PLAINTIFF'S EXHIBIT UC-788

48862

INV-0166 #15

U.S. DEPARTMENT OF LABOR
Occupational Safety and Health Administration

Form Approved
OMB No. [illegible]

MATERIAL SAFETY DATA SHEET

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Required under USDL Safety and Health Regulations for Ship Repairing, Shipbuilding, and Shipbreaking (29 CFR 1915, 1916, 1917)

SECTION I

MANUFACTURER'S NAME	EMERGENCY TELEPHONE NO.
Richard Klinger Inc.	(513) 498-1181

ADDRESS (Number, Street, City, State, and ZIP Code)
2350 Campbell Road Sidney, Ohio 45365

CHEMICAL NAME AND SYNONYMS	TRADE NAME AND SYNONYMS
Compressed Rubber Bonded Asbestos Sheet Packing	Klinger K-61 White
CHEMICAL FAMILY	**FORMULA**
Mixture of SBR Rubber and Asbestos	N/A

SECTION II - HAZARDOUS INGREDIENTS

PAINTS, PRESERVATIVES, & SOLVENTS	%	TLV (Units)	ALLOYS AND METALLIC COATINGS	%	TLV (Units)
PIGMENTS Titanium Dioxide	½-1½%	10Mg/M^3	BASE METAL		N/A
CATALYST		N/A	ALLOYS		N/A
VEHICLE		N/A	METALLIC COATINGS		N/A
SOLVENTS		N/A	FILLER METAL PLUS COATING OR CORE FLUX		N/A
ADDITIVES		N/A	OTHERS		N/A
OTHERS		N/A			

HAZARDOUS MIXTURES OF OTHER LIQUIDS, SOLIDS, OR GASES	%	TLV (Units)
Chrysotile Asbestos CAS #1332-21-4	70-90	#1
Styrene-Butadiene Rubber CAS #9003-55-8	8-15	#2
Titanium Dioxide CAS #13463-67-7	½-1½	10Mg/M^3
#1-Two fibers/cc greater than 5 um in length. #2-No TLV established.		

SECTION III - PHYSICAL DATA

BOILING POINT (°F.)	Decomposes	SPECIFIC GRAVITY (H_2O=1)	1.65-1.85
VAPOR PRESSURE (mm Hg.)	N/A	PERCENT, VOLATILE BY VOLUME (%)	N/A
VAPOR DENSITY (AIR=1)	N/A	EVAPORATION RATE (_____ =1)	N/A
SOLUBILITY IN WATER	Insoluble		
APPEARANCE AND ODOR	Solid off-white		

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT (Method used)	FLAMMABLE LIMITS	Lel	Uel
N/A	N/A		

EXTINGUISHING MEDIA
Water, Carbon Dioxide, Dry Powder, or Foam.

SPECIAL FIRE FIGHTING PROCEDURES
Firefighters should use self-contained breathing equipment and eye protection for the rubber fumes.

UNUSUAL FIRE AND EXPLOSION HAZARDS
The rubber, once ignited, may need extra cooling to prevent reignition.

(Continued on reverse side)

Form OSHA-20
Rev. May 72

Union Carbide trial exhibit UC-788: Richard Klinger Inc. OSHA-20 Material Safety Data Sheet for Klinger K-61 Whit...
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ACL Doc 16011 · Page 1 of 6
asbestosclaims.law/library/16011/1

SECTION V - HEALTH HAZARD DATA

THRESHOLD LIMIT VALUE (TLV) - Asbestos - 8 hour TWA (Time Weighted Average) of 2 fibers/cc greater than 5 um in length.

EFFECTS OF OVEREXPOSURE - The material in its finished form presents no known health hazard. A chronic health hazard may be created if further processing of the sheet allows asbestos fibers to be released into the atmosphere. Inhalation of free asbestos fiber over a long period of time can cause lung disorders, including asbestosis, pleural plaque, lung cancer, and mesothelioma.

SECTION VI - REACTIVITY DATA

STABILITY - The material has infinite storage stability.

INCOMPATABILITY - Strong oxidizers, strong acids, or bases.

HAZARDOUS DECOMPOSITION PRODUCTS - Burning rubber (See Section IV), and free asbestos (See Section V).

HAZARDOUS POLMERIZATION will not occur.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED - Dust from sheet should be treated as free asbestos. Secure area and clean up using HEPA-filtered vacuum, or wet sweep. DO NOT clean up in a method that generates dust into atmosphere.

WASTE DISPOSAL METHOD - Bury in solid landfill as required by 29 CFR 1910.1001 (N)(2).

SECTION VIII - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION - None required where local controls ensure negligible asbestos dust released into atmosphere. Where local controls not adequate, use respirator approved pursuant to 29 CFR 1910.1001 (D)(2). See section IX - Special Precautions.

VENTILATION - Where dust producing processes are used, local ventilation, air filtration and good work hygiene must be used to ensure negligible asbestos dust released to atmosphere.

EYE PROTECTION - None required for normal use.

