

Daikin POLYFLON M-18 PTFE Molding Powder, Fine Cut

Category : Polymer , Thermoplastic , Fluoropolymer , PTFE , Polytetrafluoroethylene (PTFE), Molded

Material Notes:

Fine cut powder. Processing Methods: Compression molding. Features: Suited to molding of large billets, has nearly the same molding characteristics of M-12. Also allows uniform mixing of inorganic filler and pigment. Information provided by Daikin Industries.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Daikin-POLYFLON-M-18-PTFE-Molding-Powder-Fine-Cut.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.13 - 2.22 g/cc	2.13 - 2.22 g/cc	ASTM D792
Bulk Density	0.470 g/cc	0.0170 lb/in ³	ASTM D894
Water Absorption	0.00 % @Thickness 8.50 mm, Time 86400 sec	0.00 % @Thickness 0.335 in, Time 24.0 hour	ASTM D570
Particle Size	38 µm	38 µm	Laser Method (Dry)
Viscosity	1.00e+13 - 1.00e+15 cP @Temperature 340 - 380 °C	1.00e+13 - 1.00e+15 cP @Temperature 644 - 716 °F	Melt viscosity
Linear Mold Shrinkage	0.020 - 0.050 cm/cm	0.020 - 0.050 in/in	
Deformation	5.0 %	5.0 %	6.7 MPa load, at 100°C, 24 hrs; ASTM D621
	7.0 %	7.0 %	13.7 MPa load, at 25°C, 24 hrs; ASTM D621

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	50 - 65	50 - 65	
Tensile Strength at Break	20.0 - 45.0 MPa	2900 - 6530 psi	ASTM D638
Elongation at Break	200 - 450 %	200 - 450 %	ASTM D638
Tensile Modulus	0.392 GPa	56.9 ksi	ASTM D638
Flexural Modulus	0.490 - 0.588 GPa	71.1 - 85.3 ksi	ASTM D790
Compressive Strength	5.00 - 6.00 MPa @Temperature 25.0 °C	725 - 870 psi @Temperature 77.0 °F	1% deformation; ASTM D695
Izod Impact, Unnotched	1.60 J/cm	3.00 ft-lb/in	ASTM D256
Coefficient of Friction	0.020 - 0.038	0.020 - 0.038	Non-lubricating

Mechanical Properties	Metric 0.0385	English 0.0385	Comments
Coefficient of Friction, Static	0.020	0.020	Coated-steel surface
Taber Abrasion, mg/1000 Cycles	<= 21.15	<= 21.15	9.8 N load, cs-10 wheel

Thermal Properties	Metric	English	Comments
CTE, linear	100 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$ @Temperature 23.0 - 60.0 $^{\circ}\text{C}$	55.6 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$ @Temperature 73.4 - 140 $^{\circ}\text{F}$	ASTM D696
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft ² - $^{\circ}\text{F}$	ASTM C177
Melting Point	327 $^{\circ}\text{C}$	621 $^{\circ}\text{F}$	
Maximum Service Temperature, Air	260 $^{\circ}\text{C}$	500 $^{\circ}\text{F}$	Continuous use
Flammability, UL94	V-0	V-0	
Oxygen Index	>= 95 %	>= 95 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	<= 1.00e+18 ohm-cm	<= 1.00e+18 ohm-cm	ASTM D257
Dielectric Constant	2.1 @Frequency 1000 Hz	2.1 @Frequency 1000 Hz	ASTM D150
	2.1 @Frequency 1e+6 Hz	2.1 @Frequency 1e+6 Hz	ASTM D150
Dielectric Strength	19.0 kV/mm @Thickness 3.20 mm	483 kV/in @Thickness 0.126 in	Short time; ASTM D149
	<= 0.000010 @Frequency 1000 Hz	<= 0.000010 @Frequency 1000 Hz	ASTM D150
Dissipation Factor	0.000020 @Frequency 1e+6 Hz	0.000020 @Frequency 1e+6 Hz	ASTM D150

Descriptive Properties	Value	Comments
Chemical Resistance	Excellent	
Contact Angle	110	Angle to level
Weatherability	Excellent	

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