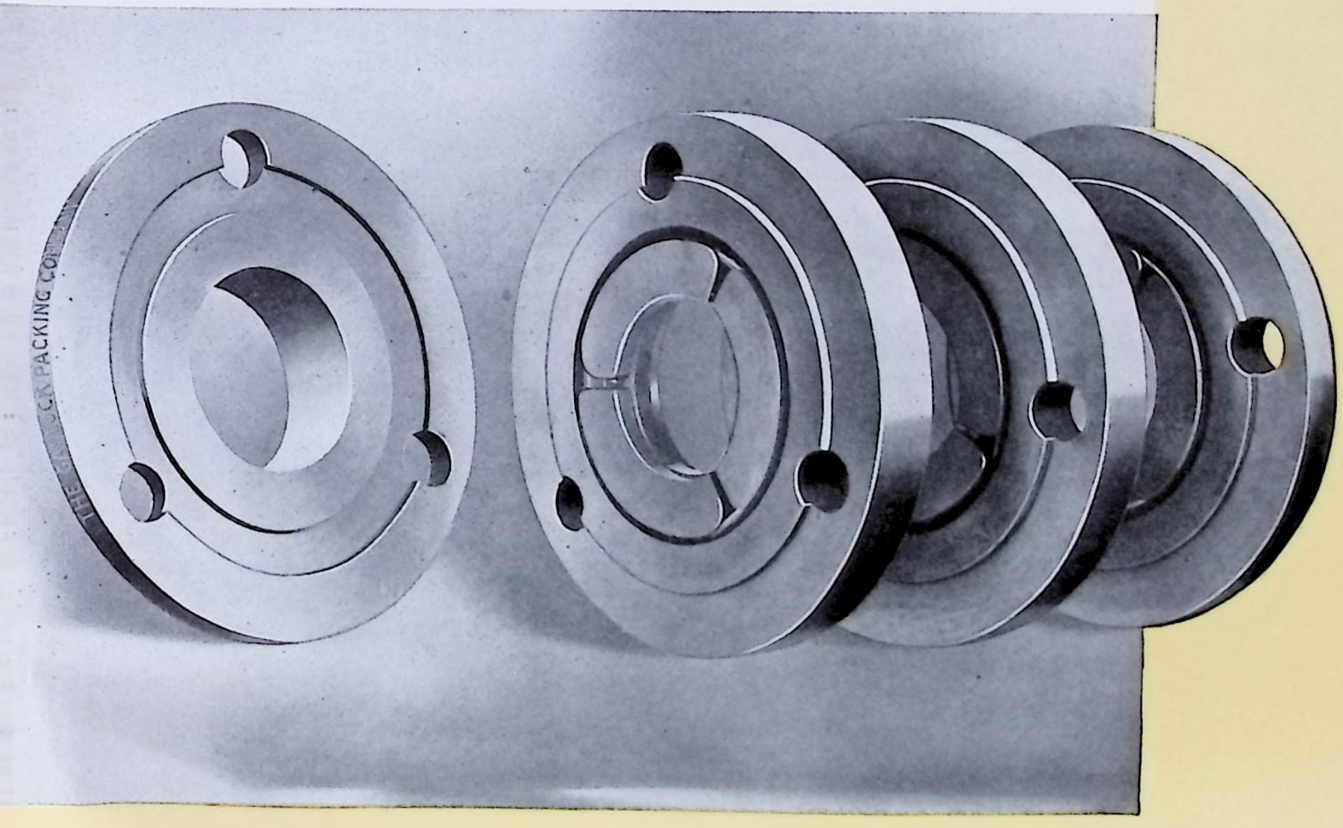
GARLOCK 806

GARLOCK 806 Floating Metal Packing is an outside, solid-case packing for use on piston rods and valve stems where there is no objection to disconnecting the rod to apply or remove the solid case.

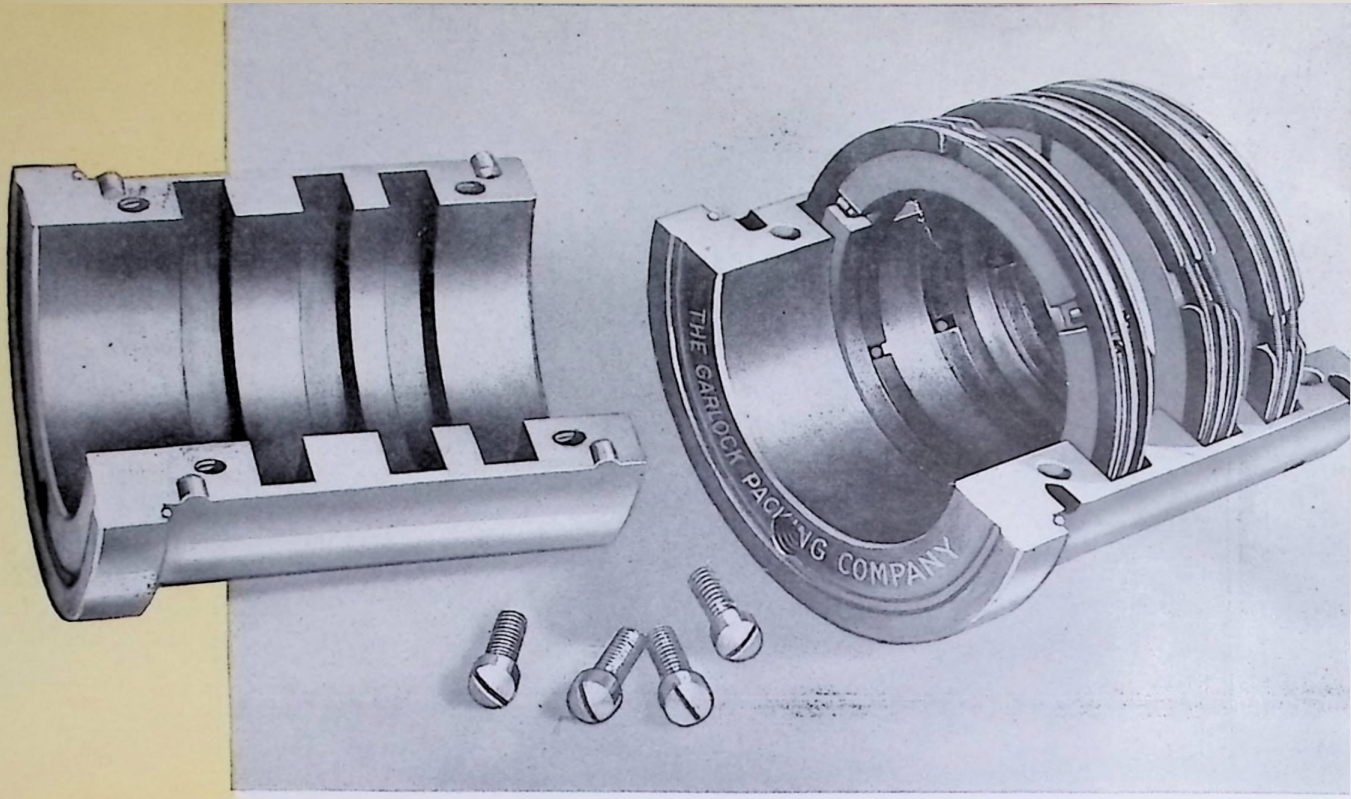
Three sections of packing rings usually are provided but a greater number of sections are supplied when required. The stuffing box gland may be removed when applying GARLOCK 806 in which event the case is made with a turned hub to fit into the stuffing box.

GARLOCK 806 cases can be supplied in round, square or elliptical shape as required. Means for draining condensation from the case are provided.





Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 212 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/212



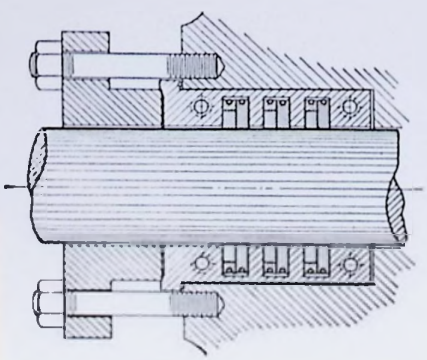
Floating Metal Packing

GARLOCK 808

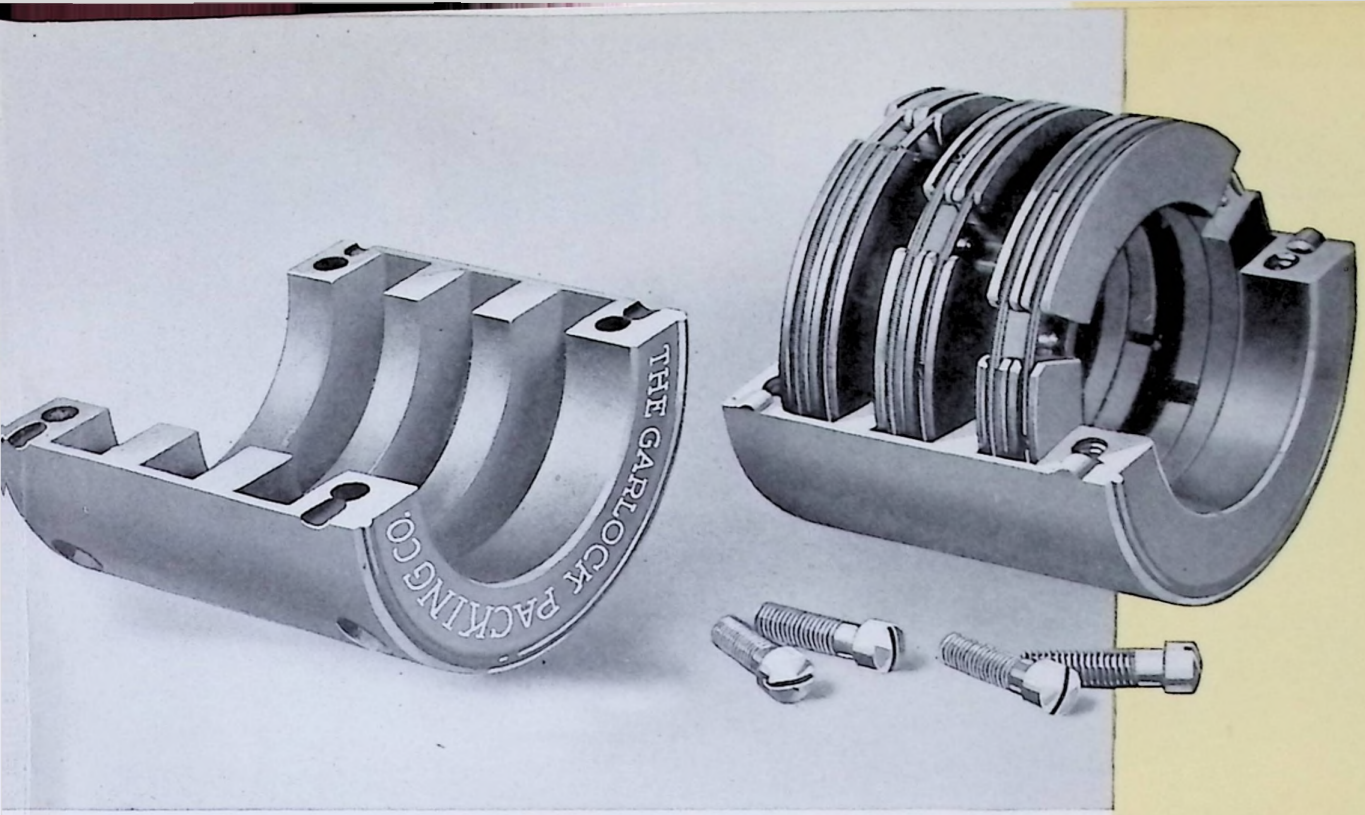
GARLOCK 808 Floating Metal Packing is recommended for use on the piston rods and valve stems of steam engines, air compressors, gas compressors and steam driven pumps.

