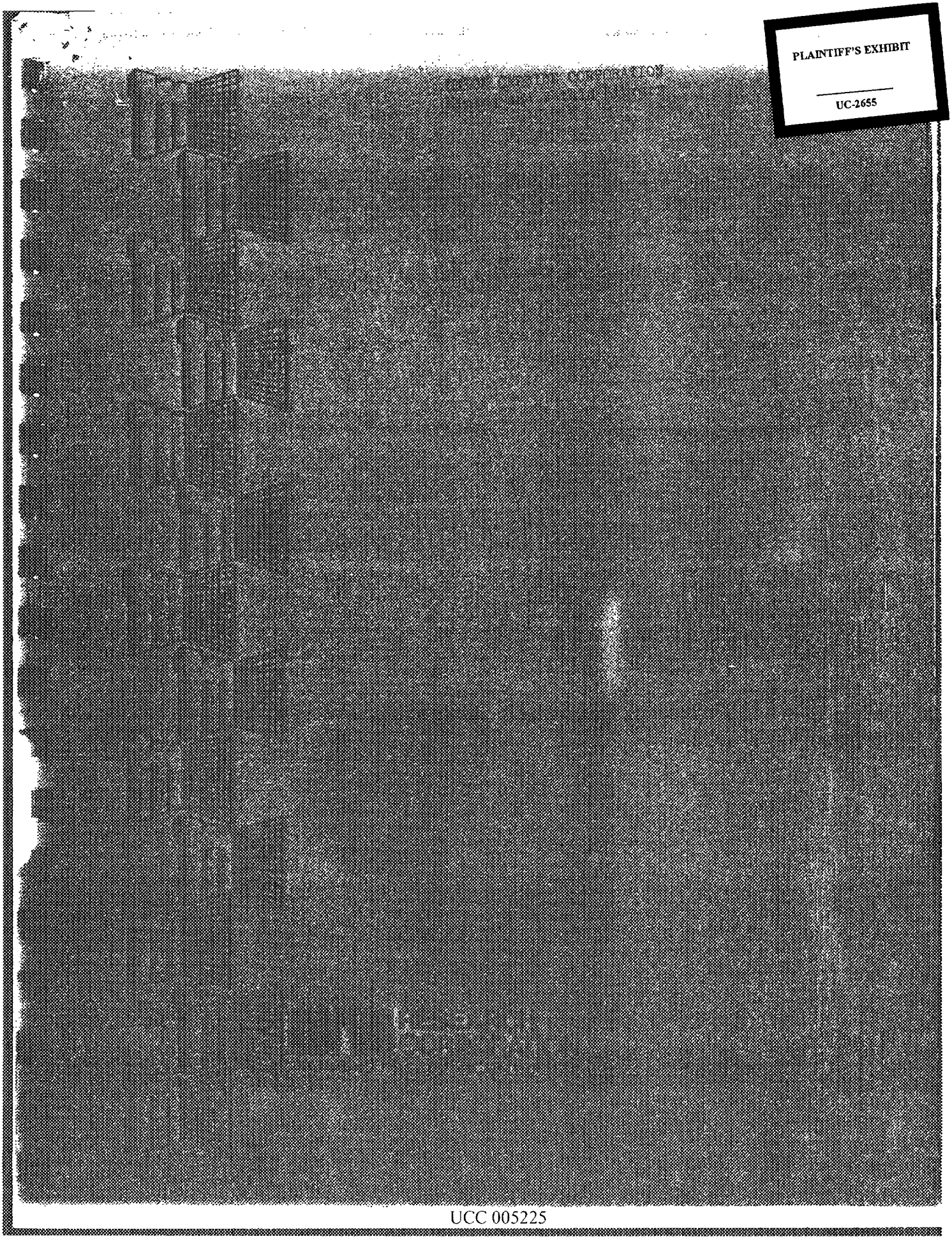

PLAINTIFF'S EXHIBIT
UC-2655
UCC 005225

THE ASBESTOS PRODUCTS INDUSTRY

AN ECONOMIC INVESTIGATION

AUGUST, 1972

MORTON RESEARCH CORPORATION
Bellmore, N. Y. 11710

PRICE: $35.
UCC 005226

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic I...
ACL Doc 17603 · Page 2 of 34
Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/2

ASBESTOS PRODUCTS
SUMMARY OF MAJOR FINDINGS

1. Shipments of asbestos products dropped sharply in 1970, but could turn around in 1971 and 1972 due to an increase in construction activity.
   In the past shipments of asbestos products fluctuated with expenditures on new construction. For example, in 1967 construction activity grew at about a 1% rate, and shipments of asbestos products dropped. In the following year, the trend reversed and construction expenditures increased by 11% while asbestos shipments rose by 6.4%. In 1971 and for the first quarter of 1972, construction activity was up sharply, indicating that shipments of asbestos produces could increase.
   By 1975 shipments of asbestos products could reach $700 or about a 3.5% annual increase.

2. Over the long run payrolls and material costs relative to sales declined.

3. Shipments of vinyl asbestos floor tiles and asbestos textile and cement products are the fastest growing segments of this industry. Shipments of asphalt floor tiles dropped sharply.

4. The s hare of market accounted for by the four largest producers declined from 60% in 1954 to 55% in 1967. The asbestos-cement shingle and clapboard segment of the industry is the most heavily concentrated.

5. Since 1959 the number of new plants in this business increased by 33%; the majority has been small plants (employing less than 100 people).

6. Prices for cement siding and shingles and asphalt floor tile continue to show strength, while prices for vinyl asbestos tile are weak.

7. Exports are estimated to rise during 1972. Imports dropped sharply in 1971.

8. Recently, the Government has issued restrictions limiting the asbestos fibres in the air which may hurt this industry.

