PLAINTIFF'S EXHIBIT

UC-2640

"CALIDRIA" ASBESTOS PRODUCT APPLICATIONS

PRODUCT	APPLICATIONS
SG-100	Vinyl-Asbestos Floor Tile
SG-130	Masonry Coatings
SG-200	Rubber Floor Tile
Super Visbestos	Drilling Muds
SG-210	Mastics Asphaltic Coatings Phenolic Molding Compounds
HPP	Rubber Sheet Goods Mineral Board (Japan) Paper (Japan)
HPO	Asphaltic Coatings, Adhesives
RG-110	Asphaltic Spray Coatings Aluminized Coatings Mastics, Caulks & Sealants
RG-144	Adhesives (Epoxy, Phenolics) Coatings Vinyl Plastisols (High Build, Dip Coatings) Mastics, Caulks & Sealants (Vinyl Butyl, Polysulfide, Bituminous)
RG-244	Polyester Resins (Laminating, Gel Coats, Putties) Caulks & Sealants (Vinyl, Butyl, Acrylic, Polyurethane) Coatings (Epoxy, Urethane, Asphaltic)

Union Carbide trial exhibit UC-2640: Calidria Asbestos Product Applications and 1978 Domestic Market Share Anal... Published by AsbestosClaims.Law
ACL Doc 17588 · Page 1 of 11 asbestosclaims.law/library/17588/1

1978

CALIDRIA ASBESTOS DOMESTIC APPLICATIONS AREAS

			T	$M	% of Total T	% of Total $
(1)	Floor Tile	SG-100 SG-200	17,500	1800	67	39
(1)	Phenolic Compounds	SG-210 HPO	350	80	1	2
(1)	Roofing Compounds	SG-210 HPO	510	100	2	2
(1)	Asphaltic Coatings	SG-130 SG-144 RG-110	940	180	4	4
(1)	Rubber-Sheet Goods	HPP RG-100	370	130	1	3
(2)	Adhesives	RG-144 RG-244	280	230	1	5
(2)	Sealants	RG-144 RG-244	430	540	2	12
(2)	Polyester Laminates	RG-244	100	200	0.5	4
(2)	Coatings	CG-135 RG-144 RG-244	550	630	2	14
(1)	Drilling Muds	Visb. CSV SHUR	3,000	400	11	9
(1)	Miscellaneous		1,920	280	7	6
			25,950	4570		

(1) Asbestos Industry (2) Non-Asbestos Industry

Summary:

Asbestos Industry	24,590	2970	95	65
Non-Asbestos Industry	1,360	1600	5	35

UCC 005306

DOMESTIC

MARKET DETAIL

Typical Asbestos Markets for "Calidria"

I. Roofing Compounds

Total market 61,000 tons

"Calidria" share 510 tons (0.8% of total)

Market includes primarily asphalt compounds using asbestos as a flow control agent. Much of the market requires slightly longer fibers than "Calidria" has available. Realistically we can probably only compete for perhaps 10% of the total or 6100 tons.

Major competitors - Johns-Manville - Most Canadian suppliers

Carey - " " "

Bell - " " "

Market is as follows:

J-M	60%
Carey	20%
Bell	19%
"Calidria"	1%

II. Coatings & Compounds

Total market 35,200 tons

"Calidria" share 940 tons (2.7% of total)

"Calidria" participates primarily in the asphaltic coatings portion of this market which excludes roof coatings. Products include automotive undercoats, coatings for water-proofing below grade concrete and for driveways and tennis

Union Carbide trial exhibit UC-2640: Calidria Asbestos Product Applications and 1978 Domestic Market Share Anal... Published by AsbestosClaims.Law
ACL Doc 17588 · Page 3 of 11 asbestosclaims.law/library/17588/3

courts. The portion of the market in which "Calidria" might compete is unknown, but is probably at least 1/3 of the total market.

Major competitors - Canadian producers

Market is split by all manufacturers (primarily Canadian) and represents an outlet for as much short fiber product as can be allocated to this high volume, low cost application.

III. Plastics

Total market	6,400 tons
"Calidria" shares	720 tons (11.3% of total)

Market includes primarily plastics used for structures, molded goods, etc. Larger segments include chemical resistant fibers, molded phenolic parts and some rubber goods.

"Calidria" participates primarly in the latter two areas.