This packing is assembled in a split case and can be applied or removed without disconnecting the rod. The case fits into the stuffing box and is provided with a copper wire gasketed flange which forms a tight seal against the face of the stuffing box. A recess, to receive the hub of the packing gland, is machined in the outside face of the packing case. Suitable means for draining condensation can be provided.

GARLOCK 808 is usually made with three sections of floating packing rings. The type of ring used frequently is dependent upon the width of the radial packing space in the stuffing box and the number of rings is determined by the depth of the stuffing box.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 213 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/213



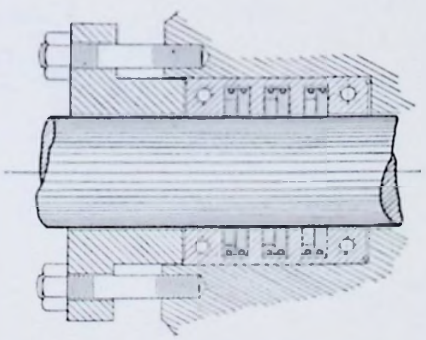
Floating Metal Packing

GARLOCK 809

GARLOCK 809 Floating Metal Packing is recommended for use on piston rods or valve stems operating against steam or air, such as on steam engines, compressors or pumps.

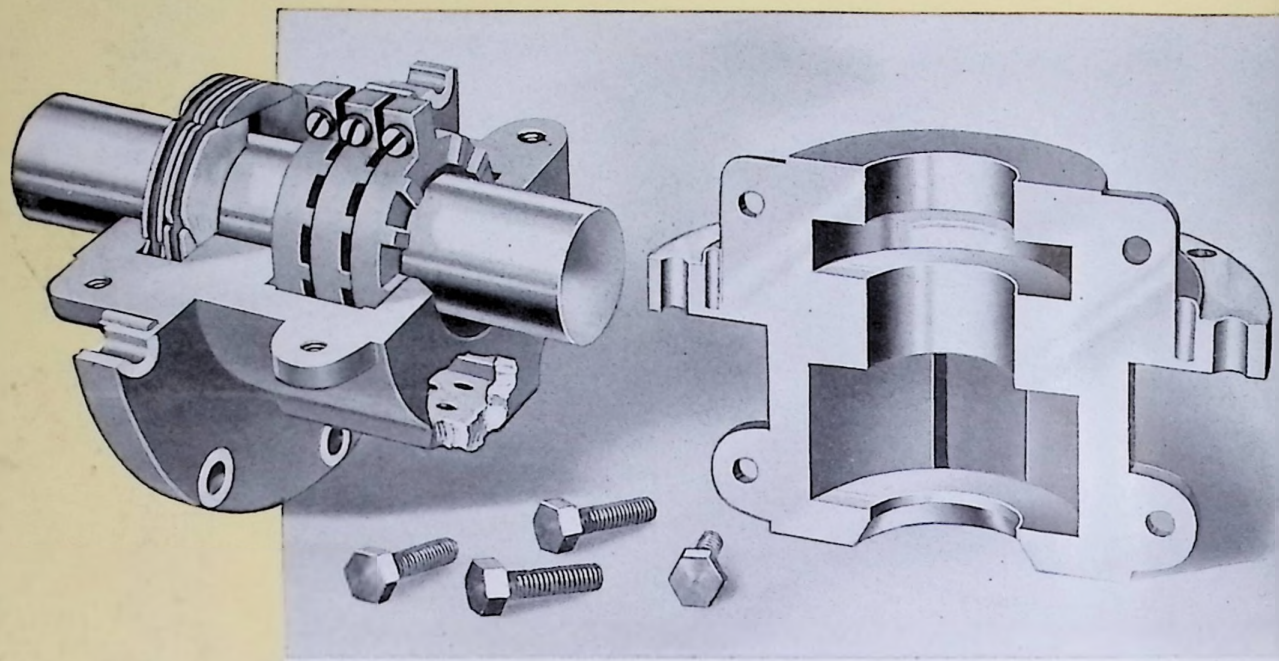
GARLOCK 809 is assembled in a split case so designed that the entire case is placed inside the stuffing box. A copper gasket located on the bottom of the case seals against the bottom of the stuffing box. This split case packing can be applied or removed without disconnecting the rod.

Three sections of floating packing rings usually are supplied although a greater number can be furnished providing the stuffing box depth permits. The type of packing ring supplied is dependent upon the radial width of the packing space in the stuffing box. A minimum width of 7/8" is required for a satisfactory installation of GARLOCK 809.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 214 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/214

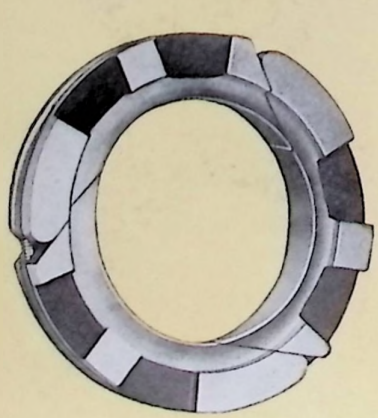
Metal Oil Scraper Rings



GARLOCK Oil Scraper Rings are designed to remove excess splash oil from the rods of gas engines, air compressors, gas compressors, steam engines, diesel engines or other equipment of the closed crankcase type, and return the excess oil to the crankcase. An installation usually consists of three or more rings.

Oil scraper rings are made of bronze, cast iron or babbitt depending upon the service requirements. They frequently are installed in combination sets with GARLOCK floating metal pressure packing rings, and must be free to float at all times in a case or groove.

GARLOCK Oil Scraper Rings are made in several different types as described below and on the following page.



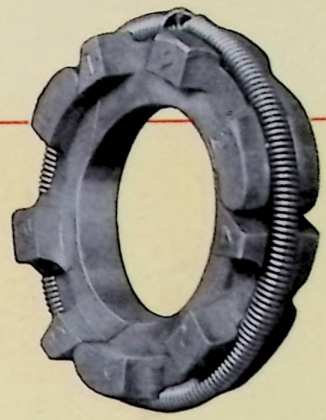
GARLOCK 891

GARLOCK 891 is a tangential cut, segmental oil scraper ring with a single scraping edge and oil return ports provided on one face only of the ring. A garter spring holds the ring segments in scraping contact with the rod.

This ring is suitable for use as an oil or water scraper ring where shaft speeds are not too high. It is an excellent ring for use as a bottom ring in an oil or water wiper box on a vertical rod as the flat, unported face of the ring prevents leakage of water or oil around the ring and down the rod.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 215 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/215

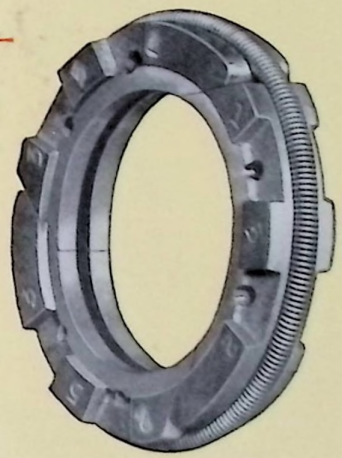
Metal Oil Scraper Rings



GARLOCK 892

GARLOCK 892 is a tangential cut, segmental oil scraper ring with a single scraper edge and with oil return ports provided on both faces of the ring. A garter spring holds the ring segments in scraping contact with the rod.

This ring is especially suited for use on vertical rods as the ports on the top side of the ring prevent the oil from accumulating around the rod in the chamfered area. On a vertical rod, however, it is recommended that an installation of GARLOCK 892 rings include a GARLOCK 891 bottom ring.

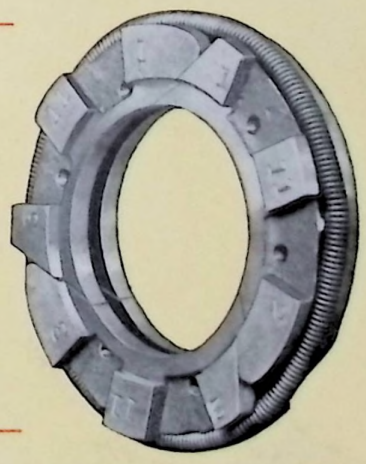


GARLOCK 893

GARLOCK 893 is a tangential cut, segmental oil scraper ring with scraper edges and oil return ports on both faces of the ring. A garter spring holds the ring segments in scraping contact with the rod.

This double-edge, double-ported GARLOCK 893 ring which scrapes in both directions represents an improved oil wiper construction and provides a ring adapted for effectively removing oil from high-speed, vertical rods. Small drain holes in the ring permit rapid escape of the oil thus preventing pressure from building up and reducing the effectiveness of the scraper ring.

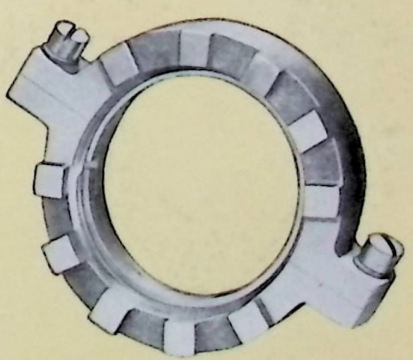
It is recommended that a GARLOCK 891 ring be used as a bottom ring in conjunction with an installation of GARLOCK 893 rings.



GARLOCK 894

GARLOCK 894 is a tangential cut, segmental oil scraper ring of improved design. This ring has a single scraper edge and ports on one side of the ring with a smooth, ground face on the other side. A garter spring holds the ring segments in scraping contact with the rod.

This is an effective oil or water scraper ring for vertical rods and is also suitable for use as a bottom ring in such installations. Small drain holes are provided to prevent oil pressure from building up and reducing the effectiveness of the ring.



GARLOCK 890

GARLOCK 890 is a segmental oil scraper ring enclosed in a ported cage. A crimped steel spring located between the outer periphery of the ring and the bore of the cage holds the ring in scraping contact with the rod. GARLOCK 890 rings are not recommended for application to rods larger than five inches in diameter.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 216 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/216

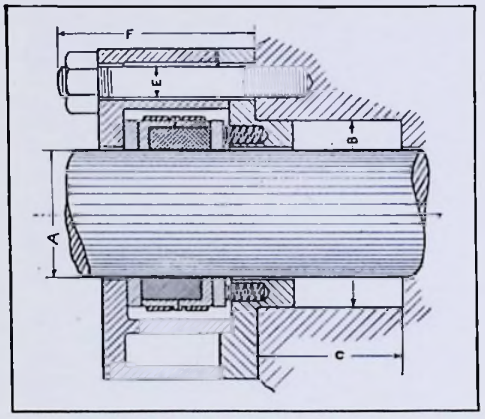
Floating Metal Packing

GARLOCK 821

GARLOCK 821 Floating Metal Packing is recommended for service on the piston rods of vertical engines and marine engines.