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic I... Published by AsbestosClaims.Law
ACL Doc 17603 · Page 3 of 34 asbestosclaims.law/library/17603/3

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic I...
ACL Doc 17603 · Page 4 of 34

STRUCTURAL TRENDS ASBESTOS PRODUCTS INDUSTRY

		Employees		Production Workers			Cost Of Materials	
	Plants	Total 1,000	Payroll Mil.$	Total 1,000	Man-Hours Mil.	Wages Mil.$	Mil.$	Sales Mil.$
1947	112	21.6	$ 60.5	18.3	37.5	$ 47.8	$ 98.4	$206.2
1949		17.4	54.8	14.2	28.8	41.0	95.1	195.6
1950		19.0	64.3	15.6	34.0	50.6	112.1	250.7
1951		20.9	77.8	17.3	37.3	61.2	150.1	314.6
1952		21.2	82.1	17.2	37.1	63.9	157.8	316.2
1953		22.3	91.5	18.0	38.8	71.1	177.2	360.4
1954	110	22.0	92.4	17.8	36.0	70.3	176.6	361.1
1955		23.7	104.9	19.1	40.4	81.9	186.4	405.1
1956		22.8	107.6	18.2	39.2	83.6	198.6	424.5
1957		22.9	111.1	18.3	38.2	84.9	198.0	425.9
1958	109	21.3	106.4	17.0	35.0	80.4	216.6	453.5
1959		22.8	119.4	18.6	39.1	92.8	250.5	522.5
1960		22.4	119.2	18.3	37.4	92.1	243.7	515.0
1961		21.7	118.6	17.5	35.9	90.1	238.8	502.9
1962		21.8	125.9	17.7	36.6	96.1	251.4	512.9
1963	124	19.5	118.0	15.7	32.9	89.8	240.7	509.2
1964		20.4	128.1	16.4	34.9	98.4	251.7	545.8
1965		21.0	132.1	16.8	34.7	100.3	268.3	567.7
1966		22.7	149.6	17.8	37.6	114.0	281.9	591.1
1967	139	21.4	144.3	16.9	35.1	107.8	264.6	576.5
1968		21.5	152.8	17.0	35.7	114.9	279.8	613.5
1969		22.2	168.9	17.7	37.7	128.9	297.7	658.8
1970		18.9	150.4	14.7	30.8	112.6	268.5	587.0

SOURCE: U. S. Dept. of Commerce

UCC 005228

Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/4

ASBESTOS PRODUCTS INDUSTRY

YEAR-END INVENTORIES

(MILLION DOLLARS)

	Total	Finished Product	% of Total	Work-in Process	% of Total	Materials And Supplies	% of Total
1947	$ 32.9	$11.2	34.0%	----------$21.7----------			
1954	56.7	24.4	43.0	$ 9.1	16.0%	$23.2	40.9%
1958	70.9	35.9	50.6	9.9	14.0	25.1	35.4
1963	82.8	49.5	59.8	12.1	14.6	21.2	25.6
1964	89.8	55.9	62.2	11.5	12.8	22.4	24.9
1965	95.3	58.5	61.4	12.7	13.3	24.1	25.2
1966	113.7	68.7	60.4	16.1	14.1	28.9	25.4
1967	111.0	67.3	60.6	15.0	13.5	28.7	25.9
1968	121.4	73.0	60.1	17.4	14.3	31.0	25.5
1969	117.8	71.2	60.4	15.7	13.3	30.9	26.2
1970	112.9	67.1	59.4	13.0	11.5	32.8	29.1

SOURCE: U. S. Dept. of Commerce

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic I... Published by AsbestosClaims.Law
ACL Doc 17603 · Page 5 of 34 asbestosclaims.law/library/17603/5

ASBESTOS PRODUCTS INDUSTRY

NEW CAPITAL EXPENDITURES

(MILLION DOLLARS)

	Total	New Plant	% Of Total	New Machinery And Equipment	% Of Total
1947	$13.0	$3.9	30.0%	$9.1	70.0%
1954	14.9	3.6	24.2	11.3	75.8
1958	12.8	2.4	18.8	10.4	81.3
1963	12.4	2.6	21.0	9.8	79.0
1964	20.9	5.2	24.9	15.7	75.1
1965	27.9	6.5	23.3	21.4	76.7
1966	23.4	4.9	20.9	18.5	79.1
1967	18.9	3.0	15.9	15.9	84.1
1968	15.8	1.7	10.8	14.1	89.2
1969	20.1	3.7	18.4	16.4	81.6
1970	16.2	3.6	22.2	12.6	77.8

SOURCE: U. S. Dept. of Commerce

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic I... Published by AsbestosClaims.Law
ACL Doc 17603 · Page 6 of 34 asbestosclaims.law/library/17603/6

ASBESTOS PRODUCTS PLANTS

SHIPMENTS BY GEOGRAPHICAL AREAS

(MILLION DOLLARS)

	1947 $	1954 $	1958 $	1963 $	1967 $	1969 $
New England	22.7	26.3	33.5	43.2	60.8	73.7
Middle Atlantic	86.0	128.2	164.7	155.4	169.5	187.1
New York	18.4	36.2	42.0	35.8	52.5	
New Jersey	45.4	61.7	84.1	78.9	68.5	
Pennsylvania	22.4	30.3	38.6	40.7	48.5	
North Central	62.9	102.5	128.0	131.2	137.7	137.8
Illinois	32.4	66.7	88.7	89.9	87.7	95.9
So. Atlantic Div.						71.7
South	27.4	54.6	69.3	99.3	130.2	
West So. Central	NA		NA	NA	62.7	
West	5.6	34.6	58.0	80.1	78.3	
California	NA	NA	NA	80.1	78.2	

NA---Not Available

SOURCE: U. S. Dept. of Commerce

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic I... Published by AsbestosClaims.Law
ACL Doc 17603 · Page 7 of 34 asbestosclaims.law/library/17603/7

MATERIALS CONSUMED BY ASBESTOS PRODUCT PLANTS

(Million Dollars)

