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Optifil®

CALCIUM CARBONATE

DESCRIPTION

A unique ground calcium carbonate from a specialty, high purity calcium carbonate and processed at Huber's largest GCC plant in Quincy, Illinois. Key advantages include controlled ultra-fine particle distribution, high surface area, round particle shape, and low silica content. Applications for Optifil include coatings, inks, PVC pipe, rubber, plastics, and oilfield drilling fluids where its 99%+ calcium carbonate content yields almost complete acid solubility.

TYPICAL PHYSICAL PROPERTIES

Median Particle Size (Sedigraph®, μ)	<u>1.7</u>
Brightness (Hunter reflectance)	93
Oil Absorption (lbs of oil / 100lbs, ASTM D281)	17
Moisture (% , ASTM D280)	0.2
Loose Bulk Density (lb/ft ³ , ASTM C110)	50
Compacted Bulk Density (lb/ft ³ , ASTM C110)	70
Acid Solubility (% in HCl)	99.8
Hegman Grind (ASTM D1210)	6.5

PARTICLE SIZE (SCREEN) ANALYSIS

Mesh size	<u>%</u>
+325 (45μm)	0.005

TYPICAL CHEMICAL ANALYSIS

Calcium Carbonate	<u>%</u>
Magnesium Carbonate	99.3
Silica and Silicates	0.4
Other	0.05
	0.2

MINERAL PROPERTIES

Color	Quincy, IL
Alkalinity (as NaOH, ASTM D1208)	White
pH (ASTM D1208)	0.4 mg/gm
Hardness (Hand. Of Chem. & Phy)	9.4 (saturated solution)
Solubility (Hand. Of Chem. & Phy)	3 Mohs, relatively non-abrasive
Particle Shape (Microscope)	0.0035 gm/100 mL H ₂ O at 100°C
Specific Gravity (ASTM D153)	Irregular, uniaxial
Refractive Index (Hand. Of Chem. & Phy)	2.7
Weight per Gallon (s.g. x 8.345)	1.6
Linear Expansion Coefficient (Hand. Of Chem. & Phy)	22.6 lbs/solid gallon
	4.3 x 10 ⁻⁶ /°C

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