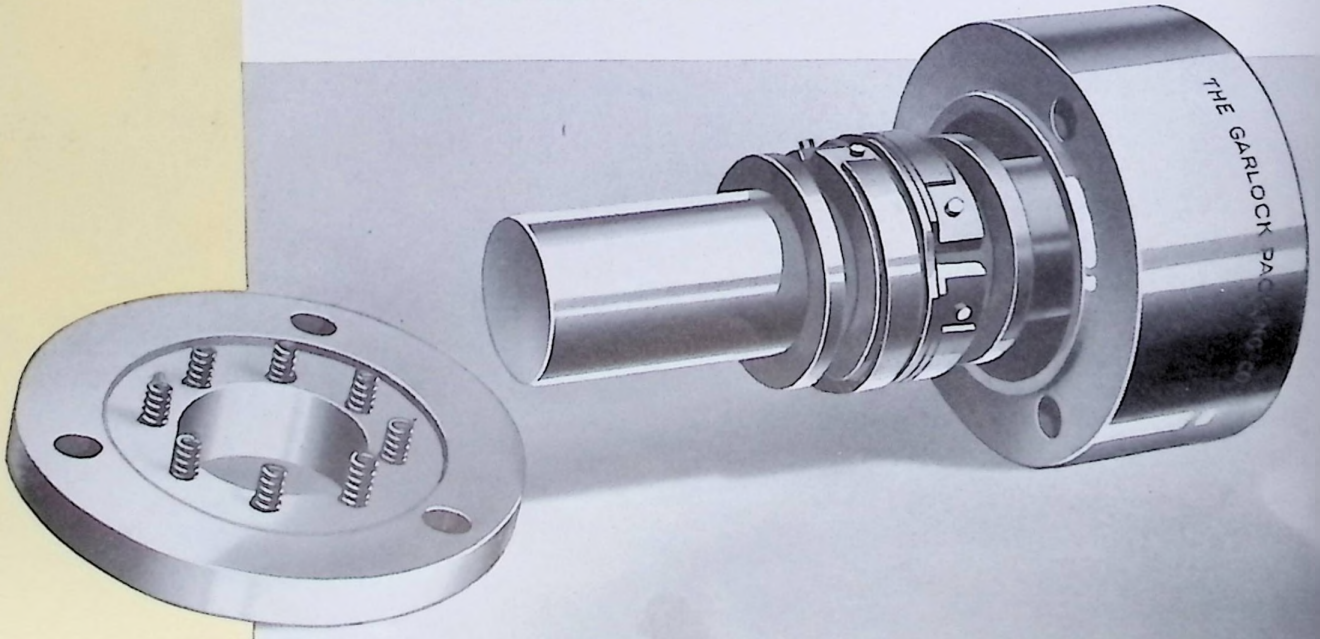
This assembly consists of four or more sections of floating metal packings depending upon the pressure to be packed. Each section is contained in a solid metal cup. These cups are applied inside the stuffing box. The first or bottom cup is copper gasketed and makes sealing contact with the bottom of the stuffing box. The other cup faces are ground to provide leakless contact and, if the stuffing box gland is not used, the top cup is provided with a flange which bolts against the face of the stuffing box. It is necessary to disconnect the rod to install these solid cups.

GARLOCK 810



GARLOCK 810 Floating Metal Packing is recommended for use on steam or air rods, particularly on the large rods of reversing and blowing engines.

GARLOCK 810 is made either with a solid or split outside case as desired. All wearing parts in this assembly are made of bronze and babbitt metals. This packing is specially designed to operate under heavy loads.



Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 217 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/217

Metal Bushing Rings

GARLOCK Metal Bushing Rings are for use in the bottoms of stuffing boxes on equipment where the rods are worn or have been turned down to a smaller diameter resulting in an excessive amount of clearance between the rod and the opening into the cylinder.

These bushing rings are regularly made of babbitt but are also available in cast iron or bronze if so specified. They are made in practically any rod size and to fit packing spaces from $\frac{3}{16}$" up.

Solid rings are furnished when packing space is less than $\frac{5}{16}$". When packing space is $\frac{5}{16}$" or greater, rings are cut into two halves with square butt joints and are provided with a steel garter spring located in a groove machined in the outer periphery of the ring.

When applying a bushing ring in the bottom of a stuffing box it may be desirable to retain the same contour or it may be that a change in the contour of the bottom of the box is desired. GARLOCK metal bushing rings are made, therefore, in several different cross-sectional shapes as follows:

Garlock 70 Ring—For bushing a bevelled-bottom stuffing box and retaining the same bevel.

Garlock 71 Ring—For bushing a flat-bottom stuffing box and changing the contour from flat to bevelled.

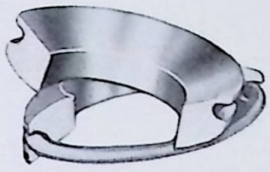
Garlock 72 Ring—For bushing a curved or oval-bottom stuffing box and changing the contour to bevelled.

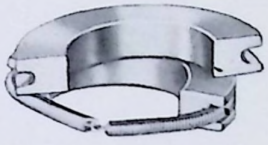
Garlock 170 Ring—For bushing a bevelled-bottom stuffing box and changing the contour from bevelled to flat.

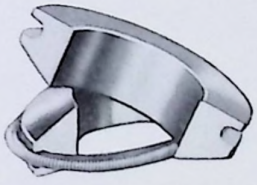
Garlock 171 Ring—For bushing a flat-bottom stuffing box and retaining the flat bottom.

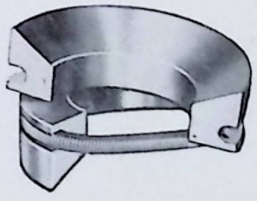
Garlock 172 Ring—For bushing a curved or oval-bottom stuffing box and changing the contour from curved to flat.

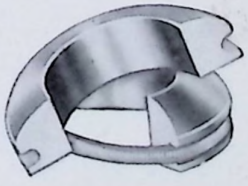
To insure receipt of rings of the desired cross-sectional shape each order should be accompanied by a sketch showing the necessary dimensions.

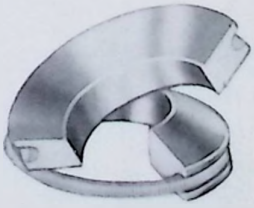












Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 218 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/218

Dimensions of Gaskets for Class 125 and Class 250 Cast Iron Pipe Flanges and Fittings

American Standards Association

Pipe Size	STANDARD AND LOW PRESSURE Class 125 Cast Iron Flanges and Fittings				MEDIUM AND HIGH PRESSURE Class 250 Cast Iron Flanges and Fittings			
	Ring Gaskets		Full Face Gaskets		Ring Gaskets		Full Face Gaskets	
	I. D.	O. D.	I. D.	O. D.	I. D.	O. D.	I. D.	O. D.
1″	1″	2 5/8″	1″	4 1/4″	1″	2 7/8″	1″	4 7/8″
1 1/4″	1 1/4″	3″	1 1/4″	4 5/8″	1 1/4″	3 1/4″	1 1/4″	5 1/4″
1 1/2″	1 1/2″	3 3/8″	1 1/2″	5″	1 1/2″	3 3/4″	1 1/2″	6 1/8″
2″	2″	4 1/8″	2″	6″	2″	4 3/8″	2″	6 1/2″
2 1/2″	2 1/2″	4 7/8″	2 1/2″	7″	2 1/2″	5 1/8″	2 1/2″	7 1/2″
3″	3″	5 3/8″	3″	7 1/2″	3″	5 7/8″	3″	8 1/4″
3 1/2″	3 1/2″	6 3/8″	3 1/2″	8 1/2″	3 1/2″	6 1/2″	3 1/2″	9″
4″	4″	6 7/8″	4″	9″	4″	7 1/8″	4″	10″
5″	5″	7 3/4″	5″	10″	5″	8 1/2″	5″	11″
6″	6″	8 3/4″	6″	11″	6″	9 7/8″	6″	12 1/2″
8″	8″	11″	8″	13 1/2″	8″	12 1/8″	8″	15″
10″	10″	13 3/8″	10″	16″	10″	14 1/4″	10″	17 1/2″
12″	12″	16 1/8″	12″	19″	12″	16 5/8″	12″	20 1/2″
14″ O.D.	14″	17 3/4″	14″	21″	13 1/4″	19 1/8″	13 1/4″	23″
16″ O.D.	16″	20 1/4″	16″	23 1/2″	15 1/4″	21 1/4″	15 1/4″	25 1/2″
18″ O.D.	18″	21 5/8″	18″	25″	17″	23 1/2″	17″	28″
20″ O.D.	20″	23 7/8″	20″	27 1/2″	19″	25 3/4″	19″	30 1/2″
24″ O.D.	24″	28 1/4″	24″	32″	23″	30 1/2″	23″	36″
30″ O.D.	30″	34 3/4″	30″	38 3/4″	29″	37 1/2″	29″	43″
36″ O.D.	36″	41 1/4″	36″	46″	34 1/2″	44″	34 1/2″	50″
42″ O.D.	42″	48″	42″	53″	40 1/4″	50 3/4″	40 1/4″	57″
48″ O.D.	48″	54 1/2″	48″	59 1/2″	46″	58 3/4″	46″	65″
54″ O.D.	54″	61″	54″	66 1/4″				
60″ O.D.	60″	67 1/2″	60″	73″				
72″ O.D.	72″	80 3/4″	72″	86 1/2″				
84″ O.D.	84″	93 1/2″	84″	99 3/4″				
96″ O.D.	96″	106 1/4″	96″	113 1/4″				

Weights of Materials and Liquids

Material	Specific Gravity	Density lb/cu. in.
Aluminum	2.70	.097
Al. Alloys, 2S	2.71	.098
3S	2.73	.099
4S	2.72	.098
24S	2.79	.101
52S	2.66	.096
195	2.77	.100
355	2.68	.097
Asbestos	2.46	.089
Bakelite	1.35	.049
Beryllium	1.8	.065
Brass	8.45 to 8.70	.305 to .313
Bronze, Al.	7.70	.278
Bronze, Phos.	8.88	.321
Copper	8.90	.322
Cork, compressed	.23	.008
Felt	.08	.003
Formica	1.35	.049
Glass, safety	2.53	.091
Gold	19.32	.697
Inconel	8.55	.309
Iron, cast	7.20	.260
Iron, wrought	7.90	.284
K-Monel	8.58	.310
Lead	11.40	.411
Leather	.95	.034
Magnesium	1.74	.063
Mag. Alloys	1.80	.065
Micarta	1.35	.049
Monel	8.90	.323
Nickel	8.90	.324
Plastecele	1.35	.049
Plexiglas	1.18	.043
Pyralin	1.35	.049
Rubber (Eng. Mount.)		
45 Durometer	1.06	.382
50 Durometer	1.11	.040
60 Durometer	1.17	.042
70 Durometer	1.24	.044
Silver	10.5	.380
Steel	7.84	.283
Steel, stainless	7.86	.284
Tin	7.29	.263

Material	Specific Gravity	Density lb/cu. in.
Woods, Ash	.66 to .85	.024 to .031
Cedar	.44 to .57	.018 to .021
Fir	.48 to .55	.017 to .020
Hickory	.74 to .80	.027 to .029
Mahogany	.56 to .85	.020 to .031
Pine	.38 to .60	.014 to .022
Spruce	.48 to .70	.017 to .025
Zinc	7.19	.259

Liquid	Specific Gravity	Density lb/U.S. gal.
Alcohol (methyl)	.81	6.8
Benzine	.69	5.8
Gasoline	.72	6.0
Glycerine	1.26	10.5
Mercury	13.55	113.0
Oil	.89	7.4
Ethyline Glycol	1.12	9.3
Water	1.00	8.35