OTHER PROTECTIVE EQUIPMENT - None required for normal handling or fitting of gaskets. Where gasket removal involves scraping, wire brushing, or other potential dust producing operations; local ventilation, air filtration, good work hygiene, and where applicable, wetting down should be used to ensure negligible asbestos dust released to atmosphere.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING - In the manufacture of Klinger compressed asbestos sheet packing, the asbestos is encapsulated into the sheet by a rubber matrix. In normal handling of sheet and cut gaskets, no significant release of asbestos dust occurs. In the production of cut gaskets; local ventilation, air filtration, and good work hygiene must be used where the production process may release fibers into the workplace. The material must not be drilled, sawed, ground, sanded, or subjected to any other dust producing process without the necessary equipment required to ensure that released fibers are contained.

SECTION X - DATE AND SOURCE OF INFORMATION

DATE - November 20, 1985 NAME - Derek Coomber, Vice President ISSUE #85-01

WJ-0166 #13

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Calidria CORPORATION

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Material Safety Data Sheet

Calidria Corporation requests that users of "Calidria" Asbestos study this data sheet to become aware of the product's hazards, and promote safe handling of the product by making this information available to its employees, agents, and contractors. If the material is resold, Calidria Corporation requests that the purchaser be furnished a copy of this data sheet and advised to provide the information herein to its employees, agents and contractors.

SECTION I PRODUCT IDENTIFICATION

Product Name: CALIDRIA® ASBESTOS.	C.A.S. Numbers: 1332-21-4, 1309-38-2
Chemical/Alloy Name: Chrysotile Asbestos.	Formula/Composition: $Mg_6(OH)_8Si_4O_{10}+Fe_3O_4$
Synonyms: Asbestos, White Asbestos, Hydrated Magnesium Silicate.	

SECTION II PHYSICAL DATA

Sizes: 3/8" pellets to powder.	Solubility in Water: Very slightly soluble.
Specific Gravity: 2.45 approximately. (H_2O=1).	Melting Point: °F (°C) Dehydrates above 1112 (600).
Odor: None.	Boiling Point: °F (°C) Not applicable.
Appearance: White fibrous solid or pellets.	Vapor Pressure: Not applicable.
Bulk Density: 15-45 lb/ft^3, as packaged. (Depends on product form.)	Percent Volatile: Absorbed H_2O 1-4% by weight. Structural H_2O ~13% by weight.
Molecular Weight: Not applicable.	Evaporation Rate: Not applicable.

SECTION III HAZARDOUS INGREDIENTS

Material or Component (CAS #)	Weight %	PEL Data (TWA Unless Noted)	
Chrysotile Asbestos (1332-21-4)	95-98%	2 fibers/cc longer than 5μ	(1)(2)(3)(5)
		10 fibers/cc longer than 5μ, ceiling	(1)(2)(3)(5)
		0.1 fibers/cc longer than 5μ	(4)
		0.2-0.5 fibers/cc longer than 5μ	(1) (Proposed)
Magnetite Fe_3O_4 (1309-38-2)	0.5-2	5 mg/cu m respirable dust	(1)(2)(5)
		15 mg/cu m total dust	(1)
		10 mg/cu m total dust	(2)(3)

References: 1 OSHA Standard 1910.1001 2 MSHA Standard 3 Current ACGIH 4 NIOSH Recommendation 5 Calidria Internal Standard

SEP 23 1985

Emergency H.E.L.P. Telephone: 304-744-3487

Calidria Corporation • P.O. Box K, King City, California • 93930

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SECTION IV HEALTH HAZARD DATA

ACUTE EFFECTS OF OVEREXPOSURE

Route of Exposure:

Inhalation:	Any dust (including asbestos) which is inhaled in substantial amounts, may irritate the respiratory tract. Extreme exposures can overwhelm the normal respiratory defense mechanisms and result in temporary difficulty in breathing.
Skin Contact:	Asbestos splinters may penetrate the skin and cause asbestos "corns."
Skin Absorption:	Not applicable.
Eye Contact:	May cause irritation and abrasions.
Ingestion:	No known effects.

CHRONIC EFFECTS OF OVEREXPOSURE

Route of Exposure:

Inhalation:	Overexposure to Chrysotile Asbestos has caused damage to lungs (asbestosis), lung cancer and mesothelioma of the pleura and peritoneum. Symptoms, which are usually not manifested until 15-20 years after exposure, include labored breathing, chest pains, weakness, and chest tightness. Pleural thickening, plaques and effusion are nondisabling conditions, seen separately or together, that have been associated with prolonged asbestos exposure. The risk of lung cancer is greatly increased for those who smoke cigarettes regularly in addition to having asbestos exposures.
Skin Contact:	Not applicable.
Skin Absorption:	Not applicable.
Eye Contact:	Same as acute effects. Usually reversible on removal from exposure.
Ingestion:	Some studies indicate that asbestos overexposure is implicated as a cause of gastro-intestinal and laryngeal cancers, but the evidence is conflicting.

