

Nyco HARRP™ 40 Wollastonite

Category : Ceramic , Oxide , Silicon Oxide , Other Engineering Material , Additive/Filler for Polymer

Material Notes:

HARRP™ 40 is suggested for concrete, roof tile, grout/stucco, etc. reinforcement. Wollastonite is a naturally occurring white mineral with an acicular (needle-shaped) particle structure. This distinctive particle morphology makes wollastonite an ideal performance mineral for a broad range of industrial and consumer applications, including polymer reinforcement; coatings; construction/architecture reinforcement; enhancing friction stability in discs, lings, and brakes; and metallurgy. Information provided by NYCO Minerals.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Nyco-HARRP-40-Wollastonite.php

Physical Properties	Metric	English	Comments
Bulk Density	2.21 g/cc	0.0799 lb/in ³	
	2.64 g/cc	0.0955 lb/in ³	
Density	2.90 g/cc	0.105 lb/in ³	
Solubility in Water	0.0095 %	0.0095 %	
Moisture Absorption	0.100 %	0.100 %	
pH	9.9	9.9	10% Slurry
Molecular Weight	116 g/mol	116 g/mol	

Mechanical Properties	Metric	English	Comments
Hardness, Mohs	4.5	4.5	
Tensile Strength	2700 - 4100 MPa	392000 - 595000 psi	Fiber Strength
	@Diameter 0.00300 - 0.150 mm	@Diameter 0.000118 - 0.00591 in	
Modulus of Elasticity	303 - 530 GPa	43900 - 76900 ksi	Fiber Modulus
	@Diameter 0.00300 - 0.150 mm	@Diameter 0.000118 - 0.00591 in	

Thermal Properties	Metric	English	Comments
CTE, linear	6.50 µm/m-°C	3.61 µin/in-°F	
Thermal Conductivity	2.63 - 2.77 W/m-K	18.3 - 19.2 BTU-in/hr-ft ² -°F	
Melting Point	1410 °C	2570 °F	ASTM D1857
	1540 °C	2800 °F	theoretical

Optical Properties	Metric	English	Comments
Refractive Index	1.63	1.63	

Component Elements Properties	Metric	English	Comments
Al2O3	0.25 %	0.25 %	
CaO	45.72 %	45.72 %	
Fe2O3	0.25 %	0.25 %	
K2O	0.20 %	0.20 %	
Loss on Ignition(%)	6.3 %	6.3 %	
MgO	0.71 %	0.71 %	
MnO	0.020 %	0.020 %	
SiO2	46.52 %	46.52 %	
TiO2	0.050 %	0.050 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	1.30e+13 ohm-cm	1.30e+13 ohm-cm	pure wollastonite
Dielectric Constant	6.8	6.8	
	@Frequency 10000 Hz	@Frequency 10000 Hz	
	6.8	6.8	
	@Frequency 100000 Hz	@Frequency 100000 Hz	
	6.9	6.9	
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dissipation Factor	6.9	6.9	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.00152	0.00152	
	@Frequency 1000 Hz	@Frequency 1000 Hz	
	0.0046	0.0046	
@Frequency 10000 Hz	@Frequency 10000 Hz		
	0.0046	0.0046	
@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz		

Electrical Properties	Metric	English	Comments
	@Frequency 100000 Hz	@Frequency 100000 Hz	

Descriptive Properties	Value	Comments
Appearance	White	
Bulking Value (gal./lbs.)	0.0413	
Minus 100 U.S. Mesh Screen (%)	57	< 149 μ m
Minus 20 U.S. Mesh Screen (%)	100	< 841 μ m
Minus 40 U.S. Mesh Screen (%)	97	< 400 μ m
Minus 60 U.S. Mesh Screen (%)	79	< 250 μ m
Morphology	Acicular	

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