		1954		1958		1963		1967	
	Unit Of Measure	Quantity	Delivered Cost	Quantity	Delivered Cost	Quantity	Delivered Cost	Quantity	Delivered Cost
Asbestos, Crude (Including Fiber)	1,000 Short Tons	481.3	$48.5	553.6	$67.1	453.2	$48.3	441.6	$55.7
Portland Cement	1,000 bbls. (376 lb. ")					2,370.0	8.8	2931.1	10.8
Vegetable Oils, Including Crude & Processed	Million Lbs.					34.2	6.0	34.9	5.9
Vinyl & Vinyl Copolymer Resins, All Forms	DO					201.6	31.0	195.9	27.7
Pigment, Organic, And Inorganic	DO					59.4	14.9	56.2	12.3
All Other Materials & Components, Parts, Containers, And Supplies Consumed			111.6		116.1	NA	98.7	NA	103.7
Materials, Components, Parts, Containers, & Supplies (1)					3.6	NA	4.4	NA	12.3
(Paper and Paperboard Containers)					5.9				

NA---Not Applicable
(1)---This item represents the total cost of materials for establishments that did not report detailed materials data.

SOURCE: U. S. Dept. Of Commerce

UCC 005232

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic I...
ACL Doc 17603 · Page 8 of 34
Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/8

ASBESTOS PRODUCTS INDUSTRY

SHARE OF MARKET TRENDS

Percent of Shipments Accounted For By:	1954	1958	1963	1966	1967
4 Largest Companies	60%	59%	56%	56%	55%
8 Largest Companies	77	76	76	74	75
20 Largest Companies	NA	95	95	NA	94
50 Largest Companies	NA	99	99+	NA	99+

NA---Not Available

SOURCE: U. S. Dept. of Commerce

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic I...
ACL Doc 17603 · Page 9 of 34
Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/9

SHARE OF MARKET

PRODUCT SHIPMENTS ACCOUNTED FOR BY THE LARGEST COMPANIES OF ASBESTOS PRODUCTS

		Percent Accounted For By:			
		4 Largest Companies	8 Largest Companies	20 Largest Companies	50 Largest Companies
Asbestos Products	1954	51%	67%	90%	NA
	1958	53	68	90	98%
	1963	54	74	93	99
	1967	51	72	91	99
Asbestos Friction Materials	1954	68	91	99	NA
	1958	63	86	99	100
	1963	68	87	NA	100
	1967	71	89	NA	100
Asbestos-Cement Shingles And Clapboard	1954	74	95	100	NA
	1958	NA	NA	100	NA
	1963	78	NA	100	NA
	1967	88	100	NA	NA
Asphalt Floor Tile	1958	81	98	100	NA
	1963	79	NA	100	NA
	1967	78	NA	100	NA
Vinyl Asbestos Floor Tile	1958	78	99	100	NA
	1963	69	NA	100	NA
	1967	72	NA	100	NA
Asbestos Textiles And Other Asbestos And Asbestos Cement Products	1958	80	90	98	100
	1963	79	89	97	99+
	1967	72	85	97	99+

SOURCE: U. S. Dept. of Commerce

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic… Published by AsbestosClaims.Law
ACL Doc 17603 · Page 10 of 34 asbestosclaims.law/library/17603/10

NUMBER OF PLANTS BY EMPLOYEE SIZE

ASBESTOS PRODUCTS PLANTS

Employee Class Size:	1959	1967	1968	1969	1970	Change 1959-1970
1-3 Employees	7	11	6	8	10	↗ 3
4-7 "	2	8	5	14	8	↗ 6
8-19 "	15	15	22	21	26	↗ 11
20-49 "	14	25	17	15	13	- 1
50-99 "	10	22	20	24	22	↗ 12
100-249 "	31	30	32	32	31	No Change
250-499 "	14	15	16	13	16	↗ 2
500 or More "	7	8	8	8	7	No Change
Total	100	134	128	135	133	↗ 33

SOURCE: County Business Patterns

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic…
ACL Doc 17603 · Page 11 of 34
Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/11

NUMBER OF ASBESTOS PRODUCT PLANTS

BY EMPLOYMENT SIZE AND BY STATE

1969

	# Of Employees, Mid-March Pay Period	Taxable Payrolls Jan.-March $1,000	Total Plants	By Employee-Size 1-7	8-49	50-249	250 Or More
California	1,860	$3,668	19	2	5	10	2
Connecticut	NA	NA	11	1	5	5	
Illinois	2,567	4,977	13	2	2	5	4
Indiana	843	1,355	5			4	1
Louisiana	752	1,339	4			2	2
Massachusetts	293	524	7	2	1	4	
Mississippi	NA	NA	3	1	1	1	
Missouri	323	525	4		1	3	
New Hampshire	319	457	4	1	1	2	
New Jersey	1,598	2,911	8	1	1	3	3
New York	2,055	3,527	8	2	3		3
North Carolina	720	1,025	6	1	1	3	1
Ohio	680	1,162	8		4	4	
Pennsylvania	2,309	4,117	10	1	4	4	1
South Carolina	1,010	1,474	4		1	2	1
Tennessee	NA	NA	1			1	
Texas	1,117	1,825	8	1	1	6	
Virginia	NA	NA	2		1		1
Puerto Rico	130	125	3		1	2	

SOURCE: County Business Patterns

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic…
ACL Doc 17603 · Page 12 of 34
Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/12

SHIPMENTS BY ALL PRODUCERS OF ASBESTOS PRODUCTS (MILLION DOLLARS)

		Annual % Change
1947	198.6	
1954	323.1	≠ 4.4%
1958	419.7	≠ 1.2
1959	488.0	≠16.3
1960	473.7	- 2.9
1961	463.6	- 2.2
1962	475.5	≠ 2.6
1963	506.1	≠ 6.2
1964	539.5	≠ 6.6
1965	567.8	≠ 5.2
1966	565.9	- 0.3
1967	564.6	- 0.2
1968	600.6	≠ 6.4
1969	647.4	≠ 7.8
1970	574.7	-11.2
1971 E	610.0	≠ 6.1
1972 E	645.0	≠ 5.7
1975 E	712.7	≠ 3.5