Major competitors - Johns-Manville

Market is split as follows:

J-M	89%
"Calidria"	11%

Union Carbide trial exhibit UC-2640: Calidria Asbestos Product Applications and 1978 Domestic Market Share Anal... Published by AsbestosClaims.Law
ACL Doc 17588 · Page 4 of 11 asbestosclaims.law/library/17588/4

~~UCC-24~~

"Calidria" Participation in Typical Domestic Asbestos Markets in 1978

	Domestic Market, Tons	Potential Segments, Tons	"Calidria" Share of Segment Tons	%
Flooring Products	147,000	75,000	17,500	23.3
Roofing	61,000	6,000	500	8.3
Coatings & compounds (Asphaltic Coatings)	35,200	12,000	1,000	8.3
Plastics (Phenolic & Rubber)	6,400	6,000	700	11.7
Drilling Muds	8,000	8,000	3,000	37.5
Other	24,000	24,000 (?)	2,300	9.6
TOTAL	281,600	131,000	25,000	19.1

REB
4/30/79

UCC 005309

DOMESTIC

"Calidria" Markets - Not Typical Asbestos

(Viscosity Control)

	Tons	Total Market*	UCC %
Adhesives	280	2500	11.2
Sealants	430	1500	28.7
Polyester Laminates	100	3400	2.9
Coatings	550	4600	12.0
TOTAL	1360	12,000	11.3

*Total Market estimates -
- Modern Plastics, January, 1979
- C & P sources (Skeist Laboratory Market Analyses - 1978)
- Assumed nominal loadings for "Calidria", i.e., 1% in polyesters, etc.

Union Carbide trial exhibit UC-2640: Calidria Asbestos Product Applications and 1978 Domestic Market Share Anal... Published by AsbestosClaims.Law
ACL Doc 17588 · Page 6 of 11 asbestosclaims.law/library/17588/6

Markets for "Calidria" - Not Typical Asbestos

I. Adhesives

Total market 3 MM tons - portion requiring viscosity additives 125,000 tons - assuming 2% addition level - market "available" 2500 tons

"Calidria" share - 280 tons (11.2% of total)

Major competitors - National Lead (Bentones)
Cabot Corporation (Cab-O-Sil)
Other (Thixcin, etc.)

Market share:

Cabot	45%
National Lead	39%
"Calidria"	11%
Others	5%

II. Sealants

Total market about 150,000 tons split as follows:

Construction	90,000 tons
Automotive	30,000 tons
Glass (Insulating)	6,000 tons
Aircraft	1,000 tons
Highways & Airfields	15,000 tons
Appliances	7,000 tons

Assuming a 1% loading of viscosity additive, a market of 1500 tons is available.

Union Carbide trial exhibit UC-2640: Calidria Asbestos Product Applications and 1978 Domestic Market Share Anal... Published by AsbestosClaims.Law
ACL Doc 17588 · Page 7 of 11 asbestosclaims.law/library/17588/7

"Calidria share 430 tons (28.7% of total)

Major competitors - Cabot (Cab-O-Sil)

National Lead (Bentones)

Market share is split as follows:

Cabot	45%
National Lead	26%
"Calidria"	29%

III. Polyester Laminates

Total market for thixotropic laminates 500,000 TPY

Assuming 1% average addition, 5,000 TPY available $23 million

Major competitors - Cabot Corp. (Cab-O-Sil)

DeGussa (Aerosil)

Others (Thixcin, Ircogel, etc.)

Market share is split as follows:

Cabot Corp.	50%
DeGussa	47%
Others	3%
"Calidria"	0%

IV. Coatings

Total market for thixotropic, viscosity modifying and pigment suspending agents is 4600 TPY (1% of 460,000 TPY)

"Calidria" share is 550 TPY (12% of total)

Union Carbide trial exhibit UC-2640: Calidria Asbestos Product Applications and 1978 Domestic Market Share Anal... Published by AsbestosClaims.Law
ACL Doc 17588 · Page 8 of 11 asbestosclaims.law/library/17588/8

Major competitors - Cabot Corp. (Cab-O-Sil)

DeGussa (Aerosil)

National Lead (Bentones)

Baker Castor Oil (Thixcin, Thixatrol)

Others

Market is split as follows:

Cabot	30%
DeGussa	20%
National Lead	20%
Baker Castor Oil	13%
"Calidria"	12%
Others	5%

Union Carbide trial exhibit UC-2640: Calidria Asbestos Product Applications and 1978 Domestic Market Share Anal... Published by AsbestosClaims.Law
ACL Doc 17588 · Page 9 of 11 asbestosclaims.law/library/17588/9

