CALIDRIA
ASBESTOS SG-210

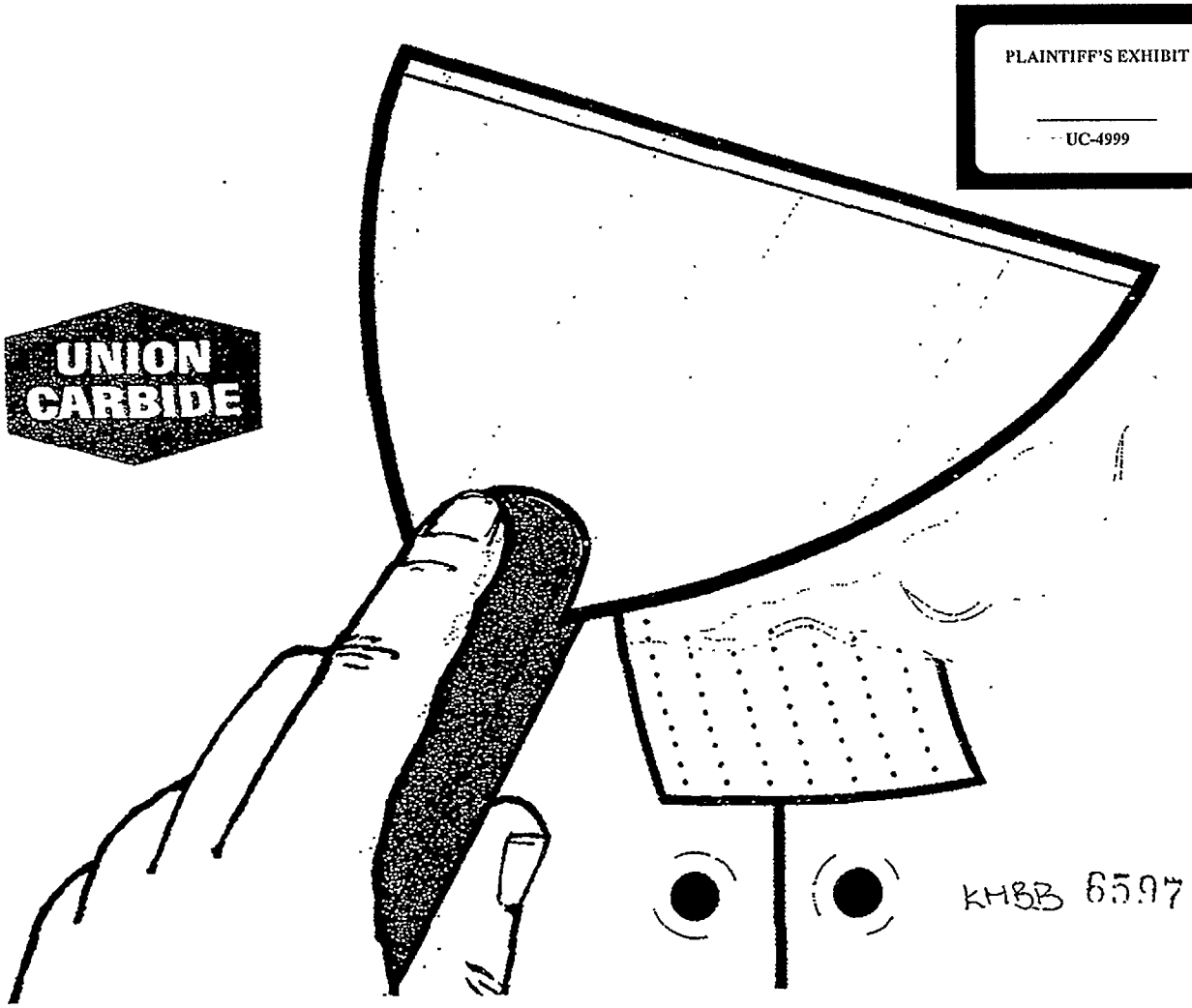
...an economical, highly efficient product to strengthen and control viscosity of dry and ready-mix

...TAPE-JOINT COMPOUNDS

[illegible] & CROSFIELD, PACIFIC INC.
[illegible] PARK AVENUE
[illegible]ERVILLE CALIFORNIA 94608
AREA CODE 415 - 558-8333