E---Estimate

SOURCE: U. S. Dept. of Commerce

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic… Published by AsbestosClaims.Law
ACL Doc 17603 · Page 13 of 34 asbestosclaims.law/library/17603/13

SHIPMENTS BY PRODUCT CLASS

(MILLION DOLLARS)

	Asbestos Friction Materials	% Of Total	Asbestos Cement Shingles & Clapboard	% Of Total	Asphalt Floor-tiles	% Of Total	Vinyl Asbestos Floor Tiles	% Of Total	Asbestos Textile & Other Asbestos & Asbestos Cement Products	% Of Total	Asbestos Products N.S.K.	% Of Total
1947	$ 58.6	29.5%	$37.5	18.9%	$42.0	21.1%	NA		$ 60.5	30.5%	NA	
1954	73.9	22.9	53.3	16.5	90.7	28.1	NA		104.2	32.3	$1.1	0.3%
1958	89.8	21.4	49.2	11.7	77.3	18.4	$ 66.6	15.9%	131.8	31.4	5.0	1.2
1959	111.7	22.9	49.9	10.2	78.6	16.1	91.6	18.8	151.0	30.9	NA	
1960	104.3	22.0	45.5	9.6	71.7	15.1	99.8	21.1	146.7	31.0	NA	
1961	101.9	22.0	38.4	8.3	70.3	15.2	102.6	22.1	145.3	31.3	NA	
1962	112.1	23.6	36.5	7.7	65.0	13.7	110.7	23.3	143.3	30.2	NA	
1963	117.7	23.3	34.7	6.9	59.2	11.7	131.1	25.9	162.2	32.0	1.1	0.2
1964	126.0	23.4	32.1	5.9	52.5	9.7	150.1	27.8	177.7	32.9	1.2	0.2
1965	136.9	24.1	31.1	5.5	44.4	7.8	157.8	27.8	196.7	34.6	1.0	0.2
1966	146.5	25.9	27.6	4.9	33.0	5.8	157.3	27.8	200.5	35.4	1.0	0.2
1967	144.4	25.6	24.0	4.3	25.0	4.4	153.5	27.2	214.1	37.9	3.6	0.6
1968	172.1	28.7	25.7	4.3	21.0	3.5	154.3	25.7	224.3	37.3	3.2	0.5
1969	193.2	29.8	23.3	3.6	18.1	2.8	160.7	24.8	248.3	38.4	3.8	0.6
1970	144.7	25.2	26.7	4.6	5.6	1.0	158.0	27.5	233.9	40.7	5.8	1.0

N.S.K.---Not Specified by Kind

SOURCE: U. S. Dept. Of Commerce

UCC 005238

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic...
ACL Doc 17603 · Page 14 of 34
Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/14

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic...
ACL Doc 17603 · Page 15 of 34

SHIPMENTS OF ASBESTOS FRICTION MATERIALS

(MILLION DOLLARS)

	1947	% Of Total	1954	% Of Total	1958	% Of Total	1963	% Of Total	1967	% Of Total
Brake Linings:										
Woven	$ 7.0	11.9%	$ 6.5	8.8%	$ 7.8	8.7%	$ 6.4	5.4%	$13.5	9.3%
Molded	31.8	54.3	48.3	65.4	58.9	65.6	81.1	68.9	95.6	66.2
Clutch Facing:										
Woven	9.9	16.9	8.6	11.6	10.2	11.4	12.1	10.3	17.2	11.9
Molded	10.0	17.1	9.9	13.4	13.0	14.5	17.5	14.9	16.1	11.1
Asbestos Friction Materials, N.S.K.	NA		0.6	0.8	NA		0.5	0.4	2.0	1.4

SOURCE: U. S. Dept. Of Commerce

UCC 005239

Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/15

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic...
ACL Doc 17603 · Page 16 of 34

SHIPMENTS OF ASBESTOS TEXTILES & OTHER ASBESTOS & ASBESTOS-CEMENT PRODUCTS

(MILLION DOLLARS)

	1947	% Of Total	1954	% Of Total	1958	% Of Total	1963	% Of Total	1967	% Of Total
Asbestos Textiles:										
Yarn, cord & thread	*		$ 4.6	4.4%	$ 6.0	4.6%	$ 7.2	4.4%	$ 7.1	3.3%
Cloth	*		7.4	7.1	6.9	5.2	9.1	5.6	12.3	5.7
Other Asbestos Textiles	*		16.5	15.8	10.3	7.8	9.7	6.0	11.5	5.4
Asbestos-Cement Products:										
Flat Sheets & Wallboard, All Thicknesses Converted to ⅛" basis	$13.4	22.1%	15.3	14.7	15.9	12.1%			15.2	7.1
Corrugated Sheets	5.1	8.4	6.5	6.2	4.3	3.3	113.5	70.0%	3.5	1.6
Pipe, conduits & ducts including Pressure Pipes	NA				69.8	53.0			118.6	55.4
Asbestos Felts:										
Roofing, asphalt or tar saturated	*		53.9	51.7%	5.0	3.8	8.8	5.4	11.2	5.2
Other	*				8.3	6.3	6.6	4.1	17.2	8.0
Other Asbestos & Asbestos-Cement Products including Millboard & prefabricated housing components	24.9	41.2%			5.4	4.1	6.2	3.8	14.1	6.6
Asbestos Textile And Other Asbestos Cement Products N.S.K.							1.1	.7	3.5	1.6

* Totaled Under Other Asbestos And Asbestos Products

SOURCE: U. S. Dept. Of Commerce

UCC 005240

Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/16

COMPARATIVE GROWTH TRENDS IN CONSTRUCTION ACTIVITIES VS. ASBESTOS SHIPMENTS

(Annual % Change)