COMPETITORS AND MARKET SHARE

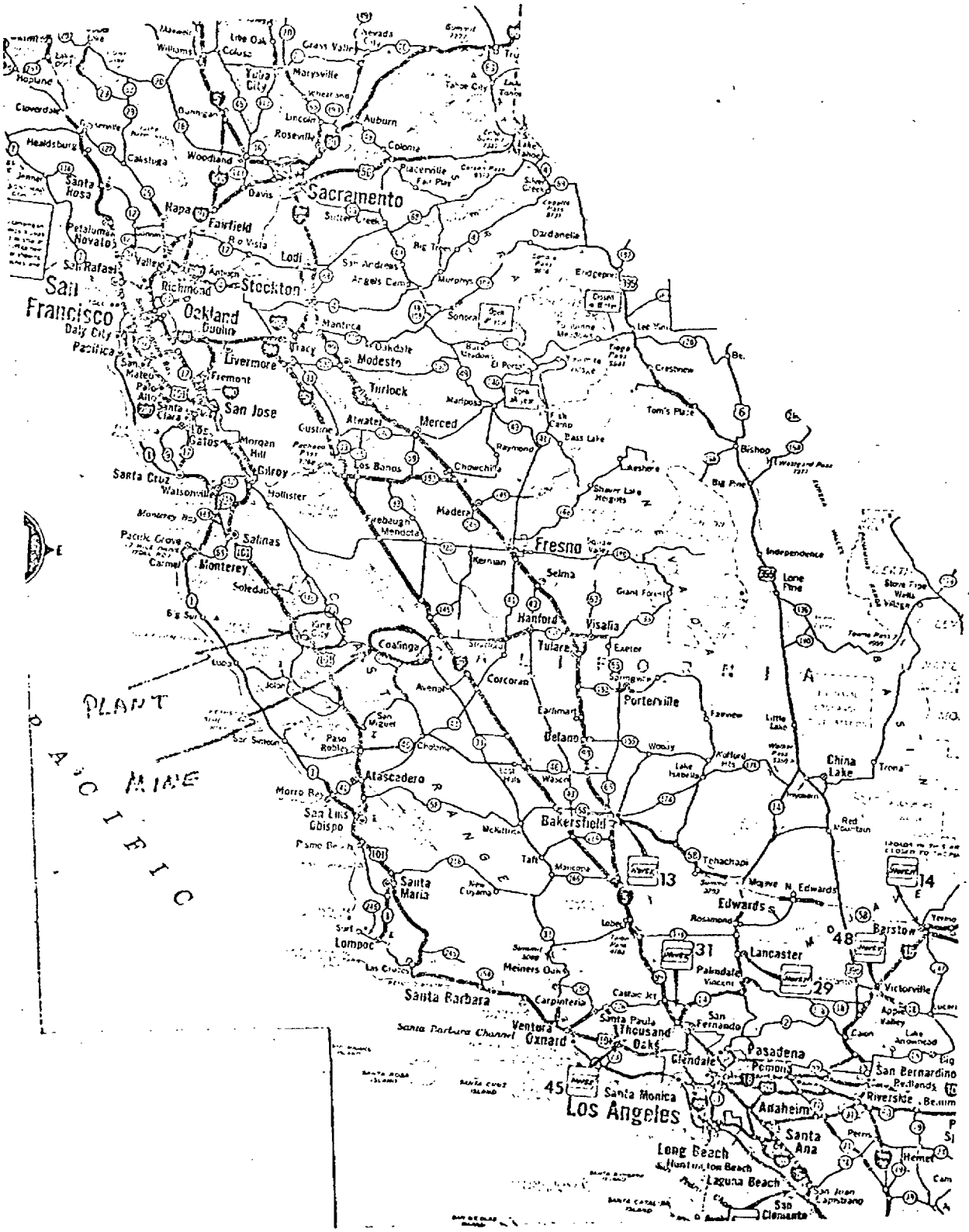
SHORT FIBER ASBESTOS MARKET

	U.S.A.	JAPAN	TOTAL
UCC	19%	16%	18%
J-M	23	11	20
Carey	47	73	53
Atlas	11	0	9

VISCOSITY CONTROL MARKET

	U.S.A.	JAPAN	EUROPE	TOTAL
UCC (RG-144 & -244)	11	25	19	15
DeGussa	25	70	70	40
Cabot	49	2	5	40
National Lead	10	2	3	3
Baker	5	1	3	2

Union Carbide trial exhibit UC-2640: Calidria Asbestos Product Applications and 1978 Domestic Market Share Ana... Published by AsbestosClaims.Law
ACL Doc 17588 · Page 10 of 11 asbestosclaims.law/library/17588/10


Sacramento
San Francisco
Oakland
Stockton
San Jose
Fresno
Bakersfield
Los Angeles
Santa Barbara
Long Beach
Anaheim
Santa Ana
Pasadena
Lancaster
Palmdale
Edwards
Barstow
Victorville
China Lake
Porterville
Visalia
Hanford
Tulare
Merced
Modesto
Turlock
Salinas
Monterey
Santa Cruz
Watsonville
Gilroy
Hollister
Atascadero
San Luis Obispo
Santa Maria
Lompoc
Oxnard
Ventura
Santa Monica
Glendale
Riverside
San Bernardino
Laguna Beach
San Clemente
PACIFIC

UCC 005315