

Solvay Specialty Polymers Hyflon® PFA M620 Perfluoroalkoxy (PFA)

Category : Polymer , Thermoplastic , Fluoropolymer , PFA

Material Notes:

Hyflon® PFA is a unique family of semi-crystalline, melt processable perfluoropolymers which combine excellent mechanical characteristics to unique properties such as chemical inertness, heat resistance, inherent flame resistance, low surface energy, and exceptional dielectric properties. Hyflon® PFA resins have been designed to retain their properties over a wide range of temperatures from cryogenic to 250-260°C (482-500°F) and are the material of choice in applications such as linings in the Chemical Process Industry, specialty cables, semiconductor industry, aerospace, and other challenging industries. Hyflon® PFA M620 is a low melt flow rate multi-purpose resin designed for pipe, cable, and stock shapes extrusion, injection, compression, and transfer molding. Hyflon® PFA M620 has obtained UL758 recognition for continuous use at 250°C (482°F) and is an ASTM D3307 - Type VIII resin. Features: Flame Retardant; High Heat Resistance; Low Flow; Semi Crystalline Uses: Aerospace Applications; Cable Jacketing; Liners; Piping; Semiconductor Molding Compounds Additional Properties: Crystallization Heat - DSC 18.0 to 26.0 J/g; Flex Life - ASTM D2176 (300.0 µm): 7.0E+4 to 1.0E+5 Cycles; Heat of Fusion - DSC 18.0 to 26.0 J/g Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Hyflon-PFA-M620-Perfluoroalkoxy-PFA.php

Physical Properties	Metric	English	Comments
Density	2.13 - 2.18 g/cc	0.0770 - 0.0788 lb/in ³	ASTM D792
Melt Flow	2.0 - 5.0 g/10 min @Load 5.00 kg, Temperature 372 °C	2.0 - 5.0 g/10 min @Load 11.0 lb, Temperature 702 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	55 - 60	55 - 60	ASTM D2240
Tensile Strength at Break	>= 26.0 MPa	>= 3770 psi	ASTM D638
Elongation at Break	>= 300 %	>= 300 %	ASTM D638
Tensile Modulus	0.500 - 0.600 GPa	72.5 - 87.0 ksi	1.0 mm/min; ASTM D638
Izod Impact, Notched	NB	NB	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	120 - 200 µm/m-°C	66.7 - 111 µin/in-°F	
Specific Heat Capacity	0.900 - 1.10 J/g-°C	0.215 - 0.263 BTU/lb-°F	ASTM C351
Thermal Conductivity	0.200 W/m-K @Temperature 40.0 °C	1.39 BTU-in/hr-ft²-°F @Temperature 104 °F	ASTM C177

Thermal Properties	Metric	English	Comments
Crystallization Temperature	255 - 265 Â°C	491 - 509 Â°F	Peak; ASTM D3418
Maximum Service Temperature, Air	260 Â°C	500 Â°F	Continuous Use
Flammability, UL94	V-0	V-0	
Oxygen Index	95 %	95 %	ASTM D2863

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+17 ohm-cm	>= 1.00e+17 ohm-cm	ASTM D257
Surface Resistance	>= 1.00e+17 ohm	>= 1.00e+17 ohm	ASTM D257
Dielectric Constant	2.0	2.0	ASTM D150
	@Frequency 100000 Hz	@Frequency 100000 Hz	
	2.0	2.0	ASTM D150
	@Frequency 50.0 Hz	@Frequency 50.0 Hz	
Dielectric Strength	35.0 - 40.0 kV/mm	889 - 1020 kV/in	ASTM D149
Dissipation Factor	<= 0.00050	<= 0.00050	ASTM D150
	@Frequency 100000 Hz	@Frequency 100000 Hz	
	<= 0.00050	<= 0.00050	ASTM D150
	@Frequency 50.0 Hz	@Frequency 50.0 Hz	

Descriptive Properties	Value	Comments
Agency Ratings	ASTM D 3307, Type VIII; UL 758	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	
	North America	
Form	Pellets	
Processing Technique	Compression Molding; Extrusion	
	Injection Molding; Resin Transfer Molding	

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