	Construction Activities	Asbestos Shipments
1954	↑ 15.2%	↑ 4.4%
1958	↑ 5.3	↑ 1.2
1959	↑ 10.3	↑16.3
1960	- 2.5	- 2.9
1961	↑ 2.8	- 2.2
1962	↑ 7.6	↑ 2.6
1963	↑ 6.3	↑ 6.2
1964	↑ 4.4	↑ 6.6
1965	↑ 9.2	↑ 5.2
1966	↑ 3.9	- 0.3
1967	↑ 1.4	- 0.2
1968	↑ 11.2	↑ 6.4
1969	↑ 7.3	↑ 7.8
1970	↑ 3.7	-11.2
1971	↑ 15.6	↑ 6.1E
1972E	↑ 24.2	↑ 5.7

E---Estimate

SOURCE: U. S. Dept. of Commerce

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic… Published by AsbestosClaims.Law
ACL Doc 17603 · Page 17 of 34 asbestosclaims.law/library/17603/17

CONSUMPTION OF ASBESTOS PRODUCTS BY INDUSTRY FOR 1963

Industries Consuming Asbestos Products	Total (Millions Of Dollars)	% Of Total Output
Automobile Repairs & Services	$68.3	12.4%
New Construction, Non-residential Bldgs.	61.6	11.2
Maintenance & Repair Construction, Residential Buildings (Nonfarm)	52.3	9.5
Gaskets & Insulations	32.3	5.9
Motor Vehicles & Parts	31.2	5.7
Maintenance & Repair Construction, All other	18.8	3.4
Nonferrous Wire Drawing & Insulating	18.6	3.4
Misc. Plastics Products	12.3	2.2
Wholesale Trade	6.5	1.2
New Construction, Public Utilities	5.3	1.0
Industrial Furnaces & Ovens	4.5	0.8
Asbestos Products	3.9	0.7
Surgical Appliances & Supplies	3.5	0.6
Misc. Manufactures	3.5	0.6
New Construction, All other	3.4	0.6
Shipbuilding & Repairing	3.2	0.6
Farm Machinery	3.0	0.5
Misc. Chemical Products	2.1	0.4
Real Estate	1.9	0.3
Safes & Vaults	1.5	0.3
Food Feed Grains & Grass Seeds	1.4	0.3
Net Exports	15.4	2.8
Total Output	$550.4	

SOURCE: U. S. Dept. of Commerce

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic... Published by AsbestosClaims.Law
ACL Doc 17603 · Page 18 of 34 asbestosclaims.law/library/17603/18

ASBESTOS PRODUCTS

WHOLESALE PRICE INDEX

		Asbestos Cement Siding Shingles (1957-59=100)	Asphalt Floor Tile (1957-59=100)	Vinyl Asbestos Floor Tile (1964=100)
1947		56.2		
1954		81.7		
1958		100.1		
1962		NA	101.4	
1963		110.8	102.5	
1964		111.0	NA	
1965		113.3	NA	
1966		115.1	NA	
1967		118.0	112.2	97.9
1968		121.9	119.7	99.5
1969		128.1	121.9	96.0
1970		137.6	127.0	97.6
1971	Months	(1967=100)	(1967=100)	(1967=100)
	Jan.	117.8	113.3	99.7
	Feb.	117.8	113.3	99.7
	March	117.8	113.3	99.7
	April	117.8	113.3	99.7
	May	122.2	113.3	99.7
	June	122.2	113.3	99.7
	July	122.2	113.3	99.7
	August	122.2	113.3	99.7
	Sept.	122.2	113.3	99.7
	Oct.	122.2	113.3	99.7
	Nov.	122.2	113.3	99.7

NA---Not Available

SOURCE: U. S. Dept. of Labor

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic… Published by AsbestosClaims.Law
ACL Doc 17603 · Page 19 of 34 asbestosclaims.law/library/17603/19

CONSUMER PRICE INDEX FOR

VINYL ASBESTOS TILE

(1967=100)

1970	111.3
1971	116.6

Months	1971	1972
Jan.	115.5	117.6
Feb.	116.6	117.6
March	116.7	117.8

SOURCE: U. S. Dept. of Labor

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic… Published by AsbestosClaims.Law
ACL Doc 17603 · Page 20 of 34 asbestosclaims.law/library/17603/20

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic...
ACL Doc 17603 · Page 21 of 34

[redacted]

20

EXPORTS

(THOUSAND DOLLARS)

	1965 $	1966 $	1967 $	1968 $	1969 $	1970 $	1971 $	Jan.&Feb. 1971 $	Jan.&Feb. 1972 $	1972E $
Asbestos Clutch Facings-including linings	1,691	1,897	2,328	2,317	2,966	1,926	1,571	203	508	3,927
Asbestos brake linings	4,728	5,236	5819	5,724	6,804	5576	7,174	1,110	1,094	7,031
Asbestos-Cement shingles & clapboard	1,097	1,797	1,996	1,944	1,599	1,659	2,580	432	499	2,967
Asphalt tile	886	1,016	880	740	631	585	535	79	69	465
Asbestos textiles & yarns	1,067	1,326	1,790	1,802	2,420	2,368	3,397	447	784	5,945
Total	9,469	11,272	12,813	12,527	14,420	12,114	15,257	2,271	2,954	19,834

SOURCE: U. S. Department Of Commerce

UCC 005245

Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/21

IMPORTS

(THOUSAND DOLLARS)

	1965 $	1966 $	1967 $	1968 $	1969 $	1970 $	1971 $	Jan.-March 1972 $
Asbestos yarn, slivers, rovings, wick, rope, cord, cloth, etc. & articles of any of the foregoing	276	872	1,007	1,324	1,598	2,934	5,608*	1,730
Pipes, tubes, & fittings of asbestos & hydraulic cement	4,081	2,591	1,916	2,971	3,400	2,897	2,613	520
Articles, NES of asbestos & hydraulic cement	1,752	1,974	2,136	2,487	2,404	2,847	2,707	845
Asbestos articles, NES	3,721	5,417	6,436	7,655	10,013	12,324	*	
Total	9,830	10,854	11,495	14,437	17,415	21,002	10,928	

E---Estimate based on quarterly figures.

