

# Hyflon® PFA P120X

Perfluoroalkoxy

Solvay Specialty Polymers

## Message:

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 up to 300°C (572°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 P120X is a low melt flow rate resin designed for blow molding applications, where very high viscosity and melt strength are needed. It also has significantly lower permeability to gasses than standard PFAs.

\* For rating at 300°C (572°F) contact your Solvay Representative.

General Information			
Features	Semicrystallization		
	Low liquidity		
	Heat resistance, high		
	Flame retardancy		
Uses	Semiconductor molding compound		
	Lining		
	Cable sheath		
	Piping system		
	Pipe fittings		
	Aerospace applications		
Agency Ratings	ASTM D 3307 Type II		
Forms	Particle		
Processing Method	Extrusion		
Physical	Nominal Value	Unit	Test Method
Melt Mass-Flow Rate (MFR) (372°C/5.0 kg)	2.5 - 5.0	g/10 min	ASTM D1238
Density	2.120 - 2.170	g/cm <sup>3</sup>	ASTM D792
Tensile Modulus <sup>1</sup> (280°C)	49.0	MPa	ASTM D1708
Heat of crystallization	35.0 - 45.0	J/g	DSC
Heat of Fusion	34.0 - 45.0	J/g	DSC
Linear expansion coefficient	1.2E-4 - 2.0E-4	cm/cm/°C	ASTM D696
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus <sup>2</sup> (23°C)	500 - 600	MPa	ASTM D1708
Tensile Strength (Break, 23°C)	> 26.0	MPa	ASTM D1708
Tensile Strength (fracture, 280°C)	4.60	MPa	ASTM D1708
Tensile Elongation (Break, 23°C)	> 300	%	ASTM D1708
Tensile Elongation (fracture, 280°C)	480	%	ASTM D1708

Thermal	Nominal Value	Unit	Test Method
Melting Temperature	310 - 316	°C	ASTM D3307
Peak Crystallization Temperature (DSC)	295	°C	DSC
Specific Heat (23°C)	0.900 - 1.10	J/kg/°C	DSC
Thermal Conductivity (40°C)	0.20	W/m/K	ASTM C177

#### Additional Information

**PROCESSING**Because PFA is corrosive in the melt, machinery used to process Hyflon® should be lined with corrosion resistant alloys.**HEALTH SAFETY AND ENVIRONMENT**Hyflon® PFA P120X 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 P120X resin is available in 25 kg (55 lbs) and 600 kg (1323 lbs) packaging. Though it has an indefinite shelf life, it is recommended to store it in a clean area, protected from direct sunlight, and possible contamination.

#### NOTE

- 1mm/min
- 1.0 mm/min

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#### Recommended distributors for this material

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