PLAINTIFF'S EXHIBIT
UC-4999

UNION CARBIDE



KHBB 6597

CALIDRIA
ASBESTOS SG-210

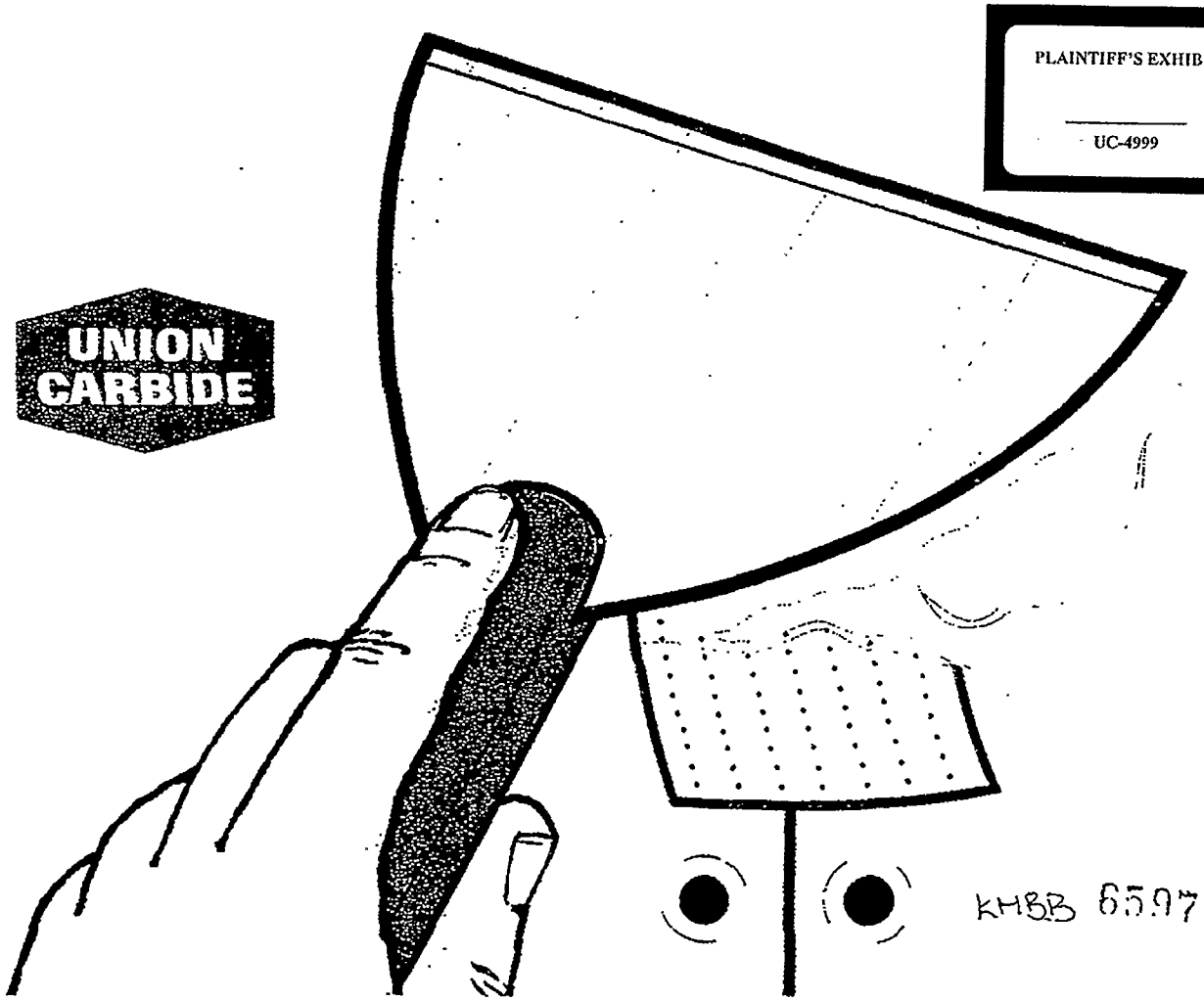
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Calidria ASBESTOS

SG-210 for TAPE-JOINT COMPOUNDS

The high-purity, finely ground fibers of "Calidria" asbestos SG-210 offer many advantages compared to other types of asbestos including:

MORE EFFICIENT STRENGTHENING

"Calidria" asbestos SG-210 fibers are ground to a fine size, with over 85% of the fibers less than 325 mesh. The product therefore has a large surface area and more active sites to interact with the inert fillers in the compound. Formulators using "Calidria" asbestos therefore need less material to give dimensional strength to the finished joint.