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 219 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/219

ENGINEERING DATA *CONTINUED*

Table of Decimal Equivalents
of 8ths, 16ths, 32ds, and 64ths of an Inch

8ths				
1/8 = .125	9/16 = .5625	17/32 = .53125	9/64 = .140625	37/64 = .578125
1/4 = .250	11/16 = .6875	19/32 = .59375	11/64 = .171875	39/64 = .609375
3/8 = .375	13/16 = .8125	21/32 = .65625	13/64 = .203125	41/64 = .640625
1/2 = .500	15/16 = .9375	23/32 = .71875	15/64 = .234375	43/64 = .671875
5/8 = .625		25/32 = .78125	17/64 = .265625	45/64 = .703125
3/4 = .750	32ds	27/32 = .84375	19/64 = .296875	47/64 = .734375
7/8 = .875	1/32 = .03125	29/32 = .90625	21/64 = .328125	49/64 = .765625
	3/32 = .09375	31/32 = .96875	23/64 = .359375	51/64 = .796875
16ths	5/32 = .15625		25/64 = .390625	53/64 = .828125
1/16 = .0625	7/32 = .21875	64ths	27/64 = .421875	55/64 = .859375
3/16 = .1875	9/32 = .28125	1/64 = .015625	29/64 = .453125	57/64 = .890625
5/16 = .3125	11/32 = .34375	3/64 = .046875	31/64 = .484375	59/64 = .921875
7/16 = .4375	13/32 = .40625	5/64 = .078125	33/64 = .515625	61/64 = .953125
	15/32 = .46875	7/64 = .109375	35/64 = .546875	63/64 = .984375

Table of Decimal Equivalents
of Millimeters and Fractions of Millimeters

mm. Inches	mm. Inches	mm. Inches	mm. Inches	mm. Inches
1/50 = .00079	31/50 = .02441	12 = .47244	42 = 1.65354	72 = 2.83464
2/50 = .00157	32/50 = .02520	13 = .51181	43 = 1.69291	73 = 2.87401
3/50 = .00236	33/50 = .02598	14 = .55118	44 = 1.73228	74 = 2.91338
4/50 = .00315	34/50 = .02677	15 = .59055	45 = 1.77165	75 = 2.95275
5/50 = .00394	35/50 = .02756	16 = .62992	46 = 1.81102	76 = 2.99212
6/50 = .00472	36/50 = .02835	17 = .66929	47 = 1.85039	77 = 3.03149
7/50 = .00551	37/50 = .02913	18 = .70866	48 = 1.88976	78 = 3.07086
8/50 = .00630	38/50 = .02992	19 = .74803	49 = 1.92913	79 = 3.11023
9/50 = .00709	39/50 = .03071	20 = .78740	50 = 1.96850	80 = 3.14960
10/50 = .00787	40/50 = .03150	21 = .82677	51 = 2.00787	81 = 3.18897
11/50 = .00866	41/50 = .03228	22 = .86614	52 = 2.04724	82 = 3.22834
12/50 = .00945	42/50 = .03307	23 = .90551	53 = 2.08661	83 = 3.26771
13/50 = .01024	43/50 = .03386	24 = .94488	54 = 2.12598	84 = 3.30708
14/50 = .01102	44/50 = .03465	25 = .98425	55 = 2.16535	85 = 3.34645
15/50 = .01181	45/50 = .03543	26 = 1.02362	56 = 2.20472	86 = 3.38582
16/50 = .01260	46/50 = .03622	27 = 1.06299	57 = 2.24409	87 = 3.42519
17/50 = .01339	47/50 = .03701	28 = 1.10236	58 = 2.28346	88 = 3.46456
18/50 = .01417	48/50 = .03780	29 = 1.14173	59 = 2.32283	89 = 3.50393
19/50 = .01496	49/50 = .03858	30 = 1.18110	60 = 2.36220	90 = 3.54330
20/50 = .01575	1 = .03937	31 = 1.22047	61 = 2.40157	91 = 3.58267
21/50 = .01654	2 = .07874	32 = 1.25984	62 = 2.44094	92 = 3.62204
22/50 = .01732	3 = .11811	33 = 1.29921	63 = 2.48031	93 = 3.66141
23/50 = .01811	4 = .15748	34 = 1.33858	64 = 2.51968	94 = 3.70078
24/50 = .01890	5 = .19685	35 = 1.37795	65 = 2.55905	95 = 3.74015
25/50 = .01969	6 = .23622	36 = 1.41732	66 = 2.59842	96 = 3.77952
26/50 = .02047	7 = .27559	37 = 1.45669	67 = 2.63779	97 = 3.81889
27/50 = .02126	8 = .31496	38 = 1.49606	68 = 2.67716	98 = 3.85826
28/50 = .02205	9 = .35433	39 = 1.53543	69 = 2.71653	99 = 3.89763
29/50 = .02283	10 = .39370	40 = 1.57480	70 = 2.75590	100 = 3.93700
30/50 = .02362	11 = .43307	41 = 1.61417	71 = 2.79527	

10 mm. = 1 Centimeter = 0.3937 inches
10 cm. = 1 Decimeter = 3.937 inches
10 dm. = 1 Meter = 39.37 inches
25.4 mm. = 1 English inch

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 220 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/220

Circumferences and Areas of Circles

Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area
1/32	.0981	.00076	7	21.99	38.484	15	47.12	176.71	23	72.25	415.47	31	97.38	754.76	39	122.5	1194.5
1/16	.1963	.00306	1/8	22.38	39.871	1/8	47.51	179.67	1/8	72.64	420.00	1/8	97.78	760.86	1/8	122.9	1202.2
1/8	.3926	.01227	1/4	22.77	41.282	1/4	47.90	182.65	1/4	73.04	424.55	1/4	98.17	766.99	1/4	123.3	1209.9
3/16	.5890	.02761	3/8	23.16	42.718	3/8	48.30	185.66	3/8	73.43	429.13	3/8	98.56	773.14	3/8	123.7	1217.6
1/4	.7854	.04908	1/2	23.56	44.178	1/2	48.69	188.69	1/2	73.82	433.73	1/2	98.96	779.31	1/2	124.0	1225.4
5/16	.9817	.07669	5/8	23.95	45.663	5/8	49.08	191.74	5/8	74.21	438.36	5/8	99.35	785.51	5/8	124.4	1233.1
3/8	1.178	.1104	3/4	24.34	47.173	3/4	49.48	194.82	3/4	74.61	443.01	3/4	99.74	791.73	3/4	124.8	1240.9
7/16	1.374	.1503	7/8	24.74	48.707	7/8	49.87	197.93	7/8	75.00	447.69	7/8	100.1	797.97	7/8	125.2	1248.7
1/2	1.570	.1963	8	25.13	50.265	16	50.26	201.06	24	75.39	452.39	32	100.5	804.24	40	125.6	1256.6
9/16	1.767	.2485	1/8	25.52	51.848	1/8	50.65	204.21	1/8	75.79	457.11	1/8	100.9	810.54	1/8	126.0	1264.5
5/8	1.963	.3068	1/4	25.91	53.456	1/4	51.05	207.39	1/4	76.18	461.86	1/4	101.3	816.86	1/4	126.4	1272.3
11/16	2.159	.3712	3/8	26.31	55.088	3/8	51.44	210.59	3/8	76.57	466.63	3/8	101.7	823.21	3/8	126.8	1280.3
3/4	2.356	.4417	1/2	26.70	56.745	1/2	51.83	213.82	1/2	76.96	471.43	1/2	102.1	829.57	1/2	127.2	1288.2
13/16	2.552	.5184	5/8	27.09	58.426	5/8	52.22	217.07	5/8	77.36	476.25	5/8	102.4	835.97	5/8	127.6	1296.2
7/8	2.748	.6013	3/4	27.48	60.132	3/4	52.62	220.35	3/4	77.75	481.10	3/4	102.8	842.39	3/4	128.0	1304.2
15/16	2.945	.6902	7/8	27.88	61.862	7/8	53.01	223.65	7/8	78.14	485.97	7/8	103.2	848.83	7/8	128.4	1312.2
1	3.141	.7854	9	28.27	63.617	17	53.40	226.98	25	78.54	490.87	33	103.6	855.30	41	128.8	1320.2
1/8	3.534	.9940	1/8	28.66	65.396	1/8	53.79	230.33	1/8	78.93	495.79	1/8	104.0	861.79	1/8	129.1	1328.3
1/4	3.927	1.227	1/4	29.06	67.200	1/4	54.19	233.70	1/4	79.32	500.74	1/4	104.4	868.30	1/4	129.5	1336.4
3/8	4.319	1.484	3/8	29.45	69.029	3/8	54.58	237.10	3/8	79.71	505.71	3/8	104.8	874.85	3/8	129.9	1344.5
1/2	4.712	1.767	1/2	29.84	70.882	1/2	54.97	240.52	1/2	80.10	510.70	1/2	105.2	881.41	1/2	130.3	1352.6
5/8	5.105	2.073	5/8	30.23	72.759	5/8	55.37	243.97	5/8	80.50	515.72	5/8	105.6	888.00	5/8	130.7	1360.8
3/4	5.497	2.405	3/4	30.63	74.662	3/4	55.76	247.45	3/4	80.89	520.77	3/4	106.0	894.61	3/4	131.1	1369.0
7/8	5.890	2.761	7/8	31.02	76.588	7/8	56.16	250.94	7/8	81.28	525.83	7/8	106.4	901.25	7/8	131.5	1377.2
2	6.283	3.141	10	31.41	78.539	18	56.54	254.46	26	81.68	530.93	34	106.8	907.92	42	131.9	1385.4
1/8	6.675	3.546	1/8	31.80	80.515	1/8	56.94	258.01	1/8	82.07	536.04	1/8	107.2	914.61	1/8	132.3	1393.7
1/4	7.068	3.976	1/4	32.20	82.516	1/4	57.33	261.58	1/4	82.46	541.18	1/4	107.6	921.32	1/4	132.7	1401.9
3/8	7.461	4.430	3/8	32.59	84.540	3/8	57.72	265.18	3/8	82.85	546.35	3/8	107.9	928.06	3/8	133.1	1410.2
1/2	7.854	4.908	1/2	32.98	86.590	1/2	58.11	268.80	1/2	83.25	551.54	1/2	108.3	934.82	1/2	133.5	1418.6
5/8	8.246	5.411	5/8	33.37	88.664	5/8	58.51	272.44	5/8	83.64	556.76	5/8	108.7	941.60	5/8	133.9	1426.9
3/4	8.639	5.939	3/4	33.77	90.762	3/4	58.90	276.11	3/4	84.03	562.00	3/4	109.1	948.41	3/4	134.3	1435.3
7/8	9.032	6.491	7/8	34.16	92.885	7/8	59.29	279.81	7/8	84.43	567.26	7/8	109.5	955.25	7/8	134.6	1443.7
3	9.424	7.068	11	34.55	95.033	19	59.69	283.52	27	84.82	572.55	35	109.9	962.11	43	135.0	1452.2
1/8	9.817	7.669	1/8	34.95	97.205	1/8	60.08	287.27	1/8	85.21	577.87	1/8	110.3	968.99	1/8	135.4	1460.6
1/4	10.21	8.295	1/4	35.34	99.402	1/4	60.47	291.03	1/4	85.60	583.20	1/4	110.7	975.90	1/4	135.8	1469.1
3/8	10.60	8.946	3/8	35.73	101.62	3/8	60.86	294.83	3/8	86.00	588.57	3/8	111.1	982.84	3/8	136.2	1477.6
1/2	10.99	9.621	1/2	36.12	103.86	1/2	61.26	298.64	1/2	86.39	593.95	1/2	111.5	989.80	1/2	136.6	1486.1
5/8	11.38	10.320	5/8	36.52	106.13	5/8	61.65	302.48	5/8	86.78	599.37	5/8	111.9	996.78	5/8	137.0	1494.7
3/4	11.78	11.044	3/4	36.91	108.43	3/4	62.04	306.35	3/4	87.17	604.80	3/4	112.3	1003.7	3/4	137.4	1503.3
7/8	12.17	11.793	7/8	37.30	110.75	7/8	62.43	310.24	7/8	87.57	610.26	7/8	112.7	1010.8	7/8	137.8	1511.9
4	12.56	12.566	12	37.69	113.10	20	62.83	314.16	28	87.96	615.75	36	113.0	1017.8	44	138.2	1520.5
1/8	12.95	13.364	1/8	38.09	115.46	1/8	63.22	318.09	1/8	88.35	621.26	1/8	113.4	1024.9	1/8	138.6	1529.1
1/4	13.35	14.186	1/4	38.48	117.85	1/4	63.61	322.06	1/4	88.75	626.79	1/4	113.8	1032.0	1/4	139.0	1537.8
3/8	13.74	15.033	3/8	38.87	120.27	3/8	64.01	326.05	3/8	89.14	632.35	3/8	114.2	1039.1	3/8	139.4	1546.5
1/2	14.13	15.904	1/2	39.27	122.71	1/2	64.40	330.06	1/2	89.53	637.94	1/2	114.6	1046.3	1/2	139.8	1555.2
5/8	14.52	16.800	5/8	39.66	125.18	5/8	64.79	334.10	5/8	89.92	643.54	5/8	115.0	1053.5	5/8	140.1	1564.0
3/4	14.92	17.720	3/4	40.05	127.67	3/4	65.18	338.16	3/4	90.32	649.18	3/4	115.4	1060.7	3/4	140.5	1572.8
7/8	15.31	18.665	7/8	40.44	130.19	7/8	65.58	342.25	7/8	90.71	654.83	7/8	115.8	1067.9	7/8	140.9	1581.6
5	15.70	19.635	13	40.84	132.73	21	65.97	346.36	29	91.10	660.52	37	116.2	1075.2	45	141.3	1590.4
1/8	16.10	20.629	1/8	41.23	135.29	1/8	66.36	350.49	1/8	91.49	666.22	1/8	116.6	1082.4	1/8	141.7	1599.2
1/4	16.49	21.647	1/4	41.62	137.88	1/4	66.75	354.65	1/4	91.89	671.95	1/4	117.0	1089.7	1/4	142.1	1608.1
3/8	16.88	22.690	3/8	42.01	140.50	3/8	67.15	358.84	3/8	92.28	677.71	3/8	117.4	1097.1	3/8	142.5	1617.0
1/2	17.27	23.758	1/2	42.41	143.13	1/2	67.54	363.05	1/2	92.67	683.49	1/2	117.8	1104.4	1/2	142.9	1625.9
5/8	17.67	24.850	5/8	42.80	145.80	5/8	67.93	367.28	5/8	93.06	689.29	5/8	118.2	1111.8	5/8	143.3	1634.9
3/4	18.06	25.967	3/4	43.19	148.48	3/4	68.32	371.54	3/4	93.46	695.12	3/4	118.6	1119.2	3/4	143.7	1643.8
7/8	18.45	27.108	7/8	43.58	151.20	7/8	68.72	375.82	7/8	93.85	700.98	7/8	118.9	1126.6	7/8	144.1	1652.8
6	18.85	28.274	14	43.98	153.93	22	69.11	380.13	30	94.24	706.86	38	119.3	1134.1	46	144.5	1661.9
1/8	19.24	29.464	1/8	44.37	156.69	1/8	69.50	384.46	1/8	94.64	712.76	1/8	119.7	1141.5	1/8	144.9	1670.9
1/4	19.63	30.679	1/4	44.76	159.48	1/4	69.90	388.82	1/4	95.03	718.69	1/4	120.1	1149.0	1/4	145.2	1680.0
3/8	20.02	31.919	3/8	45.16	162.29	3/8	70.29	393.20	3/8	95.42	724.64	3/8	120.5	1156.0	3/8	145.6	1689.1
1/2	20.42	33.183	1/2	45.55	165.13	1/2	70.68	397.60	1/2	95.81	730.61	1/2	120.9	1164.1	1/2	146.0	1698.2
5/8	20.81	34.471	5/8	45.94	167.98	5/8	71.07	402.03	5/8	96.21	736.61	5/8	121.3	1171.7	5/8	146.4	1707.3
3/4	21.20	35.784	3/4	46.33	170.87	3/4	71.47	406.49	3/4	96.60	742.64	3/4	121.7	1179.3	3/4	146.8	1716.5
7/8	21.59	37.122	7/8	46.73	173.78	7/8	71.86	410.97	7/8	96.99	748.69	7/8	122.1	1186.9	7/8	147.2	1725.7

