Solvay Specialty Polymers Hyflon® PFA P450 Perfluoroalkoxy (PFA) (Unverified Data**)

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 P450 is a medium molecular weight, high melt flow rate multi purpose resin designed for cable extrusion and injection molding. Hyflon PFA P450 has obtained UL758 recognition for continuous use at 260°C (500°F) and is an ASTM D3307 - Type I resin.Additional Information: PROCESSING - Because PFA is corrosive in the melt, machinery used to process Hyflon should be lined with corrosion resistant alloys. Clean, reworked material can be used up to 25% in weight. HEALTH SAFETY AND ENVIRONMENT - Hyflon PFA P450 is a very inert polymer and it is not harmful if used and handled according to standard processing procedures. If handled inappropriately, it may release harmful toxic chemicals. Please refer to the Material Safety Data Sheets for more information on handling and safety. PACKAGING AND STORAGE - Hyflon PFA P450 resin is available in 25 kg (55 lbs) and 500 kg (1102 lbs) packaging. Though it has an indefinite shelf life, it is recommended to store it in a clean area, protected by direct sun light and possible contamination.Information provided by Solvay Specialty Polymers.

Order this product through the following link:
http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Hyflon-PFA-P450-Perfluoroalkoxy-PFA-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.12 - 2.17 g/cc	2.12 - 2.17 g/cc	ASTM D792
Melt Flow	10 - 17 g/10 min @Load 5.00 kg, Temperature 372 °C	10 - 17 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	>= 21.0 MPa @Temperature 23.0 °C	>= 3050 psi @Temperature 73.4 °F	ASTM D1708
Elongation at Break	>= 280 % @Temperature 23.0 °C	>= 280 % @Temperature 73.4 °F	ASTM D1708
Tensile Modulus	0.500 - 0.600 GPa @Temperature 23.0 °C	72.5 - 87.0 ksi @Temperature 73.4 °F	1.0 mm/min; ASTM D1708
Flex Crack Resistance	4000 - 6000 @Thickness 0.300 mm	4000 - 6000 @Thickness 0.0118 in	Cycles; ASTM D2176

Mechanical Properties	Metric	English	Comments
Charpy Impact, Notched	[illegible]	[illegible]	ASTM D256

Thermal Properties	Metric	English	Comments
Heat of Fusion	25.0 - 35.0 J/g	10.8 - 15.1 BTU/lb	Crystallization Heat; DSC
	25.0 - 35.0 J/g	10.8 - 15.1 BTU/lb	DSC
CTE, linear, Parallel to Flow	120 - 200 µm/m-°C	66.7 - 111 µin/in-°F	ASTM D696
Specific Heat Capacity	0.900 - 1.10 J/g-°C @Temperature 23.0 °C	0.215 - 0.263 BTU/lb-°F @Temperature 73.4 °F	DSC
Thermal Conductivity	0.200 W/m-K @Temperature 40.0 °C	1.39 BTU-in/hr-ft²-°F @Temperature 104 °F	ASTM C177
Melting Point	300 - 310 °C	572 - 590 °F	ASTM D3307
Crystallization Temperature	275 - 285 °C	527 - 545 °F	Peak, DSC
Maximum Service Temperature, Air	260 °C	500 °F	Continuous
Flammability, UL94	V-0	V-0	UL 94
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	2.1 @Frequency 100000 Hz, Temperature 23.0 °C	2.1 @Frequency 100000 Hz, Temperature 73.4 °F	ASTM D150
	2.1 @Frequency 50.0 Hz, Temperature 23.0 °C	2.1 @Frequency 50.0 Hz, Temperature 73.4 °F	ASTM D150
Dielectric Strength	35.0 - 40.0 kV/mm	889 - 1020 kV/in	ASTM D149
Dissipation Factor	<= 0.00050 @Frequency 100000 Hz, Temperature 23.0 °C	<= 0.00050 @Frequency 100000 Hz, Temperature 73.4 °F	ASTM D150
	<= 0.00050 @Frequency 50.0 Hz,	<= 0.00050 @Frequency 50.0 Hz,	ASTM D150

Electrical Properties	Temperature 23.0 °C Metric	Temperature 73.4 °F English	Comments

Descriptive Properties	Value	Comments
Agency Ratings	ASTM D 3307 Type I	
	UL 758	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Flame Retardant	
	High Flow	
	High Heat Resistance	
	Medium Molecular Weight	
	Semi Crystalline	
Forms	Pellets	
Generic	PFA	
Processing Method	Extrusion	
	Injection Molding	
Uses	Aerospace Applications	
	Cable Jacketing	
	Liners	
	Semiconductor Molding Compounds	

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