

Malvern Minerals Novakup® Daper 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-Daper-Surface-Treated-Lamellar-Quartz-FillerExtender.php

Specific Gravity 2.65 g/cc 2.65 g/cc Bulk Density 0.8486 g/cc 0.03065 lb/inų Loose packed 1.326 g/cc 0.04789 lb/inų Dense Packed Brightness 80 % 80 % GE Brightness Oil Absorption 17 - 20 % 17 - 20 % Fineness 5.0 - 7.0 5.0 - 7.0 Hegman Water Absorption 8.7 % 8.7 % 0.00 % 0.00 % 0.00 % @Temperature 110 ŰC, Time 10800 sec @Temperature 230 ŰF, Time 3.00 hour 0.00 % 0.00 % 0.00 % @Temperature 1000 ŰC, Time 1800 sec ðF, Time 0.500 hour Porosity 0.48 - 0.52 % 0.48 - 0.52 % Particle Size 4.5 - 7.5 ŵm 4.5 - 7.5 ŵm average <= 10 ŵm 78% finer	Physical Properties	Metric	English	Comments
1.326 g/cc 1.326 g/cc 0.04789 lb/inų Dense Packed 80 % GE Brightness Oil Absorption 17 - 20 % 17 - 20 % Fineness 5.0 - 7.0 5.0 - 7.0 Hegman Water Absorption 8.7 % 0.00 % ©Temperature 110 ŰC, Time 10800 sec 0.00 % ©Temperature 1000 ŰC, Time 3.00 hour 0.00 % ©Temperature 1830 ŰF, Time 1.500 hour Porosity 0.48 - 0.52 % 0.48 - 0.52 % Particle Size 4.5 - 7.5 ŵm 4.5 - 7.5 ŵm average	Specific Gravity	2.65 g/cc	2.65 g/cc	
Brightness 80 % 80 % GE Brightness	Bulk Density	0.8486 g/cc	0.03065 lb/in³	Loose packed
Oil Absorption 17 - 20 % 17 - 20 % Fineness 5.0 - 7.0 5.0 - 7.0 Hegman Water Absorption 8.7 % 8.7 % 0.00 % 0.00 % 0.00 % @Temperature 110 ŰC, Time 10800 sec @Temperature 230 ŰF, Time 3.00 hour 0.00 % 0.00 % @Temperature 1830 ŰF, Time 0.500 hour Porosity 0.48 - 0.52 % Particle Size 4.5 - 7.5 ŵm 4.5 - 7.5 ŵm		1.326 g/cc	0.04789 lb/in³	Dense Packed
Fineness 5.0 - 7.0 5.0 - 7.0 Hegman	Brightness	80 %	80 %	GE Brightness
Water Absorption 8.7 % 0.00 % 0.00 % @Temperature 110 °C, Time 10800 sec @Temperature 230 °F, Time 3.00 hour 0.00 % 0.00 % @Temperature 1000 °C, Time 1800 sec @Temperature 1830 °F, Time 0.500 hour Porosity 0.48 - 0.52 % Particle Size 4.5 - 7.5 Âμm 4.5 - 7.5 Âμm average	Oil Absorption	17 - 20 %	17 - 20 %	
0.00 % @Temperature 110 °C, Time 10800 sec 0.00 % 0.00 % 0.00 % 0.00 % @Temperature 1000 °C, Time 1800 sec @Temperature 1830 °F, Time 1.500 hour Porosity 0.48 - 0.52 % 0.48 - 0.52 % Particle Size 4.5 - 7.5 Âμm 4.5 - 7.5 Âμm average	Fineness	5.0 - 7.0	5.0 - 7.0	Hegman
@Temperature 110 °C, Time 10800 sec @Temperature 230 °F, Time 3.00 hour 0.00 % 0.00 % @Temperature 1000 ŰC, Time 1800 sec @Temperature 1830 ŰF, Time 0.500 hour Porosity 0.48 - 0.52 % Particle Size 4.5 - 7.5 Âμm 4.5 - 7.5 Âμm 4.5 - 7.5 Âμm	Water Absorption	8.7 %	8.7 %	
Time 10800 sec Time 3.00 hour 0.00 % 0.00 % © Temperature 1000 °C, Time 1800 sec Time 0.500 hour Porosity 0.48 - 0.52 % 0.48 - 0.52 % Particle Size 4.5 - 7.5 Âμm 4.5 - 7.5 Âμm average		0.00 %	0.00 %	
@Temperature 1000 @Temperature 1830 °C, °F, Time 1800 sec Time 0.500 hour Porosity 0.48 - 0.52 % Particle Size 4.5 - 7.5 Âμm 4.5 - 7.5 Âμm average				
°C, Time 1800 sec °F, Time 0.500 hour Porosity 0.48 - 0.52 % Particle Size 4.5 - 7.5 Âμm 4.5 - 7.5 Âμm average		0.00 %	0.00 %	
Particle Size 4.5 - 7.5 Âμm 4.5 - 7.5 Âμm average		°C,	°F,	
· · · · · · · · · · · · · · · · · · ·	Porosity	0.48 - 0.52 %	0.48 - 0.52 %	
<= 10 Âμm <= 10 Âμm 78% finer	Particle Size	4.5 - 7.5 µm	4.5 - 7.5 Âμm	average
		<= 10 Âμm	<= 10 Âμm	78% finer
<= 20 Âμm		<= 20 Âμm	<= 20 Âμm	99% finer



Physical Properties	6.0 - 6.3 Metric	6 0 - 6 3 English	in distilled water Comments
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	0.192 BTU/lb-°F	Typical Novacite; finer grades are lower than coarser grades
	@Temperature 0.000 - 200 °C	@Temperature 32.0 - 392 °F	
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
Al203	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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