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
Published by AsbestosClaims.Law
ACL Doc 21280 · Page 221 of 228
asbestosclaims.law/library/21280/221

Circumferences and Areas of Circles—*Continued*

Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area	Diam.	Circ.	Area
47	147.6	1734.9	54	169.6	2290.2	61	191.6	2922.4	68	213.6	3631.6	75	235.6	4417.8	88	276.4	6082.1
1/8	148.0	1744.1	1/8	170.0	2300.8	1/8	192.0	2934.4	1/8	214.0	3645.0	1/4	236.4	4447.3	1/4	277.2	6116.7
1/4	148.4	1753.4	1/4	170.4	2311.4	1/4	192.4	2946.4	1/4	214.4	3658.4	1/2	237.1	4476.9	1/2	278.0	6151.4
3/8	148.8	1762.7	3/8	170.8	2322.1	3/8	192.8	2958.5	3/8	214.8	3671.8	3/4	237.9	4506.6	3/4	278.8	6186.2
1/2	149.2	1772.0	1/2	171.2	2332.8	1/2	193.2	2970.5	1/2	215.1	3685.2						
5/8	149.6	1781.3	5/8	171.6	2343.5	5/8	193.6	2982.6	5/8	215.5	3698.7	76	238.7	4536.4	89	279.6	6221.1
3/4	150.0	1790.7	3/4	172.0	2354.2	3/4	193.9	2994.6	3/4	215.9	3712.2	1/4	239.5	4566.3	1/4	280.3	6256.1
7/8	150.4	1800.1	7/8	172.3	2365.0	7/8	194.3	3006.9	7/8	216.3	3725.7	1/2	240.3	4596.3	1/2	281.1	6291.2
												3/4	241.1	4626.4	3/4	281.9	6326.4
48	150.7	1809.5	55	172.7	2375.8	62	194.7	3019.0	69	216.7	3739.2						
1/8	151.1	1818.9	1/8	173.1	2386.6	1/8	195.1	3031.2	1/8	217.1	3752.8	77	241.9	4656.6	90	282.7	6361.7
1/4	151.5	1828.4	1/4	173.5	2397.4	1/4	195.5	3043.4	1/4	217.5	3766.4	1/4	242.6	4686.9	1/4	283.5	6397.1
3/8	151.9	1837.9	3/8	173.9	2408.3	3/8	195.9	3055.7	3/8	217.9	3780.0	1/2	243.4	4717.3	1/2	284.3	6432.6
1/2	152.3	1847.4	1/2	174.3	2419.2	1/2	196.3	3067.9	1/2	218.3	3793.6	3/4	244.2	4747.7	3/4	285.1	6468.2
5/8	152.7	1856.9	5/8	174.7	2430.1	5/8	196.7	3080.2	5/8	218.7	3807.3						
3/4	153.1	1866.5	3/4	175.1	2441.0	3/4	197.1	3092.5	3/4	219.1	3821.0	78	245.0	4778.3	91	285.8	6503.8
7/8	153.5	1876.1	7/8	175.5	2452.0	7/8	197.5	3104.8	7/8	219.5	3834.7	1/4	245.8	4809.0	1/4	286.6	6539.6
												1/2	246.6	4839.8	1/2	287.4	6575.5
49	153.9	1885.7	56	175.9	2463.0	63	197.9	3117.2	70	219.9	3848.4	3/4	247.4	4870.7	3/4	288.2	6611.5
1/8	154.3	1895.3	1/8	176.3	2474.0	1/8	198.3	3129.6	1/8	220.3	3862.2						
1/4	154.7	1905.0	1/4	176.7	2485.0	1/4	198.7	3142.0	1/4	220.6	3875.9	79	248.1	4901.6	92	289.0	6647.6
3/8	155.1	1914.7	3/8	177.1	2496.1	3/8	199.0	3154.5	3/8	221.0	3889.8	1/4	248.9	4932.7	1/4	289.8	6683.8
1/2	155.5	1924.4	1/2	177.5	2507.1	1/2	199.4	3166.9	1/2	221.4	3903.6	1/2	249.7	4963.9	1/2	290.5	6720.1
5/8	155.9	1934.1	5/8	177.8	2518.2	5/8	199.8	3179.4	5/8	221.8	3917.4	3/4	250.5	4995.1	3/4	291.3	6756.4
3/4	156.2	1943.9	3/4	178.2	2529.4	3/4	200.2	3191.9	3/4	222.2	3931.3						
7/8	156.6	1953.6	7/8	178.6	2540.5	7/8	200.6	3204.4	7/8	222.6	3945.2	80	251.3	5026.5	93	292.1	6792.9
												1/4	252.1	5058.0	1/4	292.9	6829.4
50	157.0	1963.5	57	179.0	2551.7	64	201.0	3216.9	71	223.0	3959.2	1/2	252.8	5089.5	1/2	293.7	6866.1
1/8	157.4	1973.3	1/8	179.4	2562.9	1/8	201.4	3229.5	1/8	223.4	3973.1	3/4	253.6	5121.2	3/4	294.5	6902.9
1/4	157.8	1983.1	1/4	179.8	2574.1	1/4	201.8	3242.1	1/4	223.8	3987.1						
3/8	158.2	1993.0	3/8	180.2	2585.4	3/8	202.2	3254.8	3/8	224.2	4001.1	81	254.4	5153.0	94	295.3	6939.7
1/2	158.6	2002.9	1/2	180.6	2596.7	1/2	202.6	3267.4	1/2	224.6	4015.1	1/4	255.2	5184.8	1/4	296.0	6976.7
5/8	159.0	2012.8	5/8	181.0	2608.0	5/8	203.0	3280.1	5/8	225.0	4029.2	1/2	256.0	5216.8	1/2	296.8	7013.8
3/4	159.4	2022.8	3/4	181.4	2619.3	3/4	203.4	3292.8	3/4	225.4	4043.2	3/4	256.8	5248.8	3/4	297.6	7050.9
7/8	159.8	2032.8	7/8	181.8	2630.7	7/8	203.8	3305.5	7/8	225.8	4057.4						
												82	257.6	5281.0	95	298.4	7088.2
51	160.2	2042.8	58	182.2	2642.0	65	204.2	3318.3	72	226.1	4071.5	1/4	258.3	5313.2	1/4	299.2	7125.5
1/8	160.6	2052.8	1/8	182.6	2653.4	1/8	204.5	3331.0	1/8	226.5	4085.6	1/2	259.1	5345.6	1/2	300.0	7163.0
1/4	161.0	2062.9	1/4	182.9	2664.9	1/4	204.9	3343.8	1/4	226.9	4099.8	3/4	259.9	5378.0	3/4	300.8	7200.5
3/8	161.3	2072.9	3/8	183.3	2676.3	3/8	205.3	3356.7	3/8	227.3	4114.0						
1/2	161.7	2083.0	1/2	183.7	2687.8	1/2	205.7	3369.5	1/2	227.7	4128.2	83	260.7	5410.6	96	301.5	7238.2
5/8	162.1	2093.2	5/8	184.1	2699.3	5/8	206.1	3382.4	5/8	228.1	4142.5	1/4	261.5	5443.2	1/4	302.3	7275.9
3/4	162.5	2103.3	3/4	184.5	2710.8	3/4	206.5	3395.3	3/4	228.5	4156.7	1/2	262.3	5476.0	1/2	303.1	7313.8
7/8	162.9	2113.5	7/8	184.9	2722.4	7/8	206.9	3408.2	7/8	228.9	4171.0	3/4	263.1	5508.8	3/4	303.9	7351.8
52	163.3	2123.7	59	185.3	2733.9	66	207.3	3421.2	73	229.3	4185.3	84	263.8	5541.7	97	304.7	7389.8
1/8	163.7	2133.9	1/8	185.7	2745.5	1/8	207.7	3434.1	1/8	229.7	4199.7	1/4	264.6	5574.8	1/4	305.5	7427.9
1/4	164.1	2144.1	1/4	186.1	2757.1	1/4	208.1	3447.1	1/4	230.1	4214.1	1/2	265.4	5607.9	1/2	306.3	7466.2
3/8	164.5	2154.4	3/8	186.5	2768.8	3/8	208.5	3460.1	3/8	230.5	4228.5	3/4	266.2	5641.1	3/4	307.0	7504.4
1/2	164.9	2164.7	1/2	186.9	2780.5	1/2	208.9	3473.2	1/2	230.9	4242.9						
5/8	165.3	2175.0	5/8	187.3	2792.2	5/8	209.3	3486.3	5/8	231.3	4257.3	85	267.0	5674.5	98	307.8	7542.9
3/4	165.7	2185.4	3/4	187.7	2803.9	3/4	209.7	3499.3	3/4	231.6	4271.8	1/4	267.8	5707.9	1/4	308.6	7581.5
7/8	166.1	2195.7	7/8	188.1	2815.6	7/8	210.0	3512.5	7/8	232.0	4286.3	1/2	268.6	5741.4	1/2	309.4	7620.1
												3/4	269.3	5775.0	3/4	310.2	7658.8
53	166.5	2206.1	60	188.4	2827.4	67	210.4	3525.6	74	232.4	4300.8	86	270.1	5808.8	99	311.0	7697.7
1/8	166.8	2216.6	1/8	188.8	2839.2	1/8	210.9	3538.8	1/8	232.8	4315.3	1/4	270.9	5842.6	1/4	311.8	7736.6
1/4	167.2	2227.0	1/4	189.2	2851.0	1/4	211.2	3552.0	1/4	233.2	4329.9	1/2	271.7	5876.5	1/2	312.5	7775.6
3/8	167.6	2237.5	3/8	189.6	2862.8	3/8	211.6	3565.2	3/8	233.6	4344.5	3/4	272.5	5910.5	3/4	313.3	7814.7
1/2	168.0	2248.0	1/2	190.0	2874.7	1/2	212.0	3578.4	1/2	234.0	4359.1						
5/8	168.4	2258.5	5/8	190.4	2886.6	5/8	212.4	3591.7	5/8	234.4	4373.8	87	273.3	5944.6	100	314.1	7854.0
3/4	168.8	2269.0	3/4	190.8	2898.5	3/4	212.8	3605.0	3/4	234.8	4388.4	1/4	274.1	5978.9	1/4	314.9	7893.3
7/8	169.2	2279.6	7/8	191.2	2910.5	7/8	213.2	3618.3	7/8	235.2	4403.1	1/2	274.8	6013.2	1/2	315.7	7932.7
												3/4	275.6	6047.6	3/4	316.4	7972.2

