UNION CARBIDE

Calidria ASBESTOS

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RESIN GRADE - 144

Union Carbide's RG-144 Asbestos is a highly refined, purified chrysotile asbestos. There are about 1×10^{14} colloidal fibrils per gram of RG-144. For this reason RG-144 is an effective low cost thickening agent for liquid resins. Because of the favorable aspect ratio (ca. 200:1) of the fibrils, they perform well as mineral reinforcing whiskers in resin systems. The physical characteristics of RG-144 are shown below.

Typical Physical Characteristics

Specific Gravity	2.45
Moisture Content, % by Wt.	2.0 max.
Surface Area, Sq. meters per gram	60 approx.
Reflectance, G.E. Brightness	72-76
Nature of Surface Charge	Electropositive (Cationic)
pH in Water (2% slurry)	9.0
Bulking Value, gal./100 lb.	4.8
Oil Absorption (DOP) lb./100 lb.	120
Refractive Index, n_d 25°C	1.54-1.56
Aspect Ratio (Average L/D)	200:1
Tensile Strength, psi*	824,000 max. (281,000-436,000)
Tensile Modulus, psi*	23.2×10^6
Dry Bulk Density, lb./cu. ft (fully aerated)	4
Shipping Density, lb./cu. ft.	12-14
Standard Pallet Weight, lb.	1400

Chrysotile is one of a group of six different asbestiform minerals. It is a tubular, hydrated magnesium silicate ($Mg_6(OH)_8Si_4O_{10}$) and accounts for 90% of all asbestos currently used in the United States. (Most of which is mined and processed in Canada and is known, consequently, as Canadian Chrysotile.)

*1968 Modern Plastics Encyclopedia, p. 594

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Canadian chrysotile normally occurs as a cross fiber in serpentine rock. It is refined by crushing with subsequent air separation from large quantities of waste rock and is graded according to Fiber length; from Grade 3 (the longest) to Grade 7.

RG-144 differs from conventional chrysotile because of the unusual morphology of the massive California deposit from which it is mined and the exclusive hydraulic process by which it is refined. RG-144 contains more than 98% chrysotile fiber and less than 0.7% magnetite. RG-144 is also unique because it contains a higher concentration of fully liberated asbestos fibrils (whiskers) than any other chrysotile product.

CALIDRIA RG-144, because of its unusual purity, high concentration of liberated fibrils, and controlled moisture content is recommended for use in superior products in the following areas of application.

For Viscosity Control

1. Vinyl plastisols
2. Asphaltic sealants and mastics
3. Polysulfide sealants
4. Epoxy adhesives and encapsulating compounds
5. Butyl rubber sealants
6. Polyester premixes
7. Casein adhesives

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For Whisker Reinforcement

1. Rigid vinyls (with excellent see-through)
2. Nylon molding compounds
3. Polysulfone compounds
4. Polyethylene compounds

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