

## Daikin POLYFLON MG-1431F PTFE 20% Glass Fiber and 5% MoS2 Filled Molding Powder, High Apparent Density, Free Flow

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

### Material Notes:

15% glass fiber and 5% MoS2 filled. High apparent density and free-flowing properties. High wear resistance, good electrical properties, low friction, high creep resistance. Applications: Mechanical and electrical service (e.g. split-curved bearings, valve seats) Information provided by Daikin Industries.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Daikin-POLYFLON-MG-1431F-PTFE-20-Glass-Fiber-and-5-MoS2-Filled-Molding-Powder-High-Apparent-Density-Free-Flow.php](http://www.lookpolymers.com/polymer_Daikin-POLYFLON-MG-1431F-PTFE-20-Glass-Fiber-and-5-MoS2-Filled-Molding-Powder-High-Apparent-Density-Free-Flow.php)

Physical Properties	Metric	English	Comments
Specific Gravity	2.13 - 2.22 g/cc	2.13 - 2.22 g/cc	ASTM D792
Water Absorption	0.00 % @Thickness 8.50 mm, Time 86400 sec	0.00 % @Thickness 0.335 in, Time 24.0 hour	ASTM D570
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	0.15 - 0.30	0.15 - 0.30	Non-lubricating

Mechanical Properties <small>Static</small>	Metric <small>0.075</small>	English <small>0.075</small>	Comments <small>el surface</small>
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Thermal Properties	Metric	English	Comments
CTE, linear	100 $\mu\text{m}/\text{m}\cdot^\circ\text{C}$	55.6 $\mu\text{in}/\text{in}\cdot^\circ\text{F}$	ASTM D696
	@Temperature 23.0 - 60.0 $^\circ\text{C}$	@Temperature 73.4 - 140 $^\circ\text{F}$	
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft <sup>2</sup> - $^\circ\text{F}$	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	$\geq 95\%$	$\geq 95\%$	ASTM D2863

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

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

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