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 222 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/222

Steam Table

Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.	Gauge Press. Lbs.	Temp. Deg. F.
5	228	39	285	72	317	110	344	176	378	241	403
6	230	40	287	73	318	112	345	178	378	243	403
7	233	41	288	74	319	114	346	180	379	245	404
8	235	42	289	75	320	116	348	182	380	247	405
9	237	43	290	76	321	118	349	184	381	249	405
10	240	44	291	77	321	120	350	186	382	251	406
11	242	45	292	78	322	122	351	188	383	253	407
12	244	46	293	79	323	124	352	190	384	255	407
13	246	47	294	80	324	126	353	192	384	257	408
14	248	48	295	81	324	128	354	194	385	259	409
15	250	49	297	82	325	130	355	196	386	261	409
16	252	50	298	83	326	132	356	198	387	263	410
17	254	51	299	84	327	134	357	200	388	265	411
18	255	52	300	85	327	136	359	202	388	267	411
19	257	53	301	86	328	138	360	204	389	269	412
20	259	54	302	87	329	140	361	206	390	271	413
21	261	55	302	88	330	142	362	208	391	273	413
22	262	56	303	89	330	144	363	210	391	275	414
23	264	57	304	90	331	146	364	212	392	277	415
24	265	58	305	91	332	148	365	214	393	279	415
25	267	59	306	92	332	150	366	216	394	281	416
26	268	60	307	93	333	152	367	218	394	283	416
27	270	61	308	94	334	154	368	220	395	285	417
28	271	62	309	95	334	156	368	222	396	295	420
29	273	63	310	96	335	158	369	224	397	305	423
30	274	64	311	97	336	160	370	226	397	355	437
31	275	65	312	98	336	162	371	228	398	375	442
32	277	66	312	99	337	164	372	230	399	385	444
33	278	67	313	100	338	166	373	232	400	405	449
34	279	68	314	102	339	168	374	234	400	455	460
35	281	69	315	104	340	170	375	235	401	510	472
36	282	70	316	106	341	172	376	237	401	560	481
37	283	71	317	108	343	174	377	239	402	585	486
38	284										

Table of Water Heads and Equivalent Pressures

(To estimate any pressure, multiply the head (in feet) by .433. The result is lbs. per square inch.)

Head in Feet	Pressure Lbs. per Sq. In.	Head in Feet	Pressure Lbs. per Sq. In.	Head in Feet	Pressure Lbs. per Sq. In.	Head in Feet	Pressure Lbs. per Sq. In.
5	2.17	80	34.64	275	119.08	700	303.10
10	4.33	90	38.97	300	129.90	750	324.75
15	6.50	100	43.30	350	151.55	800	346.40
20	8.66	125	54.13	400	173.20	850	368.05
30	12.99	150	64.95	450	194.85	900	389.70
40	17.32	175	75.78	500	216.50	950	411.35
50	21.65	200	86.60	550	238.15	1000	433.00
60	25.98	225	97.43	600	259.80	1100	476.30
70	30.31	250	108.25	650	281.45	1200	519.60

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 223 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/223

ENGINEERING DATA *CONTINUED*

Fahrenheit and Centigrade Conversion Table

Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.	Cent.	Fahr.
0	32	205	401	405	761	605	1121	805	1481	1005	1841	1205	2201	1405	2561
5	41	210	410	410	770	610	1130	810	1490	1010	1850	1210	2210	1410	2570
10	50	215	419	415	779	615	1139	815	1499	1015	1859	1215	2219	1415	2579
15	59	220	428	420	788	620	1148	820	1508	1020	1868	1220	2228	1420	2588
20	68	225	437	425	797	625	1157	825	1517	1025	1877	1225	2237	1425	2597
25	77	230	446	430	806	630	1166	830	1526	1030	1886	1230	2246	1430	2606
30	86	235	455	435	815	635	1175	835	1535	1035	1895	1235	2255	1435	2615
35	95	240	464	440	824	640	1184	840	1544	1040	1904	1240	2264	1440	2624
40	104	245	473	445	833	645	1193	845	1553	1045	1913	1245	2273	1445	2633
45	113	250	482	450	842	650	1202	850	1562	1050	1922	1250	2282	1450	2642
50	122	255	491	455	851	655	1211	855	1571	1055	1931	1255	2291	1455	2651
55	131	260	500	460	860	660	1220	860	1580	1060	1940	1260	2300	1460	2660
60	140	265	509	465	869	665	1229	865	1589	1065	1949	1265	2309	1465	2669
65	149	270	518	470	878	670	1238	870	1598	1070	1958	1270	2318	1470	2678
70	158	275	527	475	887	675	1247	875	1607	1075	1967	1275	2327	1475	2687
75	167	280	536	480	896	680	1256	880	1616	1080	1976	1280	2336	1480	2696
80	176	285	545	485	905	685	1265	885	1625	1085	1985	1285	2345	1485	2705
85	185	290	554	490	914	690	1274	890	1634	1090	1994	1290	2354	1490	2714
90	194	295	563	495	923	695	1283	895	1643	1095	2003	1295	2363	1495	2723
95	203	300	572	500	932	700	1292	900	1652	1100	2012	1300	2372	1500	2732
100	212	305	581	505	941	705	1301	905	1661	1105	2021	1305	2381	1505	2741
105	221	310	590	510	950	710	1310	910	1670	1110	2030	1310	2390	1510	2750
110	230	315	599	515	959	715	1319	915	1679	1115	2039	1315	2399	1515	2759
115	239	320	608	520	968	720	1328	920	1688	1120	2048	1320	2408	1520	2768
120	248	325	617	525	977	725	1337	925	1697	1125	2057	1325	2417	1525	2777
125	257	330	626	530	986	730	1346	930	1706	1130	2066	1330	2426	1530	2786
130	266	335	635	535	995	735	1355	935	1715	1135	2075	1335	2435	1535	2795
135	275	340	644	540	1004	740	1364	940	1724	1140	2084	1340	2444	1540	2804
140	284	345	653	545	1013	745	1373	945	1733	1145	2093	1345	2453	1545	2813
145	293	350	662	550	1022	750	1382	950	1742	1150	2102	1350	2462	1550	2822
150	302	355	671	555	1031	755	1391	955	1751	1155	2111	1355	2471	1555	2831
155	311	360	680	560	1040	760	1400	960	1760	1160	2120	1360	2480	1560	2840
160	320	365	689	565	1049	765	1409	965	1769	1165	2129	1365	2489	1565	2849
165	329	370	698	570	1058	770	1418	970	1778	1170	2138	1370	2498	1570	2858
170	338	375	707	575	1067	775	1427	975	1787	1175	2147	1375	2507	1575	2867
175	347	380	716	580	1076	780	1436	980	1796	1180	2156	1380	2516	1580	2876
180	356	385	725	585	1085	785	1445	985	1805	1185	2165	1385	2525	1585	2885
185	365	390	734	590	1094	790	1454	990	1814	1190	2174	1390	2534	1590	2894
190	374	395	743	595	1103	795	1463	995	1823	1195	2183	1395	2543	1595	2903
195	383	400	752	600	1112	800	1472	1000	1832	1200	2192	1400	2552	1600	2912
200	392														

Metric Conversion Table

Millimeters × .03937 = inches.
Millimeters ÷ 25.4 = inches.
Centimeters × .3937 = inches.
Centimeters ÷ 2.54 = inches.
Meters × 39.37 = inches (Act of Congress).
Meters × 3.281 = feet.
Meters × 1.094 = yards.
Kilometers × .621 = miles.
Kilometers ÷ 1.6093 = miles.
Kilometers × 3280.8693 = feet.
Square Millimeters × .00155 = sq. inches.
Square Millimeters ÷ 645.1 = sq. inches.
Square Centimeters × .155 = sq. inches.
Square Centimeters ÷ 6.451 = sq. inches.
Square Meters × 10.764 = sq. feet.
Square Kilometers × 247.1 = acres.
Hectare × 2.471 = acres.
Cubic Centimeters ÷ 16.383 = cubic inches.

