

Malvern Minerals Novakup® 325 Surface-Treated Lamellar Quartz Filler/Extender

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

Material Notes:

Novakup® is a surface modified or silane treated Novacite®. It has been used its barrier prosperities in chemical and corrosion resistant applications and as a filler/extender/reinforcing agent in polymers. Novacite® quartz silica has closely controlled sizing that is used extensively in the coatings field. Novacite® has broad acceptance as silica in special purpose, product finishes OEM, automotive and industrial coatings. The unique, disc-like or lamellar shape of Novacite® makes it useful for coating systems where low oil absorption and improved barrier properties are desired. In coatings, the lamellar plate overlap parallel to the substrate surface. It has a polar, wettable surface and is very transparent in the UV and visible range. Its structure alpha (low) quartz, which is stable to 573°C. The crystallography of Novacite shows it is an uncommon variety of quartz, with anhedral or subhedral crystals that cleave along the principal axis of the molecular structure. Information provided by Malvern Minerals Company.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Malvern-Minerals-Novakup-325-Surface-Treated-Lamellar-Quartz-FillerExtender.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.65 g/cc	2.65 g/cc	
Bulk Density	0.8486 g/cc	0.03065 lb/in ³	Loose packed
	1.326 g/cc	0.04789 lb/in ³	Dense Packed
Brightness	80 %	80 %	GE Brightness
Oil Absorption	17 - 20 %	17 - 20 %	
Fineness	0.00 - 2.0	0.00 - 2.0	Hegman
Water Absorption	8.7 %	8.7 %	
	0.00 %	0.00 %	
	@Temperature 110 °C, Time 10800 sec	@Temperature 230 °F, Time 3.00 hour	
Porosity	0.00 %	0.00 %	
	@Temperature 1000 °C, Time 1800 sec	@Temperature 1830 °F, Time 0.500 hour	
	0.46 - 0.52 %	0.46 - 0.52 %	
Particle Size	>= 10 µm	>= 10 µm	20% finer
	7.0 - 15 µm	7.0 - 15 µm	average
	<= 53 µm	<= 53 µm	98% finer

pH Physical Properties	6.0 - 6.3 Metric	6.0 - 6.3 English	in distilled water Comments
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Mechanical Properties	Metric	English	Comments
Knoop Microhardness	820	820	
Hardness, Mohs	7.0	7.0	

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	0.803 J/g-°C @Temperature 0.000 - 200 °C	0.192 BTU/lb-°F @Temperature 32.0 - 392 °F	Typical Novacite; finer grades are lower than coarser grades
Transformation Temperature	573.7 °C	1065 °F	on heating
	573.8 °C	1065 °F	on cooling

Optical Properties	Metric	English	Comments
Refractive Index	1.550	1.550	

Component Elements Properties	Metric	English	Comments
Al2O3	0.102 %	0.102 %	
CaO	0.014 %	0.014 %	
Fe2O3	0.039 %	0.039 %	
Loss on Ignition(%)	0.19 %	0.19 %	
MgO	0.021 %	0.021 %	
SiO2	99.49 %	99.49 %	
TiO2	0.015 %	0.015 %	

Descriptive Properties	Value	Comments
Acid Number	0	0-18
Color	Gray-Tan	Wet
	White	Dry

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