UNION CARBIDE

INTERNAL CORRESPONDENCE

MINING AND METALS DIVISION

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Mr. W. C. Thurber
Metals Division
New York, NY

Date: June 10, 1975
"Calidria" Asbestos
Originating Dept: TECHNOLOGY DEPARTMENT

Answering letter date:

Mr. J. L. Myers
File

Subject: California Marks Bill

The information you requested on the type of asbestos used in the various tests submitted regarding the Marks Bill is attached. The records are quite clear except for a couple of the early spray texture tests where the manufacturer cannot be sure which asbestos was used in the particular lot of material sprayed.

H. B. Rhodes/ds

H. B. Rhodes

Attachment
/ds

RECEIVED
JUN 13 1975

PLAINTIFF'S EXHIBIT
UC-4205

TABLE I

WATER-BASED SYSTEMS

WITH WATER-SOLUBLE BINDERS

Sample Designation	Commercial Application	Date	Binder	Approximate Wt. % Asbestos[1]	Spray Gun Type	Operation	Sample Time (Min.)	Asbestos Airborne Concentration (Fibers/cc >5μ)
I - INTERIOR TEXTURE SPRAYS								
12	(DWS-Coral Gables) Ceiling spray.	6/14/73	Soya protein.	2	Air supported	Operator applying ceiling spray to condominium apts.	71	0.1
82	"	"	"	2	"	Operator wiping walls after ceiling spray.	68	0.1
3	Wall spray.	"	Starch.	2	"	Operator applying wall spray to condominium apts.	51	0.3, 0.8
35	"	"	"	2	"	Operator carrying hose during wall spraying.	34	0.1
38	DWS-Kings Creek Ceiling spray.	—	"	1	"	Operator spraying ceiling of condominium.	14	0.5
28	"	—	"	1	"	"	15	0.8
56	"	—	"	1	"	"	15	0.6
131	Wall spray.	—	"	2	"	Operator spraying walls of condominium.	21	1.6
102	"	—	"	2	"	"	12	1.1
K-3	DCA-CHM Ceiling spray.	10/3/74	"	1	"	Operator applying ceiling spray to home.	19	0.5
K-2	"	"	"	1	"	Operator "wiping" walls after ceiling spray.	22	0.2
K-2	Wall spray.	"	"	2.5	"	Operator applying wall spray to home. Full coverage.	24	0.07
I-25	"	"	"	2.5	"	Operator spraying glitter. Immediately after ceiling sprayed.	26	0.0
Z-49	Font. Ceiling spray.	12/4/73	"	1	"	Operator applying ceiling spray to condominium apts.	20	0.5
Z-54	"	"	"	1	"	Operator "wiping" walls after ceiling spray.	24	0.1

[1] Based on total formulation as sprayed.

FBM Products Div. [illegible] Co. Ltd. Probably Canadian

Supro Styro Tex Canadian

6/77 = 0.5

Note: There is some uncertainty re the type of asbestos in the 6/14/73 and Kings Creek tests. Mfg was gradually shifting to Calidria.

6/77 = 1/4

TABLE II

WATER-BASED SYSTEMS

WITH LATEX BINDERS

ample ignation	Commercial Application	Date	Binder	Approximate Wt. % Asbestos (1)	Spray Gun Type	Operation	Sample Time (Min.)	Airborne Asbestos Concentration (Fibers/cc>5μ)
EXTERIOR COATINGS								
M-6	Wall and Roof Spray.	10/4/74	Vinyl latex.	3.7	Air supported.	Operator spraying vertical wall panel.	15	0.0
J-3	"	"	"	2.8	"	"	12	0.2
C-2	"	"	Acrylic latex	0	"	"	~~8~~	~~0.2~~
M-43	Roof spray.	9/30/74	Acrylic latex.	0.7	Airless.	Operator spraying downward onto a large roof.	28	0.0
M-49	"	"	"	0.7	"	"	14	0.0

Supro-
Pacific Asb
7EX3
(California)
Calidria

$\frac{\sqrt{2}}{4} = .05$

Based on total formulation as sprayed.