Cubic Centimeters ÷ 3.69 = fl. drams (U. S. P.).
Cubic Centimeters ÷ 29.57 = fluid ounces (U. S. P.).
Cubic Meters × 35.315 = cubic feet.
Cubic Meters × 1.308 = cubic yards.
Cubic Meters × 264.2 = gallons (231. cubic inches).
Liters × 61.022 = cu. in. (Act of Congress).
Liters × 33.84 = fluid ounces (U. S. P.)
Liters × .2642 = gallons (231. cu. in.)
Liters ÷ 3.78 = gallons (231. cu. in.).
Liters ÷ 28.316 = cubic feet.
Hectoliters × 3.531 = cubic feet.
Hectoliters × 2.84 = bushels (2150.42 cu. in.).
Hectoliters × .131 = cubic yards.
Hectoliters ÷ 26.42 = gallons (231. cu. in.).
Grams × 15.432 = grains (Act of Congress).
Grams ÷ 981. = dynes.
Grams (water) ÷ 29.57 = fluid ounces.
Grams ÷ 28.35 = ounces avoirdupois.

Grams per Cu. Cent. ÷ 27.7 = lbs. per cubic inch.
Joule × .7373 = foot pounds.
Kilograms × 2.2046 = pounds.
Kilograms × 35.3 = oz. avoirdupois.
Kilograms ÷ 907.2 = tons (2,000 lbs.).
Kilograms per Sq. Cent. × 14.223 = lbs. per sq. in.
Kilogram-meters × 7.233 = foot lbs.
Kilograms per Meter × .672 = lbs. per foot.
Kilograms per Cu. Meter × .062 = lbs. per cubic foot.
Tonneau × 1.1023 = tons (2,000 lbs.).
Kilowatts × 1.34 = Horse Power.
Watts ÷ 746. = Horse Power.
Watts × .7373 = foot pounds per second.
Calorie × 3.968 = B.t.u.
Cheval vapeur ÷ .9863 = Horse Power.
(Centigrade × 1.8) ÷ 32 = degrees Fahr.
Gravity Paris = 980.94 centimeters per sec.

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 224 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/224

INDEX

Style	Description	Page
1	Rubber Tubing	176
1	Gasket Paste	194
1	Rubber Compound—Available forms	180
2	Rubber Tubing	176
2	Lubricating Compound	193
3	Rubber Tubing	176
3	Lubricating Compound	193
4	Rubber Tubing	176
8	Neoprene Tubing	176
17	Alabestine Packing	33
19	Rubber Sheet—Special Duck Insertion	91
22	Rubber Sheet—Red	89
22	Rubber Compound—Available forms	180
24	Rubber Sheet—Wire Insertion	90
25	Gold Brand Flax Packing—Hard	54
26	Gold Brand Flax Packing—Regular	54
27	Gold Brand Flax Packing—Very soft	54
28	Tubular Rubber Gasketing	104
30	Silver Brand Flax Packing—Hard	57
31	Silver Brand Flax Packing—Regular	57
32	Silver Brand Flax Packing—Very soft	57
33	Hydraulic Packing—Regular	49
33 Spl.	Hydraulic Packing—Special Rock Hard	120
34	Lake Brand Jute Packing—Hard	58
35	Lake Brand Jute Packing—Regular	58
36	Gold Brand Flax Packing—Graphited	54
38	Hydraulic Packing	50
42	Ocean Brand Blended Flax Packing—Soft	59
43	Ocean Brand Blended Flax Packing—Regular	59
50	High Pressure Flax Packing	56
52	Lake Brand Jute Packing—Graphited	58
53	Ocean Brand Blended Flax Packing—Graphited	59
57	Rayon Packing	61
58	Rayon Packing	61
66	Braided Cotton Packing	61
67	Star Diagonal Packing	137
70	Metal Bushing Ring	217
71	Metal Bushing Ring	217
72	Metal Bushing Ring	217
80	Majestic Gum Core Packing—Oval	141
81	Majestic Gum Core Packing—Round	141
83	Rubber Back Flax Coil Packing	60
87	Extra Diagonal Packing	138
90	Waterproof Hydraulic Flax Coil Packing—Regular	55
90-S	Waterproof Hydraulic Flax Coil Packing—Soft	55
90-VS	Waterproof Hydraulic Flax Coil Packing—Very soft	55
91	Rubber Sheet Packing	93
91	Rubber Compound—Available forms	180
92	Waterproof Hydraulic Flax Spiral Packing—Regular	55
92-S	Waterproof Hydraulic Flax Spiral Packing—Soft	55
92-VS	Waterproof Hydraulic Flax Spiral Packing—Very soft	55
93	Rubber Back Flax Coil Packing	60
94	Rubber Coil Packing	51
95	Rubber Ring Packing	51
95	Gauge Glass Rings	177
95	Evaporator Tube Gaskets	178
96	Rubber Gaskets	93
99	Waterproof Hydraulic Flax Ring Packing—Regular	55
99-S	Waterproof Hydraulic Flax Ring Packing—Soft	55
99-VS	Waterproof Hydraulic Flax Ring Packing—Very soft	55
107	High Pressure Diagonal Packing	138
108	Rubber Pump Valves	173
111	Rubber Pump Valves	173
111	Rubber Valve Discs	175
113	Amberite Pump Valves	140-173
113	Amberite Valve Discs	140-175
114	Wire Wound Coil Packing	34
115	Beaver Packing—Square	32
116	Wire Wound Ring Packing	34
117	Beaver Packing—Round	32
122	Rubber Gaskets—Red	89
122	Rubber Gaskets—Tank hose	129
122	Gauge Glass Rings	177
124	Rubber Gaskets—Wire insertion	90
125	High Pressure Coil Packing	20
131	Silver Brand Flax Packing—Graphited	57
139	Rubber Pump Valves	174
139	Rubber Hydrant Valves	179
139	Rubber Compound—Available forms	180
144	Palmyra Coil Packing	23
145	Palmyra Spiral Packing	23
146	Palmyra Ring Packing	23
150	High Pressure Spiral Packing	20
151	Rubber Pump Valves	174
152	Rubber Pump Valves	174
152	Rubber Compound—Available forms	180
154	Rubber Pump Valves	174
154	Rubber Compound—Available forms	180
155	Amberite Pump Valves	140-173
155	Amberite Pump Rings	140
155	Amberite Rod Packing Rings	140
155	Amberite Piston Rings	140
159	Rubber Sheet—C. I.	94
160	Molded Valve Rings	37
161	Molded Valve Rings	37
162	Molded Valve Rings	37
163	Molded Valve Rings	37
166	Molded Valve Rings	37
169	Rubber Sheet—C.O.S.	94
170	Metal Bushing Ring	217
171	Metal Bushing Ring	217
172	Metal Bushing Ring	217
175	Rubber Pump Valves	174
175	Rubber Hydrant Valves	179
176	Hot Oil Packing	30
179	Rubber Sheet—C.B.S.	94
182	Rubber Pump Valve	173
182	Rubber Valve Disc	175

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
Published by AsbestosClaims.Law
ACL Doc 21280 · Page 225 of 228
asbestosclaims.law/library/21280/225

INDEX *CONTINUED*

Style	Description	Page
182	Rubber Hydrant Valve	179
182	Rubber Compound—Available forms	180
182-1	Rubber Rings—Polished Rod	145
183	Rubber Back Flax Ring Packing	60
188	Rubber Pump Valves	173
188	Rubber Compound—Available forms	180
189	Rubber Pump Valves	174
189	Rubber Compound—Available forms	180
193	Rubber Back Flax Ring Packing	60
197	Rubber Pump Valves	174
197	Rubber Rings—Polished Rod	145
197	Rubber Compound—Available forms	180
200	High Pressure Ring Packing	20
204	Rubber Expansion Joint—Pressure	190
205	Rubber Expansion Joint—Vacuum	190
206	Rubber Expansion Joint—Pressure and Vacuum	190
216	Inner Wedge Ring Packing	45
217	Outer Wedge Ring Packing	45
219	Rubber Gaskets—Special Duck Insertion	91
220	Compressor Coil Packing	25
221	Compressor Spiral Packing	25
222	Compressor Ring Packing	25
230	Hornblende Blue Asbestos Coil Packing	31
231	Hornblende Blue Asbestos Ring Packing	31
233	Derby Coil Packing—Square	22
234	Rotopac Coil Packing	27
235	Derby Ring Packing—Square	22
237	Thorndyke Coil Packing	29
238	Thorndyke Ring Packing	29
239	Rotopac Ring Packing	27
243	Derby Coil Packing—Round	21
244	Rotopac Coil Packing—Wire inserted	27
245	Derby Ring Packing—Round	21
248	Mill Coil Packing	34
249	Rotopac Ring Packing—Wire inserted	27
251	Mill Ring Packing	34
252	Furnace Door Packing	35
253	Ideal Coil Packing	46
254	Ideal Spiral Packing	46
255	Ideal Ring Packing	46
256	Expansion Joint Packing	36
257	Cold Oil Packing	30
258	Blue Asbestos Packing	31
260	Special Hydraulic Ring Packing—Solid	48
261	Special Hydraulic Ring Packing—Cut open	48
262	Special Hydraulic Coil Packing	48
266	Rotopac Packing—Controlled lubrication	27
281	Rubber Gaskets—Tubular	104
300	Lip Packing—Spiral	143
301	Lip Packing—Ring	143
302	Lip Packing—Spiral	143
303	Lip Packing—Ring	143
313	Extra Ring Packing—Metal Insertion	44
314	Extra Ring Packing—Metal Insertion	43

