Teflon® FEP 9835

Perfluoroethylene Propylene Copolymer

DuPont Fluoropolymers

Message:

DuPont™ Teflon ® FEP 9835 is a melt-processible fluoroplastic resin available in pellet form. It is a copolymer of tetrafluoroethylene and hexafluoropropylene, without additives, that meets the requirements of ASTM D 2116 type II. With a relatively high melt flow rate and excellent electrical properties, Teflon ® FEP 9835 has been specifically designed for high-speed extrusion of thin coatings on small-gauge wires for twisted-pair constructions. This resin provides the electrical and mechanical properties needed for low voltage applications. In addition, Teflon ® FEP 9835 has a higher melt flow rate than most other fluoroplastic resins. This permits higher extrusion speeds and easier processing, making Teflon ® FEP 9835 a cost-effective alternative for producing thin-wall extrusions.Teflon ® FEP 9835 is designed and made to have improved adhesion to copper wire under specific wireline process conditions, low dissipation factor at high frequencies, and to have significant plate-out resistance in melt extrusion. It is suitable as a solid insulator, and as a foamed insulator when used with an appropriate nucleant in a nitrogen gas injection process.
Teflon ® FEP 9835 is used when traditional extrusion and molding processes are required for producing products with the superior properties of a fluoroplastic resin. Compared to other thermoplastics, the high melt strength and thermal stability of Teflon ® FEP 9835 can be used to improve processing rates. Compared with other fluoroplastics, creep resistance at high service temperatures provides a superior balance and level of end-use properties. Teflon ® FEP 9835 combines the processing ease of conventional thermoplastics with many properties similar to those of polytetrafluoroethylene. Properly processed products made from neat Teflon ® FEP 9835 resin provide the superior properties characteristic of fluoroplastic resins: chemical inertness, exceptional dielectric properties, heat resistance, toughness and flexibility, low coefficient of friction, non-stick characteristics, negligible moisture absorption, low flammability, performance at temperature extremes, and excellent weather resistance.In a flame situation, products of Teflon ® FEP 9835 resist ignition and do not promote flame spread. When ignited by flame from other sources, their contribution of heat is very small and added at a slow rate with very little smoke.

General Information	
Features	Good Chemical Resistance
	Good Electrical Properties
	Good Flow
	Good Thermal Stability
	Good Toughness
	Good Weather Resistance
	High Heat Resistance
	Non-Stick
Uses	Communication Wire Insulation
	Low Voltage Insulation
	Thin-walled Insulation
	Wire & Cable Applications
Agency Ratings	ASTM D 2116 type II
Forms	Pellets
Processing Method	Compression Molding
	Extrusion
	Injection Molding
	Wire & Cable Extrusion

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)	20	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 (23°C)	24.0	MPa	ASTM D638, ISO 12086
Tensile Elongation (Break, 23°C)	300	%	ASTM D638, ISO 12086
Flexural Modulus (23°C)	520	MPa	ASTM D790A, 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			IEC 60250
1 MHz	2.03		ASTM D150
1.00 GHz	2.03		ASTM D2520
Dissipation Factor			IEC 60250
1 MHz	6.0E-4		ASTM D150
1.00 GHz	5.0E-4		ASTM D2520
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating	V-0		UL 94
Oxygen Index	> 95	%	ASTM D2863, ISO 4589-2
Additional Information	**Nominal Value**	**Unit**	**Test Method**
Critical Shear Rate (372°C)	150	sec^-1	Internal Method
MIT Folding Endurance - 8 mil film (200.0 µm)	1.2E+4	Cycles	ASTM D2176
NOTE			
1.	Short Time, .25 mm film		

Recommended distributors for this material

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