EMERGENCY AND FIRST AID PROCEDURES

Route of Exposure:

Inhalation:	No acute toxicity: Remove to fresh air. If breathing is difficult, oxygen may be administered. If breathing has stopped, administer artificial respiration. Call a physician.
Skin Contact:	Remove asbestos slivers promptly. If "asbestos corn" develops, surgical removal may be required.
Eye Contact:	Irrigate gently with water for 15 minutes. Refer to ophthalmologist to rule out possibility of damage to cornea or eyeball by fibers.
Ingestion:	None indicated.

NOTES TO PHYSICIAN

A medical surveillance program must be established for asbestos-exposed persons in accordance with the requirements of the Occupational Safety and Health Administration's standard for Asbestos (29 CFR Part 1910.1001).

SECTION V FIRE AND EXPLOSION DATA

Combustibility: Not combustible. Flammable Limits: Not applicable.

Flash Point (Test Method): Not applicable. Autoignition Temperature: Not applicable.

Explosion Tendency: Not applicable.

Extinguishing Media: Use media appropriate for surrounding material in fire situation.

Special Fire-Fighting Procedures: Avoid media and procedures that cause airborne dust. Personnel involved in fire-fighting should use NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing.

Unusual Fire and Explosive Hazard: See above.

SECTION VI REACTIVITY DATA

Stability: Stable (Temperatures in excess of 1112 °F (600 °C) cause loss of bound water).

Conditions to Avoid: None.

Hazardous Decomposition Products: None.

Material to Avoid: None.

SECTION VII SPILL, LEAK, AND DISPOSAL INFORMATION

Steps to be Taken if Material is Spilled or Released: Avoid breathing dust. Notify Safety personnel of spill. Permit only trained clean-up personnel in the spill area. Use wet methods or approved vacuum cleaning system to pick up spilled materials. Use water or other dust suppressants where sweeping is unavoidable. Do not stir up dust. Clean-up personnel should wear approved respirators and protective clothing. Waste and contaminated protective clothing must be placed in dust-tight containers and be properly labeled for disposal.

Neutralizing Agents: Not applicable.

Waste Disposal Method: Bags, friable asbestos, waste and scrap material should be disposed of in a manner which will avoid airborne concentrations of asbestos, such as the use of dust-tight trash bags or containers. Such containers should be labeled in accordance with 40 CFR 61.20. Asbestos is also classified as a hazardous material under CWA 307(a) and has a reportable quantity of one pound. Deposit waste containers in a secured landfill in accordance with Federal, State, and local regulations.

SECTION VIII SPECIAL PROTECTION INFORMATION

Ventilation: Provide adequate exhaust ventilation and capture filtration to remove asbestos particulate from the workplace and minimize its dispersion into the environment. Isolate work areas and post signs where asbestos contamination may exceel PEL. Hand- or power-operated tools which may release asbestos in excess of the PEL must be equipped with local exhaust systems.

SEP. 23 1985

SECTION VIII SPECIAL PROTECTION INFORMATION (Continued)

Personal Protective Equipment:

Respiratory Protection (Type): Where asbestos exposure in excess of the permissible limits is anticipated, wear a NIOSH/MSHA-approved respirator; a reusable or single-use air purifying respirator up to 10 times the PEL: a powered air purifying respirator up to 100 times the PEL: a continuous-flow or pressure-demand Type C supplied air respirator for greater than 100 times the PEL.

Eye Protection: Goggles are recommended. Follow Safety Rules.

Gloves/Clothing: Gloves are recommended during handling.

Other: For concentrations in excess of the ceiling limit special clothing, such as coveralls, whole-body clothing, head coverings, gloves, and foot coverings are required under CFR 1910.1001.

SECTION IX SPECIAL PRECAUTIONS

Precautionary Statements:

WARNING CANCER HAZARD

Breathing asbestos dust can cause lung damage and cancer. The risk of lung cancer is greatly increased for smokers.

Do not create or breathe dust.
Do not dry-sweep or use air hose for cleaning.
Do not take protective equipment or clothing home.

Do follow recommended work practices.
Do wear approved respiratory protection and protective clothing as required by applicable regulations.
Do use vacuum or wet cleaning methods.
Do dispose of dust, friable waste materials and contaminated protective equipment in dust-tight containers.

FOR INDUSTRIAL USE ONLY

Precautions for Handling and Storage: Store asbestos in closed containers (dust-tight) in a clean, dry, secure area. Protect containers from damage. Do not open containers in a manner that can release dust without providing proper enclosure or control measures. Use dust suppression control measures at all stages of asbestos handling, use and disposal. Follow good housekeeping practices to prevent accumulation of asbestos-containing dusts. Avoid inhalation of asbestos.

Other Precautions:

Material Listed as Carcinogen in:

National Toxicology Program Annual Report (NTP): Known carcinogen.

International Agency for Research on Cancer (IARC): Group I - Carcinogenic to humans.

OSHA 29 CFR Part 1910, Subpart Z: Occupational Exposure to Asbestos, Notice of Proposed Rulemaking, F.R. Vol. 49 No. 70, p. 14116 et seq. Tues., Apr. 10, 1984.

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