Teflon® FEP 9819FL

Perfluoroethylene Propylene Copolymer

DuPont Fluoropolymers

Message:

DuPont™ Teflon ® FEP 9819FL is a specialty fluoroplastic resin available as a loosely compacted fluff. It is intended for use in special application processes in consultation with DuPont. Teflon ® FEP 9819FL and the other Teflon ® FEP (fluorinated ethylene propylene) copolymer resins combine the processing ease of conventional thermoplastics with many properties similar to those of polytetrafluoroethylene (PTFE). They have high melt strength and stability at recommended processing temperatures.

Teflon ® FEP 9819FL is preferred for products that are not exposed to severe environmental stress in service. Properly processed products made from neat Teflon ® FEP 9819FL resin provide the superior properties typical of the fluoroplastic resins: retention of properties after service at 204°C (400°F), useful properties at -240°C (-400°F), excellent dielectric properties and chemical inertness to nearly all industrial chemicals and solvents. Molded products have moderate stiffness and high ultimate elongation. In a flame, products of Teflon ® FEP 9819FL resist ignition and do not promote flame spread. When ignited by flame from other sources, their contribution of heat is very small and is added at a slow rate with very little smoke.

General Information			
Features	Good Chemical Resistance		
	Good Electrical Properties		
	Good Melt Strength		
	High Elongation		
Forms	Fluff		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	2.15	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR) (372°C/5.0 kg)	30	g/10 min	ASTM D2116, ISO 12086
Water Absorption (24 hr)	< 0.010	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore D)	55		ASTM D2240, ISO 868
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength			
Yield, 23°C	20.0	MPa	ASTM D638
23°C	20.0	MPa	ISO 12086
Tensile Elongation (Break, 23°C)	300	%	ASTM D638, ISO 12086
Flexural Modulus (23°C)	520	MPa	ASTM D790, ISO 178
Thermal	**Nominal Value**	**Unit**	**Test Method**
Melting Temperature	255	°C	ASTM D4591
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Strength			
0.250 mm	80	kV/mm	ASTM D149
0.250 mm [1]	80	kV/mm	IEC 60243-1
Dielectric Constant (1 MHz)	2.03		ASTM D150, IEC 60250
Dissipation Factor (1.00 GHz)	7.0E-4		ASTM D2520, IEC 60250
Flammability	**Nominal Value**	**Unit**	**Test Method**
Oxygen Index	> 95	%	ASTM D2863, ISO 4589-2

Additional Information	Nominal Value	Unit	Test Method
Critical Shear Rate (372°C)	200	sec^-1	Internal Method
MIT Folding Endurance - 8 mil film (200.0 µm)	7.0E+3	Cycles	ASTM D2176
NOTE			
1.	Short Time, .25 mm film		

Recommended distributors for this material

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