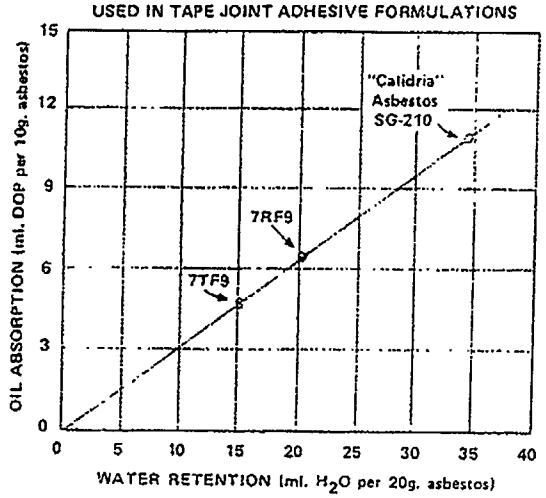
MORE EFFICIENT VISCOSITY CONTROL

The fibers of "Calidria" asbestos SG-210 can absorb vast amounts of water – generally about 400 times their weight. As shown by the graph above, this unique asbestos absorbs from 70 to 125% more water and oil than other types of asbestos. Thus, less "Calidria" asbestos is needed to reach a given viscosity.

40% SMALLER ADDITIONS

This reduction can be made by most users switching to "Calidria" asbestos SG-210 from other types of asbestos. Such a reduction allows substantial savings in the amount of asbestos to be handled and stored. To make up for the weight difference, extra limestone should be added to the system.

WATER AND OIL ABSORPTION CAPACITY OF DIFFERENT ASBESTOS PRODUCTS USED IN TAPE JOINT ADHESIVE FORMULATIONS



LESS CRACKING

The smaller addition needed with "Calidria" asbestos SG-210 reduces shrinkage problems that often occur with large asbestos additions. SG-210 users have reported that cracking over nailholes and along feathered edges has been minimized.

SMOOTHER, WHITER COMPOUNDS

The tiny particles of "Calidria" asbestos SG-210 give very smooth compounds when spread and dried. The absence of rock dust and abrasive fillers in this asbestos also contributes to the smoothness. There are no impurities that can discolor the system, so that a whiter compound can also be obtained.

CONVINCE YOURSELF

To test the effectiveness of "Calidria" asbestos SG-210, make up a small batch of your present formulation. Add 60% of your normal asbestos addition using "Calidria" asbestos SG-210. Then make up for the difference in weight using limestone. Overall water demand should be about the same but sometimes varies according to the ingredients in the formulation. Withhold about 10% of the water for final viscosity adjustment at the end of mixing. Then test the properties of the formulation made with SG-210 . . . and compare.

KMBB 6598

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Union Carbide trial exhibit UC-4999: Union Carbide Product Brochure for Calidria Asbestos SG-210 in Tape-Joint C...
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TYPICAL PHYSICAL PROPERTIES

Reflectance (G.E. Photovoltmeter)	69%
Magnetite Content	2% max.
Alkalinity	0.5 to 0.6% of Na_2O
pH in Water (5% slurry)	8.5 to 9.5
Surface Area (BET)	50 to 60 sq. m per g.
Oil (DOP) Absorption	100 to 110 lb. per 100 lb. asbestos
Water Absorption	62 to 65 weight % in filter cake
Wet Bulk Density (settled volume after 1 hour)	220 ml. for 10 g. asbestos in 250 ml container
Dry Bulk Density	4 to 5.5 lb. per cu. ft.

