PLAINTIFF'S EXHIBIT
UC-197

UNION CARBIDE THE DISCOVERY COMPANY

Calidria ASBESTOS

UNION CARBIDE CORPORATION · BOX K · KING CITY, CA. 93930 · TEL. 408-385-5961

UNION CARBIDE THAILAND LTD.
FILE No. | CROSS REF.
RECD. 18 MAY 1970

RCB	ADM. FIN. DEPT.
MKTG. DEPT.	SS
	SN
HFS	CV
SH	NP
RD	
AJ	
SV	PLANT
SD	WB WB
JV	CK
	LV
	SN

May 12, 1970

WR.
WB/SN
This relates to recent N.L. letter re use of asbestos perhaps in SPC formula

Mr. Ray Cabrera
Union Carbide Thailand Ltd.
Bangkok Bank Bldg.
300 Silom Road
GPO Box 1254
Bangkok 5, Thailand

Dear Mr. Cabrera:

At the request of Nate Lasher, I am sending you a sample of R-G 110, which we recommend as a filler/viscosity control agent for asphaltic compounds. Nate had mentioned SG-210 to you, but our plant production is essentially committed to domestic customers and we do not plan to export any SG-210.

R-G 110 is priced domestically at 5.75¢/lb., fob King City, which is probably somewhat higher than the asbestos currently being used. However, it has been our experience that only 1/3 to 1/2 the amount is required for similar thickening in many systems. Inexpensive fillers can be used to maintain the same mineral content. The major advantages of R-G 110 over other asbestos are its fineness and purity. Nozzle plugging and abrasion damage are essentially eliminated. In aluminum-pigmented systems the amount of aluminum can usually be reduced because of improved dispersing by CALIDRIA R-G 110.

Two sets of literature describing R-G 110, and other information, are enclosed. Please advise if you would like additional literature or samples.

Very truly yours,

John L. Myers

John L. Myers
Marketing Manager
CALIDRIA Asbestos

A23463

encl:
cc: N. Lasher, Jennat
J. A. Riddle

Cal-5

Table 3
Paint Test Results

Physical Properties	TPX-3800 Blend 14 11-93-A	PVA-2001 11-93-B
Total Solids (%)	48.6	48.6
P.V.C. (%)	21.6	21.6
Viscosity (KU)	79	79
Weight per Gallon	10.7	10.7
Paint Film Properties		
60° Gloss	47	69
Wet Adhesion		
7 Day Air Dry, 5% Lava		
(1) Initial Wear (cycles)	0	1125
(2) Total Cycles	1600	1600
(3) Percent Wear	0	45
Scrub - 7 Day Air Dry, 5% Lava Media		
(1) Initial Wear (cycles)	1700	1000
(2) Total Cycles	2900	2900
(3) Percent Wear	20	30
Application Properties		
Open Time (minutes)	20+	20+
Color Properties*(Oxide Mix)		
Development	10	13
Acceptance	Excellent	Excellent
Float	None	None

*TPX-3800 assigned a value of 10

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APPENDIX I

Interior Asbestos Formulation
Filtercake Incorporated Prior to Pigment Dispersion

Ingredient	Pounds	Gallons
Water	269.0	32.3
Cellosize QP-4400	3.0	0.3
Aerosol OT (75%) Am. Cyan.	2.3	0.3
Calidria Asbestos Filtercake (47.2 solids)	68.0	5.8
Butyl Carbitol Acetate	15.0	1.8
Tergitol NPX	3.0	0.3
Tamol 850 - 25% Active R+H. with pigment.	4.0	0.4
W. D. Lecithin	1.0	0.1
Ethylene Glycol	20.0	2.2
Phenyl Mercuric Acetate - 30	0.5	-
Colloid 60 - 746 O.K. or 748.	1.0	0.1
Ti-Pure R-911	250.0	7.5
ASP - 170 - clay	75.0	3.5
Duramite - $CaCO_3$	125.0	5.5
Water	114.0	13.7
Colloid 60	2.0	0.3
UCAR-360	243.0	27.0
	1195.8	101.1

Physical Properties

PVC	=	56.4
Total Solids	=	52.4
Weight/Gallon	=	11.8
Viscosity	=	76 KU
pH	=	8.0

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APPENDIX II

Interior Asbestos Formulation
Filtercake Incorporated after Pigment Dispersion

Ingredients	Pounds	Gallons
Water	269.0	32.3
Cellosize QP-4400	3.0	0.3
Tergitol NPX	3.0	0.3
Tamol 850	4.0	0.4
W. D. Lecithin	1.0	0.1
Ethylene Glycol	20.0	2.2
Phenyl Mercuric Acetate - 30	0.5	-
Colloid 60	1.0	0.1
Ti-Pure R-911	250.0	7.5
ASP-170	75.0	3.5
Duramite	125.0	5.5
Aerosol OT (75%)	2.3	0.3
Calidria Asbestos Filtercake (47.2% solids)	68.0	5.8
Butyl Carbitol Acetate	15.0	1.8
Water	114.0	13.7
Colloid 60	2.0	0.3
UCAR-360	243.0	27.0
	1195.8	101.1