*---Asbestos yarn, etc. & Asbestos articles, NES are combined.

SOURCE: U. S. Department Of Commerce

UCC 005246

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic...
ACL Doc 17603 · Page 22 of 34
Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/22

Direct Sales

Specific foreign firms have expressed interest in direct purchases of the products below.

Columbia--Asbestos flat sheets, cord. "El Surtidor"--Carlos A. Rodriguez (dist., mfr., retailer), Calle 5A, No.4-55-Fontibon, Bogota.

Germany---Asbestos-cement shingles, clapboard, balcony facings. Stakusit-Stahl-Kunststoff GMBH & Co. KG, (importer, dist.), 10 Hauptstrasse, 4307 Kettwig.

Germany---Asbestos textiles. G. W. Schauenburg & Sohn GMBH, (dist., mfr.), 1 Sandstr., 433 Muelheim 1 Ruhr.

Philippines--Brake shoe lining for automobiles. Mandee Commercial (importer, dist.), 147 8th St., 11th Ave., Caloocan City, P. O. Box 1553, Manila.

AGENCIES

Specific foreign firms have expressed interest in agency agreement for the products listed below.

Singapore--Floor tiles, vinyl asbestos. Mr. Sim Yong Teng, Marketing Div., Diethelm and Co. Ltd. (importer, mfr., agent), 139-149 Market St., Singapore 1, P. O. Box 191, Singapore.

Honduras---Asphalt Floor Tiles. Exclusive representation. Nacional Comercial, S. A. de C. V. (importer, dist., agent), Apartado Postal 347, Tegucigalpa, D. C.

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic…
ACL Doc 17603 · Page 23 of 34
Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/23

WORLD PRODUCTION OF ASBESTOS BY COUNTRY

UNITS--000 TONS (METRIC)

	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969
South Africa	160	177	201	187	195	218	251	244	236	258
South Rhodesia	122		129	129	139	160	160			
Swaziland	29	28	30	30	36	37	36	35	39	36
Canada	1,015	1,065	1,103	1,157	1,288	1,259	1,351	1,316	1,448	1,448
United States(1)	41	48	48	60	92	107	114	112	109	114
Brazil	98	115	88	133	106	159	273	338	345	
China (Mainland) (2)	80	90	90	100	120	130	140	150	150	160
Cyprus	21	15	20	18	12	16	25	19	19	21
Japan	16	17	14	17	16	15	19	25	22	21
France	26	28	25	24	22	7				
Italy	55	57	55	57	68	72	82	101	104	112
Bulgaria (3)	1	1	1	1	1	1	2	2	2	2
Czechoslovakia	2	3	3	2					17	23
Finland	10	10	10	9	11	12	12	12	12	
Yugoslavia (3)	5	6	7	8	8	10	8	9	10	11
Australia	14	15	17	12	12	11	12	1	1	1
Total	1,695	1,675	1,841	1,944	2,126	2,214	2,485	2,366	2,514	2,208

1---Asbestos sold plus asbestos used by producers
2---Source, U. S. Bureau of Mines
3---Asbestos fibres only

SOURCE: Statistical Office Of The U. N.; Dept. Of Economic And Social Affairs

UCC 005248

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic...
ACL Doc 17603 · Page 24 of 34
Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/24

SALIENT ASBESTOS TRENDS

		1965	1966	1967	1968	1969
United States						
Production (Sales)	Short Tons	118,275	125,928	123,189	120,690	125,936
Value	1,000	$ 10,162	$11,056	$11,102	$10,406	$10,648
Exports-Re-exports (Unmanufactured)	Short Tons	43,126	46,996	47,718	41,236	36,173
Value	1,000	$ 5,294	$ 5,763	$ 6,025	$ 4,679	$4,979
Imports For Consumption (Unmanufactured)	Short Tons	719,559	726,459	645,112	737,909	694,558
Value	1,000	$70,457	$73,100	$65,743	$72,930	$76,422
Consumption, Apparent (1)	Short Tons	794,708	805,391	720,583	817,363	784,321
World						
Production	Short Tons	3,101,994	3,275,262	3,207,259	3,290,370	NA

NA---Not Available
(1)--Measured by quantity produced, plus imports, minus exports.

SOURCE: U. S. Dept. of the Interior

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic… Published by AsbestosClaims.Law
ACL Doc 17603 · Page 25 of 34 asbestosclaims.law/library/17603/25

NEW PRODUCTS

Safety Cloth
Reduction of airborne fibers by more than 60%, & 40 to 50% higher abrasion resistance are properties of an asbestos safety cloth finished by a new process. Flame retarder and clean-gard cloth is made in all standard styles of safety cloth, in 50 & 100 yard rolls, and in widths of 36, 40 and 60 inches (wider on order). Weights are 2.25, 2.35 and 2.50 lb. 1 sq. yd.
H. K. Porter, Porter Bldg., Pittsburgh, Pa. 15219

Asbestos Tubes
Rigid tubes for Class F & H uses (to 180C) are impregnated with a polyester varnish and use a phenolic adhesive to reduce moisture pickup to less than 2%. Either spiral or convolute-wound versions can be had in any wall thickness and in round, square or radiused inside corners.
Paramount Industries, Inc. 1430 Progress Rd., Fort Wayne, Ind. 46808

Fire Curtain
Asbestos cloth, coated with yellow neoprene, stores overhead, & out of the way, but when there's a fire it drops instantly to confine the blaze. New Insta-Wall can be triggered by existing sensors, comes in a rust-proof cabinet measuring 6 ft. long, 14 in. wide and 5 in. deep. Velcro edges make it easy to hang curtains to cover larger areas but won't restrict emergency entrance and exit; chain base weight insures tight seal with the floor.
Singer Safety Products, Inc. 444 N. Lake Shore Drive, Chicago, Ill. 60611

SOURCE: Industrial Equipment News

Asbestos Fabric
A new asbestos textile called "Novatex" has been announced. It is totally inorganic but light-weight and flexible. The fabric is receptive to various aluminizing techniques and other finishes. Novatex fabrics show tensile strengths higher than conventional asbestos fabrics weighing one and one half to four times heavier.
Raybestos-Manhattan, Inc. 205 Middle St., Bridgeport, Conn. 06603.