all California

TABLE III

RESIN-BASED SYSTEMS

Sample Designation	Commercial Application	Date	Binder	Approximate Wt. % Asbestos[1]	Spray Gun Type	Operation	Sample Time (Min.)	Asbestos Airborne Concentration (Fibers/cc >5μ)
I - POLYESTER RESINS								
A. General Purpose Laminating Resins								
69	Boat manufacture.	12/7/72	General purpose laminating resin.	0.5	Air-supported chopper.	Operator spraying molds with resin & chopped glass.	24	0.6
L-13	"	10/31/74	"	0.5	"	Operator spraying resin & chopped fiber glass. (Includes roll-out time.)	16	0.1
M-28	"	"	"	0.5	"	Operator spraying resin & chopped fiber glass.	5	0.4
M-30	"	"	"	0.5	"	Operator spraying resin & chopped fiber glass.	4	0.4
M-34	"	10/8/74	"	0.5	"	Operator spraying mold with resin. (No glass.)	55	0
M-40	"	"	"	0.5	"	"	53	0.03
I-12	"	"	"	0.5	"	"	35	0.1
B. Chemical Resistant Resins								
J-21	Fiber-glass pipe manufacture.	8/13/74	Chemical resistant resin.	1.4	Airless.	Operator adjacent to automatic spray machine coating 28' mandrels.	23	0.1
M-26	"	"	"	1.4	"	Operator wiping mandrels. In area near spraying.	14	0.4
J-5	Ship coating.	10/3/74	Chemical resistant resin + chopped fiber glass.	0.7	Air-supported wand.	Roll-out can. In spraying area about 1/4 of time.	65	0.4
J-7	"	"	"	0.7	"	Operator spraying ship hull in dry dock.	41	0.4
M-28	"	"	"	0.7	"	"	23	0

(1) Based on total formulation as sprayed.

2.93

12 =

.2

All California

TABLE III (continued)

RESIN BASED SYSTEMS

Sample Designation	Commercial Application	Date	Binder	Approximate[1] Wt. % Asbestos	Spray Gun Type	Operation	Sample Time (Min.)	Asbestos Airborne Concentration (Fibers/cc >5
II - EPOXY RESINS								
A. Filled Epoxy								
K-9	Ship coating.	10/2/74	Epoxy primer.	1.5	Airless.	Operator spraying outside & under a ship.	33	0.2
K-10	"	"	"	1.5	"	"	8	0.2
M-10	"	"	High build epoxy.	0	Air supported.	Operator spraying side of ship from scaffold.	31	0.1
I-27	"	"	"	0	"	"	14	0.1
J-1	"	"	"	0	"	"	60	0.01
B. Epoxy - Coal Tar								
M-45	Coating dry dock.	10/1/74	Epoxy Coal-tar, solvent.	1	Airless.	Operator spraying side of dry dock from suspended platform.	11	0.2
M-1	"	"	"	1	"	Operator spraying side of dry dock from fixed scaffold.	38	0
K-3	Coating pipe interiors.	"	"	1	Air-supported wand.	Operator spraying interior of 3", 6" and 12" diameter pipe.	37	0.1
III - ALKYD RESIN PAINT								
M-7	Painting building exterior	10/6/74	Alkyd resin.	12	Airless gun.	Operator spraying building exterior wall.	9	0
M-35	"	"	"	12	"	"	5	0.06

[1] Based on total formulation as sprayed.

.76 /

$\frac{2.93 + .76}{19} = 0.2$

TABLE IV

ASPHALTIC AND COAL-TAR BASED SYSTEMS

Sample Identification	Commercial Application	Date	Binder	Approx. Wt. % Asbestos[1]	Spray Gun Type	Operation	Sample Time (Min.)	Airborne Asbestos Concentration (Fibers/cc) 5μ
M-42	Auto undercoating (Sound deadener)	10/74	Cut back asphalt	15	Airless.	Operator spraying on auto body.	7	0.2
M-31	"	"	"	15	"	"	6	1.5
2	Fibrated Roof Coating.	9/26/74	"	8	Air supported.	Operator spraying against vertical steel surface.	-	0.02
2	"	10/11/74	"	8	"	" "	-	0.11
3	"	9/26/74	"	8	Airless	" "	-	0.03
3	"	10/11/74	"	8	"	" "	-	0.07
-	Emulsified asphalt fibrated roof coating.	12/18/74	Steam refined, emulsified asphalt.	3	Air supported	Operator spraying against vertical steel surface.	43	0.16
-	"	"	"	3	Airless	" "	23	0.17

[1] Based on total formulation as sprayed.