Physical Properties

PVC	=	56.4
Total Solids	=	52.4
Weight/Gallon	=	11.8
Viscosity	=	77 KU
pH	=	8.2

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APPENDIX III

Interior Asbestos Formulation
Slurry Incorporated Prior to Pigment Dispersion

Ingredients	Pounds	Gallons
Water	269.0	32.3
Cellosize QP-4400	3.0	0.3
Calidria Asbestos Slurry (20.3% solids)*	155.0	16.4
Tergitol NPX	3.0	0.3
Tamol 850	4.0	0.4
W. D. Lecithin	1.0	0.1
Ethylene Glycol	20.0	2.2
Butyl Carbitol Acetate	12.0	1.5
Phenyl Mercuric Acetate - 30	0.5	-
Colloid 60	1.0	0.1
Ti-Pure R-911	250.0	7.5
ASP-170	75.0	3.5
Duramite	125.0	5.5
Water	30.0	3.6
Colloid 60	1.0	0.1
UCAR-360	243.0	27.0
	1192.5	100.8

Physical Properties

PVC	=	56.4
Total Solids	=	52.4
Weight/Gallon	=	11.8
Viscosity	=	76 KU
pH	=	8.3

*See Appendix VI

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APPENDIX IV

Interior Asbestos Formulation
Slurry Incorporated after Pigment Dispersion

Ingredients	Pounds	Gallons
Water	269.0	32.3
Cellosize QP-4400	3.0	0.3
Tergitol NPX	3.0	0.3
Tamol 850	4.0	0.4
W. D. Lecithin	1.0	0.1
Ethylene Glycol	20.0	2.2
Butyl Carbitol Acetate	12.0	1.5
Phenyl Mercuric Acetate - 30	0.5	-
Colloid 60	1.0	0.1
Ti-Pure R-911	250.0	7.5
ASP-170	75.0	3.5
Duramite	125.0	5.5
Calidria Asbestos Slurry (20.3% Solids)*	155.0	16.4
Water	30.0	3.6
Colloid 60	1.0	0.1
UCAR-360	243.0	27.0
	1192.5	100.8

Physical Properties

PVC	= 56.4
Total Solids	= 52.4
Weight/Gallon	= 11.8
Viscosity	= 77 KU
pH	= 8.1

*See Appendix VI

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APPENDIX V

Standard Formulation Without Asbestos Filtercake

Ingredients	Pounds	Gallons
Water	269.0	32.3
Cellosize QP-4400	5.0	0.4
Tergitol NPX	3.0	0.3
Tamol 850	4.0	0.4
W. D. Lecithin	1.0	0.1
Ethylene Glycol	20.0	2.2
Butyl Carbitol Acetate	15.0	1.8
Phenyl Mercuric Acetate - 30	0.5	-
Colloid 60	1.0	0.1
Ti-Pure R-911	250.0	7.5
ASP-170	75.0	3.5
Duramite	155.0	6.9
Water	150.0	18.0
Aerosol OT (75%)	2.3	0.3
Colloid 60	2.0	0.3
UCAR-360	243.0	27.0
	1195.8	101.1

Physical Properties

PVC	=	56.3
Total Solids	=	52.4
Weight/Gallon	=	11.8
Viscosity	=	82 KU
pH	=	8.0

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APPENDIX VI

Calidria Filtercake Slurry

Ingredients	Pounds	Percent by Weight
Water	576	55.6
Aerosol OT (75%)	4	0.4
Colloid 60	5	0.5
Butyl Carbitol Acetate	15	1.4
Calidria Asbestos Filtercake (47.2%)	424	41.0
Aerosol OT (75%)	10	1.0
Colloid 60	1	0.1
	1035	100.0

Physical Properties

Total Solids = 20.3%

Viscosity = 290 cps

Manufacturing Procedure

Charge container with Part A ingredients. Add Part B slowly under moderate agitation. The presence of the Butyl Carbitol Acetate and Colloid 60 in Part A will prevent puffing due to air entrapment. The subsequent addition of Part C completes the necessary reduction of surface tension needed to accomplish a thorough wetting out of the asbestos begun by the Aerosol OT contained in Part A. The resultant slurry should provide a reading of 4 to 5 on the Hegman scale with readings in the 6 to 7 range obtainable for paint grinds into which the asbestos slurry has been incorporated.

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11-93-C
Semi-Gloss Formulation
Based on PVA-2001

Ingredients	Pounds
Propylene Glycol	77.0
Tamol 731	10.0
Bālab 748	2.0
Unitane OR-640-A or Ti-Pure R-900	250.0
Add the above ingredients and disperse to a 7 Hegman reading.	
Tergitol NP-44	3.0
Ethylene Glycol	30.0
PMO-30	0.5
Butyl Carbitol	25.0
PVA-2001 (51.0%)	508.0
Ammonium Hydroxide (28%)	2.0
Cellosize QP-15,000 (2.5% solution)	81.0
Water	76.0
Bālab 748	2.0
	1066.5

Physical Constants

Viscosity	=	79 KU
PVC	=	21.6%
Total Solids	=	48.6%
Yield	=	100.03 gallons
Gloss - 60°	=	67

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