[illegible]

Cumulative retained on 100 mesh screen	0.6%
Cumulative retained on 200 mesh screen	3 to 6%
Cumulative retained on 325 mesh screen	10 to 15%

PACKAGING AND AVAILABILITY

One Package – Weight (3 ply paper bag)	30 lb.
One Pallet: Weight Dimensions	1,200 lb. approx. 53 in. x 44 in. x 69 in. high
Full 50-ft. Carload (available from Kang City, Calif. plant)	52 pallets 62,400 lb.
Full 40 ft. Truckload (available from several locations nationwide)	17 pallets 20,400 lb.

TYPICAL PERFORMANCE DATA IN 3 READY-MIX FORMULATIONS

INGREDIENTS AND ORDER OF ADDITION*	BEDDING-COAT TAPE-JOINT COMPOUND		GENERAL-PURPOSE TAPE-JOINT COMPOUND		TAPE-JOINT TOPPING COMPOUND	
	lbs. per 100 Gal.	% by Weight	lbs. per 100 Gal.	% by Weight	lbs. per 100 Gal.	% by Weight
Water	424.16	31.39	421.67	31.35	399.81	28.27
"Cellosize" TJC Thickener	4.41	0.32	4.41	0.32	6.96	0.49
Bacteriastat	1.72	0.13	1.73	0.13	1.84	0.13
Anionic Dispersant	14.01	1.04	14.01	1.04	–	–
"UCAR" Latex 130	90.94	6.73	–	–	80.47	5.89
"UCAR" Latex 131	–	–	97.55	7.25	–	–
Dibutyl Phthalate	5.23	0.39	–	–	4.62	0.33
Ethylene Glycol	8.74	0.65	8.74	0.65	9.39	0.66
"Calidria" Asbestos SG-210	39.62	2.92	39.19	2.92	42.17	2.97
Mica, AA	..	..	91.60	6.81	–	–
Mica, P-80-F	184.34	13.66	91.60	6.81	23.36	1.65
Mica, Ser-X	–	–	–	–	93.20	6.60
Clay, ASP 400	35.04	2.60	21.71	1.62	9.24	0.66
Calcium Carbonate, No. 1 white	542.17	40.11	–	–	729.53	51.56
PD #1 Defoamer	0.88	0.06	–	–	–	–
Talcum Powder	–	–	–	–	9.24	0.66
Water Conditioner	–	–	–	–	4.67	0.33
Talc	–	–	4.35	0.32	–	–
Calcium Carbonate, No. 1 white	–	–	8.77	0.65	–	–
	–	–	539.69	40.13		
Total	1351.26	100.00	1345.02	100.00	1414.50	100.00
TYPICAL PROPERTIES						
Water Content	35.1%		35.1%		30.66%	
Brabender Viscosity	700 B.U.		600 B.U.		840 B.U.	
Adhesion to Wallboard Tape	100%		100%		100%	
Nailhole Cracking Resistance	99%		95%		92%	
Sandability	Good		Good		Good	

*Mixed 1.5 to 2.0 hours in 1-gallon mixer at 79 r.p.m.

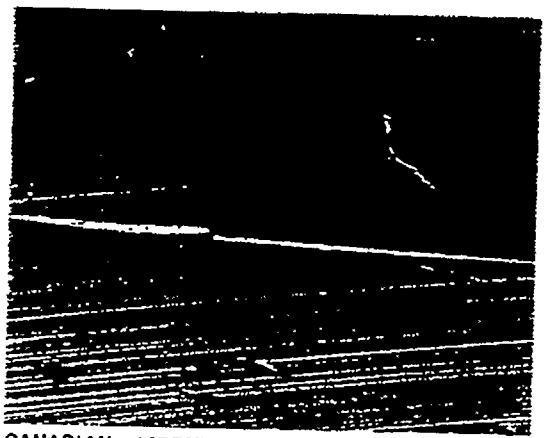
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Why is "Calidria" asbestos different?