TABLE V

AIRBORNE ASBESTOS FIBER COUNTS -

GRINDING AND SANDING OF RESIN-BASED SYSTEMS CONTAINING ASBESTOS

Sample Designation	Commercial Application	Date	Resin	Asbestos Type	Asbestos Approx. Wt. %	Operation	Sample Time (Min.)	Airborne Asbestos Fiber Concentration (Fibers/cc >5 μ)
I. THERMOSET RESIN (Polyester)								
—	Molding furniture parts	3/15/72	Polyester	RG-244	0.05	Operator hand sanding small parts.	45	0.002
—	"	"	"	"	0.05	Operator running power sander with integral hood.	45	0.002
1929-40-4	"	12/6/72	"	"	0.3	Operator sanding and grinding molded parts. Good hood & ventilating system on grinder.	23	0.3
1929-82-3	Fabrication of reinforced fiber glass pipe.	2/27/73	Polyester	RG-144	2-3	Operator pulls pipe along line. Saws off end with circular saw.	19	0.1
1929-82-4	"	"	"	"	2-3	Same operation as 1929-82-3.	49	0.1
1929-82-5	"	"	"	"	2-3	Operator removing end of pipe with scarfing machine.	45	0.04
I-13	"	8/13/74	"	RG-244	1.4	Operator shaping end of pipe with bell & spigot machine.	16	0.3
I-6	"	"	"	"	1.4	Operator cutting off pipe end and light grinding on exterior surface.	17	0.2
I-26	Fabrication of FRP tanks and pipe.	8/13/74	Polyester	RG-244	1.5	Operator grinding inside of 13' I.D. x 25' tank.	16	0.4
C-8	"	"	"	"	1.5	Continuation of same operation as I-26.	5	0.3
I-39	"	"	"	"	1.5	Operator grinding edges of miscellaneous small parts.	25	0.3
1929-84-4	Production of artificial bricks.	3/8/73	Polyester	RG-244	2.0	Operator cutting with sabre saw.	44	0.1
1929-84-5	"	"	"	"	2.0	Operator trimming with sabre saw.	39	0.2
B-20	Production of fiber glass boats.	11/26/74	Polyester	RG-244	0.5	Operator grinding inside of boat hull.	11	0.0
B-25	"	"	"	"	0.5	Operator grinding.	4	0.0

TABLE VI

AIRBORNE ASBESTOS FIBER COUNTS

GRINDING OF RESIN PLAQUES CONTAINING ASBESTOS IN A SMALL (8'x8'x8.5') CLOSED ROOM

Plaque Composition							Airborne Asbestos Fiber Concentration (fibers/cc >5μ)		
							During Grind (7 Min.)		After Grind (90 Min.)
Resin Type	Resin Wt. %	Chrysotile Type	Chrysotile Wt. %	Fiber Glass Wt. %	Sisal Wt. %	Lime-stone Wt. %	Operator Personal Sample	Sample from 5 Ft. Level Room Corner	Sample from 5 Ft. Level Room Corner
Polyester	79.2	RG-244	0.8	20.0	-	-	0.0	0.0	0.0
Polyester	99.2	RG-244	0.8	-	-	-	0.0	0.0	0.0
Polyester	98.0	RG-244	2.0	-	-	-	0.0	0.2	0.01
Polyester	96.0	RG-244	4.0	-	-	-	0.7	1.2	0.01
Epoxy	76.0	RG-144	4.0	20.0	-	-	0.2	0.2	0.05
Polyester	35.0	RG-110	5.0	10.0	10.0	40.0	0.6	1.2	0.02
Polyester	35.0	RG-110	10.0	10.0	10.0	35.0	0.0	0.0	0.0
Polyester	30.0	SG-200	18.0	-	2.0	50.0	0.3	0.9	0.06

UCC 010060