SOURCE: The Journal of Commerce

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic... Published by AsbestosClaims.Law
ACL Doc 17603 · Page 26 of 34 asbestosclaims.law/library/17603/26

FROM NEW PRODUCTS DIGEST

1. Vinyl Flooring--
The line of cushioned flooring is more than 100 mils thick, deeply embossed and heavily foamed. It is available in 6 and 12-ft. widths with a no-wax finish & asbestos backing and in four patterns.
Mannington Mills, Inc., Salem, N. J.

2. Asphalt Roof Shingle--
The self-sealing asphalt roof shingle in earthtone colors harmonizes with all exterior treatment. The Seal-O-Matic feature bonds each shingle to one below it, making the roof virtually impervious to strong winds; this factor is designed for application over existing shingles or for new construction.
Size: 14 x 36 in. with 67 shingles per square.
Johns-Manville Corp., New York, N. Y.

3. Vinyl Asbestos Tile--
Recommended for residential or light traffic commercial installation, the adhesive-backed vinyl is available in three styles, each in three color choices.
Azrock Floor Products Division, Uvalde Rock Asphalt Company, San Antonio, Texas.

4. Amtico Prego Flooring--
The addition to the company's vinyl asbestos flooring line is a stone-like metallic decorative pattern with a smooth surface. Available in 12-in. squares, 1/16th gauge and in 6 colorations.
Amtico Division, American Biltrite Rubber Co., Chelsea, Mass.

5. Aquaflex Parquet Wood Vinyl Flooring--
The wood-grain vinyl flooring features deeply embossed lines to give the appearance of real wood parquetry. The 6-ft. wide sheet flooring is protected by a continuous layer of nonporous clear vinyl and has an interlayer of vinyl foam cushioning with an asbestos felt backing.
Floor Products Division, GAF Corp., New York, N. Y.

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic… Published by AsbestosClaims.Law
ACL Doc 17603 · Page 27 of 34 asbestosclaims.law/library/17603/27

NEW LITERATURE

Asbestos Textiles--Shown in 24-page color catalog include lap, roving, yarn, cord, cloth, rope, tubing, belting, and tape. Has specs. applications, packaging.
H. K. Porter Co. Pittsburgh, Pa. 15219

Asbestos Fabrics--8 to 24 oz. for protective garments, seals, ducts, firewalls, filtration and other uses. "Novatex" bulletin, 4 pages.
Raybestos-Manhattan, Inc. 205 Middle St., Bridgeport, Conn. 06603

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic...
ACL Doc 17603 · Page 28 of 34
Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/28

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic...
ACL Doc 17603 · Page 29 of 34

ASBESTOS PRODUCTS-TRANSPORTATIONS TRENDS-1967

Percent Distribution By Means Of Transport:

	Number (000 Of Tons)	Rail	Motor Carrier	Private Truck	Air	Water	Other	Unknown
Asbestos Products	1,244	23.0%	64.6%	11.8%		0.2%	0.3%	0.1%
Asbestos Friction Material	103	.6	81.5	16.6	Q2%	0.2	.9	
Asphalt & Vinyl Asbestos Floor Tile	667	21.3	60.6	17.7		0.3		0.1

Percent Distribution By Distance Of Shipment:

	Number (000 Of Tons)	Under 50 Miles	50 To 99 Miles	100 To 199 Miles	200 To 299 Miles	300 To 499 Miles	500 To 799 Miles	800 To 1,199 Miles	1,200 And Over
Asbestos Products	1,244	5.9%	8.7%	12.7%	15.1%	17.2%	22.4%	9.9%	8.1%
Asbestos Friction Material	103	2.9	2.8	5.4	7.5	22.3	22.7	.6.8	29.6
Asphalt And Vinyl Asbestos Floor Tile	667	3.9	5.1	15.5	22.4	17.3	21.7	9.6	4.5

Percent Distribution By Weight Of Shipment:

	Number (000 Of Tons)	Under 1,000 Pounds	1,000-9,999Lbs.	10,000-29,999 (Lbs.)	30,000-59,999Lbs.	60,000-89,999Lbs.	90,000 Lbs. & Over
Asbestos Products	907	2.9%	10.4%	22.1%	.36.4%	11.6%	16.6%
Asbestos Friction Material	103	17.7	37.3	22.9	18.7	3.4	
Asphalt And Vinyl Asbestos Floor Tile	330	0.7	9.1	28.0	49.7	9.3	3.2

SOURCE: U. S. Dept. Of Commerce

UCC 005253
Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/29

WORK INJURY RATES*

	Asbestos Products	Miscellaneous Nonmetallic Mineral Products
1958	6.2	10.6
1959	21.2	15.5
1960	10.5	11.5
1961	9.9	11.4
1962	10.1	11.9
1963	10.3	11.8
1964	10.9	12.7
1965	7.1	12.9
1966	9.4	15.0
1967	9.6	16.8
1968	13.3	16.7
1969	NA	17.4
1970	13.8	15.9

* The injury frequency rate is the average number of disabling work injuries for each million employee-hours worked.