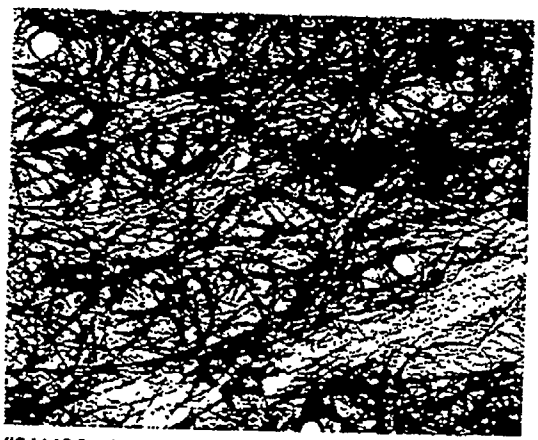
"Calidria" products are made from high-purity, short-fiber chrysotile asbestos obtained from a unique deposit about 160 miles south of San Francisco, California. Unlike conventional deposits that extend through the host rock, this deposit is essentially free of hard, consolidated rock masses. Further, the ore assays up to 60% asbestos compared to conventional deposits which contain from 6 to 10% asbestos.

Special hydraulic beneficiation techniques developed by Union Carbide efficiently break down the fiber bundles and remove the rock and impurities from the asbestos fiber. As a result, all "Calidria" products are over 95% pure asbestos whose fibers are 98% liberated from fiber bundles.

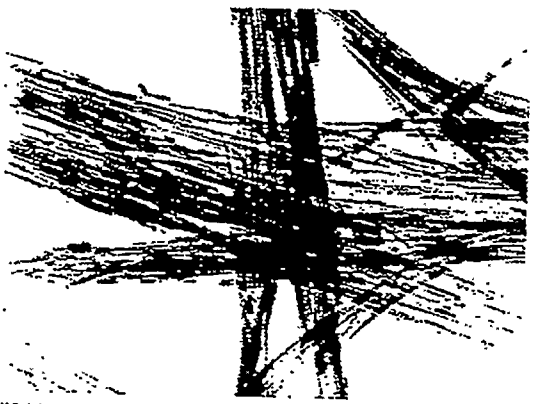
SG-210 is finely ground for use in tape-joint compounds.



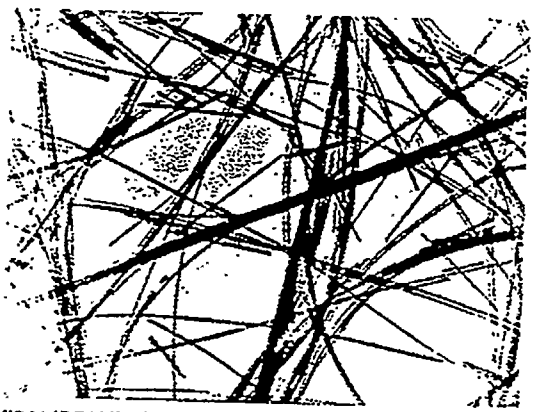
CANADIAN ASBESTOS — AS-MINED — Individual fiber bundles are straight and tightly bonded, surrounded by consolidated rock masses. In this form, the fibers defy separation from each other and from the host rock.



"CALIDRIA" ASBESTOS — AS-MINED — Here the fibers are randomly oriented and essentially free of hard rock masses. Further, the ore assays up to 60% asbestos, considerably more than the Canadian ore.



"CALIDRIA" ASBESTOS — IF DRY-PROCESSED — Even the most exacting dry processes do not completely break down the fiber bundles into individually liberated fibers. Union Carbide technology developed a special wet process to liberate the fibers.



"CALIDRIA" ASBESTOS — UNIQUELY WET-PROCESSED — Union Carbide's process separates 98% of the fibers from the fiber bundles. The fibers contain virtually no rock dust, abrasive fillers, or impurities that can mar tape-joint compounds.

KMBB 6600

Use "Calidria" Asbestos T-135 in Acoustical and Texturing Compounds

Containing high-purity asbestos and TiO_2, "Calidria" asbestos T-135 is a low-cost pigment with secondary thickening action. The titanium dioxide particles are uniformly dispersed along the asbestos fibers and are firmly fixed to the fiber surface by electrostatic attraction. These dispersed TiO_2 particles give maximum optical efficiency and allow T-135 to replace TiO_2 on a pound-for-pound basis. The effective thickening ability of the high-purity asbestos fibers also allows removal of asbestos and partial removal of other thickeners. "Calidria" asbestos T-135 therefore provides savings in many spray-ceiling acoustic and wall-texturing compounds.

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KMBB 6601

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