Style	Description	Page
316	Extra Sectional Ring Packing—Metal Insertion	44
317	Extra Sectional Ring Packing—Metal Insertion	43
333	Extra Ring Packing	40
334	Extra Ring Packing	40
336	Extra Sectional Ring Packing	41
337	Extra Sectional Ring Packing	43
339	Extra Odd-Shape Ring Packing	41
341	Cord Plugs	192
343	Locomotive Stoker Engine Packing	121
344	Braided Copper Wire Coil Packing	136
346	Braided Copper Wire Ring Packing	136
353	Rubber Sheet	92
353	Rubber Compound—Available forms	180
356	"O" Center Forge Packing—Coil	26
357	"O" Center Forge Packing—Spiral	26
358	"O" Center Forge Packing—Ring	26
359	Rubber Pump Valves	174
366	"O" Center Hydraulic Packing—Coil	47
367	"O" Center Hydraulic Packing—Spiral	47
368	"O" Center Hydraulic Packing—Ring	47
377	Metalmarine Packing	24
400	Slush Pump Packing	146
405	Slush Pump Packing	146
430	Chevron Packing	79
430	Chevron Packing—Power Reverse Gears	117
431	Chevron Packing	80
440	Duo Packing	134
443	Duo Packing	134
446	Duo Packing	133
449	Duo Packing	133
449-S	Duo Packing—Power Reverse Gears	117
500	Tubular Rubber Gasketing—Metal Insertion	104
501	Tubular Rubber Gaskets—Metal Insertion	104
530	Chevron Packing	80
530	Chevron Packing—Locomotive Throttles	113
530	Chevron Packing—Feed Water Pumps	119
530	Chevron Packing—Expansion Joints	122
530	Modified Chevron Packing—Power Reverse Gears	117
531	Chevron Packing	80
535	Lake Brand Jute Packing—Very soft	58
550	Extra Diagonal Ring Packing	41
555	Guardian Gaskets	98
556	Extra Diagonal Ring Packing	43
601	Folded Asbestos Gaskets—Heine Boilers	100
602	Folded Asbestos Gaskets—B. & W. Boilers	100
604	Folded Asbestos Gaskets	99
604	Folded Asbestos Gaskets—Smoke box cover plate	129
605	Woven Asbestos Sheet Packing—Wire inserted	88
607	Woven Asbestos Gaskets—Wire inserted	88
608	Folded Asbestos Gaskets—Edgemoor Boilers	100
610	Asbestos Gasketing—Tubular	104
611	Asbestos Gaskets—Tubular	104
612	Asbestos Tape	101
616	Buttonhole Tape	125

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 226 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/226

INDEX *CONTINUED*

Style	Description	Page
617	Slotted Tape	125
619	Rubber Diaphragm Sheet	106
625	Autoline Sheet Packing	88
627	Autoline Gaskets	88
644	Pacific Semi-Metallic Coil Packing	28
646	Pacific Semi-Metallic Ring Packing	28
660	Cork-Fibre Sheet Packing	97
661	Cork-Fibre Gaskets	97
701	Industrial Brake Lining	188
711	"Z" Spiral Packing	42
712	"Z" Ring Packing	42
725	Rubber Transmission Belting	189
730	Lattice-Braid Asbestos Packing	67
731	Lattice-Braid Asbestos Packing	67
732	Lattice-Braid Asbestos Packing—Wire inserted	68
733	Lattice-Braid Asbestos Packing	69
736	Lattice-Braid Blue Asbestos Packing	70
740	Lattice-Braid Flax Packing	71
745	Lattice-Braid Waterproof Hydraulic Flax Packing	72
751	Lattice-Braid Cotton Packing	73
777	Extra Spiral Packing	40
778	Extra Spiral Packing	40
800	Varitemp Ammonia Metal Packing	204
805	Floating Metal Packing	210
806	Floating Metal Packing	211
808	Floating Metal Packing	212
809	Floating Metal Packing	213
810	Floating Metal Packing	216
813	Molded Cups—Power Reverse Gears	118
813-A	Molded Cups—Power Reverse Gears	118
821	Floating Metal Packing	216
835	Floating Metal Packing	205
860	Floating Metal Packing	208
861	Floating Metal Packing	209
870	Combination Metal Packing	207
875	Floating Metal Packing	206
890	Oil Scraper Ring	215
891	Oil Scraper Ring	214
892	Oil Scraper Ring	215
893	Oil Scraper Ring	215
894	Oil Scraper Ring	215
900	Compressed Asbestos Sheet Packing	85
901	Compressed Asbestos Sheet Packing—Graphited	85
906	Pleated Copper Foil Packing	150
907	Copper Foil Packing	150
913	Pleated Aluminum Foil Packing	151
914	Aluminum Foil Packing	151
915	Aluminum Foil Packing	154
916	Lead Foil Packing	154
917	Pleated Lead Foil Packing	152
918	Lead Foil Packing—asbestos core	153
919	Lead Foil Packing—flax core	153
920	Lead Foil Packing—plastic core	153
924	Plastallic Packing	167
926	Plastallic Packing	168
927	Plastallic Packing	168
928	Plastallic Packing	168
929	Plastallic Packing	169
930	Plastallic Packing	169
931	Plastallic Packing	169
932	Shredded Lead Ring Packing	166
933	Braided Lead Wire Coil Packing	160
934	Shredded Copper Ring Packing	163
935	Shredded Copper Set Packing	163
937	Braided Copper Tinsel Packing	159
938	Shredded Lead Ring Packing	166
939	Lead Wool Ring Packing	166
941	Shredded Lead Set Packing	164
942	Shredded Lead Ring Packing	166
943	Braided Lead Wire Ring Packing	160
944	Braided Lead Packing	155
945	Braided Lead Packing	156
948	Shredded Lead Ring Packing	166
949	Lead Wool Ring Packing	166
950	Compressed Asbestos Gaskets	85
950	Compressed Asbestos Gaskets—Locomotive appliances	129
951	Compressed Asbestos Gaskets—Graphited	85
953	Rubber Gaskets	92
953	Gauge Glass Rings	177
953	Evaporator Tube Gaskets	178
954	Condenser Tube Packing Rings	147
960	Duo Packing	135
962	Shredded Lead Ring Packing	166
965	Duo Packing	135
968	Shredded Lead Ring Packing	166
969	Lead Wool Ring Packing	166
980	Duo Packing	135
981	Flexomet Coil Packing	165
982	Shredded Lead Coil Packing	166
988	Shredded Lead Coil Packing	166
991	Flexomet Ring Packing	165
992	Shredded Lead Coil Packing	166
998	Shredded Lead Coil Packing	166
999	Lead Wool Coil Packing	166
1000	Condenser Tube Packing Rings—Lead	147
1001	Condenser Tube Packing Rings—Fibre	147
1002	Condenser Tube Packing Rings—Lead insert	147
1005	Expansion Joint Ring Packing	122
1005-A	Expansion Joint Ring Packing	122
1010	Ball Joint Ring Packing	124
1015	Expansion Joint Coil Packing	122
1015-A	Expansion Joint Coil Packing	122
1200	Power Reverse Gear Cylinder Packing	118
1225	Duo Packing—Power Reverse Gears	117
1700	Locomotive Cab Cock Packing	112
1906	Duo Packing	133
1907	Duo Packing	135
2000	Locomotive Throttle Packing	115

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
ACL Doc 21280 · Page 227 of 228
Published by AsbestosClaims.Law
asbestosclaims.law/library/21280/227

INDEX *CONTINUED*

Style	Description	Page
2200	Locomotive Air Pump Packing	116
5008	Gas Generator Door Packing	36
5246	Furnace Door Packing	35
5250	Expansion Joint Packing	123
5270	Expansion Joint Packing	123
5339	Tubular Asbestos Tape—Wire inserted	127
5349	Tubular Asbestos Tape	127
5366	Braided Aluminum Foil Packing	157
5414	Blue Asbestos Packing	31
5420	Asbestos Tubing	192
5534	Cotton Gasketing for Hatches	103
5536	Braided Lead Foil Packing	158
5603	Oxygen Packing	36
5689	Locomotive Air Pump Packing	116
5689	American Multiple Throttle Packing	114
6023	Rubber Sheet Packing	93
6023	Rubber Compound—Available forms	180
6044	Evaporator Tube Gaskets	178
7021	Compressed Asbestos Sheet Packing	86
7022	Compressed Asbestos Gaskets	86
7022	Compressed Asbestos Gaskets—Locomotive appliances	129
7024	Coupling Discs and Tractor Links	192
7037	Channel Flax Packing	142
7050	Shredded Lead Set Packing	161
7050-C	Shredded Lead Set Packing	162
7051	Asbestos Gasketing—Wire inserted	103
7066	Asbestos Insulation Tape	127
7104	Rubber Diaphragm Sheet	106
7114	Ball Joint Packing Filler Rings	124
7130	Chlorine Valve Ring Packing	36
7131	Molded Cups	144
7224	Rubber Pump Valves	174
7228	Neoprene Compressed Asbestos Sheet Packing	87
7300	Neoprene Rubber Sheet Packing	95
7300	Neoprene Rubber Gaskets—Tank cars	129
7300	Neoprene Rubber Compound—Available forms	181
7430	Neoprene Rubber Diaphragm Sheet	109
7491	Neoprene Rubber Compound—Available forms	181
7505	Rubber Rings—Polished Rod	145
7505	Rubber Pump Valves	174
7505	Rubber Compound—Available forms	180
7543	Rubber Diaphragm Sheet	107
7567	Locomotive Stoker Packing	121
7588	Neoprene Asbestos Gasketing	102
7593	Rubber Pump Valves	173
7597	Feed Water Pump Gaskets	129
7598	Thiokol Rubber Diaphragm Sheet	108
7603	Thiokol Rubber Diaphragm Sheet	108
7606	Molded Cups	144
7636	Hydraulic Packing	50
7705	Compressed Blue Asbestos Sheet Packing	87
7751	Gauge Cock Discs	115
7752	Brake Cylinder Cups	128
7771	Asbestos Insulation Tape	126
7790	Rubber Sheet Packing	92
7790	Rubber Pump Valves	174
7790	Rubber Gauge Glass Rings	177
7790	Rubber Valve Discs	175
7790	Rubber Compound—Available forms	180
7797	Neoprene Rubber Sheet Packing	95
7797	Neoprene Rubber Compound—Available forms	181
7810	Molded Cups—Power Reverse Gears	118
7815	Chevron Packing	81
7815	Rubber Compound—Available forms	180
7849	Folded Blue Asbestos Gaskets	99
7857	Chevron Packing	81
7862	Rubber Pump Valves	173
7954	Asbestos Tinning Machine Brushes	191
7963	Feed Water Pump Cylinder Packing	120
7986	Neoprene Rubber Sheet Packing	95
7986	Neoprene Rubber Compound—Available forms	181
7992	Neoprene Rubber Diaphragm Sheet	109
7998	Rubber Diaphragm Sheet	107
8030	Locomotive Fire Pan Tape	127
8051	Chevron Packing	81
8061	American Multiple Throttle Packing	114
8240	Neoprene Asbestos Gasketing	102
8312	Neoprene Rubber Sheet Packing	95
8312	Neoprene Rubber Compound—Available forms	181
8380	Asbestos Tinning Machine Brushes	191
8452	Buna-N Rubber Sheet Packing	96
8452	Buna-N Rubber Tank Car Gaskets	129
8452	Buan-N Rubber Compound—Available forms	181
8459	Buna-N Rubber Sheet Packing	96
8459	Buna-N Rubber Valve Discs	175
8459	Buna-N Rubber Compound—Available forms	181
8474	Buna-N Rubber Sheet Packing	96
8474	Buna-N Rubber Compound—Available forms	181
8495	Buna-N Rubber Sheet Packing	96
8495	Buna-N Rubber Compound—Available forms	181
8525	Asbestos Tinning Machine Brushes	191
8527	Locomotive Stoker Packing	121
8605	Feed Water Pump Cylinder Packing	120
8619	Molded Cups	144
8627	Rubber Compound—Available forms	180
8735	Asbestos Tinning Machine Brushes	191
9001	American Multiple Throttle Packing	114
	Leather Packings	132
	Leather Hydrant Valves	179
	Klozure Oil Seals	184-187
	Luball—Packing Lubricant	194
	Thiokol Rubber Compounds	181
	Pipe Thread Compound	195
	Flexible Packing Hooks	195
	Rubber Expansion Joints	190

Garlock Packing Company: Garlock Packings and Other Garlock Products, Catalog J (1949)
Published by AsbestosClaims.Law
ACL Doc 21280 · Page 228 of 228
asbestosclaims.law/library/21280/228