SOURCE: Handbook of Labor Statistics

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic… Published by AsbestosClaims.Law
ACL Doc 17603 · Page 30 of 34 asbestosclaims.law/library/17603/30

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic...
ACL Doc 17603 · Page 31 of 34

MAJOR FINANCIAL RATIOS FOR ASBESTOS PLANTS

	1947 %	1954 %	1958 %	1963 %	1967 %	1968 %	1969 %	1970 %
Payroll as % of Sales	29.3	25.6	23.5	23.2	25.4	24.9	25.6	25.6
Cost of Materials as % of Sales	47.7	49.0	47.8	47.3	45.9	45.6	45.2	45.7
Man-Hours Worked Per Production Worker	2,049	2,022	2,059	2,096	2,077	2,100	2,130	2,095
Wages Per Man-Hour	$1.28	$1.95	$2.30	$2.73	$3.07	$3.22	$3.42	$3.66
Sales Revenue Per Employee	$9,546	$16,414	$21,291	$26,113	$26,939	$28,535	$29,676	$31,058

SOURCE: U. S. Dept. of Commerce

UCC 005255

Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/31

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic...
ACL Doc 17603 · Page 32 of 34

UCC 005256

ASBESTOS PRODUCTS

FINANCIAL TRENDS BY COMPANY

	1962 $	1963 $	1964 $	1965 $	1966 $	1967 $	1968 $	1969 $	1970 $	1971 $	Quarterly Activity 1971 3 Mos. To Mar. 31 $	1972 3 Mos. To Mar. 31 $	% Change
Johns-Manville													
Net Sales (Mil.$)	392.3	414.9	458.9	460.2	512.5	513.9	556.1	612.6	620.4	685.1	136.0	163.8	↗ 20.4%
Profitability	6.1%	6.7%	7.0%	7.1%	7.4%	6.4%	7.2%	7.1%	6.0%	6.6%	4.1%	5.4%	
Return On Investment	6.8%	7.5%	8.3%	8.3%	9.0%	7.6%	8.4%	8.3%	6.3%	6.5%			
											13 Wks. To 3/28/71	13 Wks. To 4/2/72	
Raybestos-Manhattan													
Net Sales (Mil.$)	93.0	95.2	101.9	105.6	119.5	117.8	136.2	149.3	145.7	151.4	38.6	40.5	↗ 4.9%
Profitability	4.4%	4.6%	5.4%	6.1%	6.4%	3.1%	3.3%	2.9%	1.0%	1.8%	1.8%	1.9%	
Return On Investment	7.4%	7.3%	NA	9.6%	10.7%	5.2%	5.9%	4.9%	1.4%	2.6%			

Note: Profitability=Net Income as a % of Sales.
Return on Investment=Net Income as a % of Assets.

NA---- Not Available

SOURCE: Standard & Poors

Published by AsbestosClaims.Law
asbestosclaims.law/library/17603/32

COMPANY ACTIVITY

1. During 1971, the Flintkote Company's Asbestos mine operations at the Thetford Mines, Quebec was terminated.

2. GAF has a line of asbestos cement bulkhead material being used extensively in waterfront and inland waterways development projects.

3. GAF's "Timberline" Asphalt roof shingles have built-in thermoplastic sealing agents which are activated by the sun after the roof has been installed.

4. GAF's Industrial Products Group is launching a new asbestos latex gasketing.

5. The production of GAF's corrugated asbestos cement sheets for use in the construction of cooling towers has risen in response to a growing need for thermal water pollution control by power plants.

6. A joint venture by Illinois Central's Abex Inter'l and Rutgerswerke A. G. of Frankfurt, West Germany, of which Abex owns 50 percent, controls Fren-Do S.P.A. and Societa Italiana per l'Amianto S.P.A. Fren-do is Italy's largest producer of organic friction materials for auto and industrial applications and Societa Italiana is the world's oldest manufacturer of Asbestos products.

7. In view of the attention that is being focused on asbestos as a possible ecological pollutant, Raybestos Manhattan has formed an Environmental Task Force to review the precautionary measures the Company has observed.

8. Raybestos Manhattan has a new special asbestos felt to resist 5,000 degree F.

9. At the end of 1971, Raybestos-Manhattan's investment in Cassiar Asbestos Corp., which mines asbestos spinning fiber in British Columbia, was carried on its books at $3,480,728 and had a quoted market value of $11,275,000.

10. Johns-Manville Corp. is building a $7,000,000 plant at Asbestos, Quebec that will produce railway brake shoes, asbestos textiles and rubber rings for asbestos-cement pipe.

11. At the Jeffrey Mine, one of the world's largest open pit mines and Johns-Manville's major source of asbestos, substantial capital investment was made for new hauling, stripping and processing equipment.

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic... Published by AsbestosClaims.Law
ACL Doc 17603 · Page 33 of 34 asbestosclaims.law/library/17603/33

INDUSTRY DEVELOPMENTS

1. Tough new controls issued by the U. S. Occupational Safety & Health Administration are insentives to suppliers to come up with substitute insulating products. They do not ban asbestos insulation, but they impose a limit of 5 asbestos fibers per cubic centimeter in the air that workers breathe.

   Fibreboard Corp. switched last fall to an asbestos-free calcium silicate. It is a combination of a natural and a manufactured fiber.

2. Johns-Manville Corp. and Owens-Corning Fiberglas Corp. are pushing research efforts to eliminate asbestos from their insulation products. J-M says that it has already reduced the asbestos content of one product from 12% to 7% in the last two years. Owens-Corning has conducted plant trials of a product that uses glass fibers in place of asbestos.

3. The Philip Carey Co. of Cincinnati, a division of Panacon Corp. has had a non-asbestos product on the market since 1970. It uses perlite, a volcanic glass that expands when heated to form a lightweight aggregate of tiny spheres, and the perlite is reinforced with glass fibers.

4. The Food and Drug Administration proposes to ban clothing made from fabric which contains asbestos. The proposal would not apply to clothing made to be worn in firefighting.

5. In late 1970, a fabric containing 8% asbestos fibers was imported from Italy and used to manufacture some 600,000 women's coats, which were marketed in 1971.

6. As a result of the Tariff Commission's determination, imports of asbestos cement pipe from Japan sold at less than fair value (purchase price for export to the United States was lower than the price of corresponding pipe sold in the Japanese home market) will become subject to special dumping duties.

Union Carbide trial exhibit UC-2655: Morton Research Corporation, The Asbestos Products Industry: An Economic... Published by AsbestosClaims.Law
ACL Doc 17603 · Page 34 of 34 asbestosclaims.law/library/17603/34