

Tefzel® HT-2185

Ethylene Tetrafluoroethylene Copolymer

DuPont Fluoropolymers

Message:

DuPont™ Tefzel® HT-2185 fluoropolymer resin is a special-purpose resin available in translucent, 2.5-mm (0.1-in) pellets. Compared with other grades of Tefzel®, it has a higher flow rate.

Tefzel® HT-2185 and the other Tefzel® fluoropolymers are melt processible, modified copolymers of ethylene and tetrafluoroethylene. They are high-performance resins that can be processed at relatively high rates compared with fluorocarbon resins. They are mechanically tough and offer an excellent balance of properties.

The relatively high flow rate of Tefzel® HT-2185 makes it uniquely suitable for high-speed processing, especially for extruded coatings and injection molding of slender, thin-walled, or intricate shapes. Molded or extruded products made from Tefzel® HT-2185 are preferred for uses that do not involve significant flexural or tensile stress at elevated temperatures. Higher viscosity products such as Tefzel® HT-2181 and Tefzel® HT-2183 are preferred for these applications.

Properly processed products made from neat Tefzel® HT-2185 are inert to most solvents and chemicals, hydrolytically stable, and weather-resistant. The recommended upper service temperature is 150°C (302°F); useful properties are retained at cryogenic ranges. The level and stability of dielectric properties are excellent, and the flame rating is V-0 by the UL94 method. Mechanical properties include outstanding impact strength, cut-through, and abrasion resistance.

Statements, or data, regarding behavior in a flame situation are not intended to reflect hazards presented by this or any other material when under actual fire conditions.

Typical End Products

Tefzel ® HT-2185 is ideal for many end products, including electrical components, such as sleeving, coil forms, sockets, connectors, and switches; lab ware, such as tubing, valves, containers, and fasteners; battery or instrument components that require chemical inertness; and mechanical parts.

General Information	
UL YellowCard	E54681-101244453
Features	Copolymer
	Solvent resistance
	Impact resistance, high
	Good electrical performance
	Good wear resistance
	High liquidity
	Good chemical resistance
	Good weather resistance
	Good toughness
	Hydrolysis stability
Uses	Thin wall parts
	Electrical/Electronic Applications
	Valve/valve components
	Pipe fittings
	Fasteners
	Switch
	Connector
	Container
	Laboratory apparatus

Appearance	Translucent
Forms	Particle
Processing Method	Blow molding Extrusion Extrusion coating Resin transfer molding Compression molding Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.70	g/cm ³	ASTM D792
Apparent Density	1.30	g/cm ³	Internal method
Melt Mass-Flow Rate (MFR) (297°C/5.0 kg)	11	g/10 min	ASTM D3159
Water Absorption (24 hr)	7.0E-3	%	ASTM D570
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (23°C)	40.0	MPa	ASTM D638
Tensile Elongation (Break, 23°C)	300	%	ASTM D638
Flexural Modulus (23°C)	1000	MPa	ASTM D790
Compressive Strength	38.0	MPa	ASTM D695
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C)	No Break		ASTM D256
Thermal	Nominal Value	Unit	Test Method
Melting Temperature	255 - 280	°C	ASTM D3418
CLTE - Flow (0 to 100°C)	1.3E-4	cm/cm/°C	ASTM D696
Maximum Service Temperature	155	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+17	ohms·cm	ASTM D257
Dielectric Strength (0.250 mm)	70	kV/mm	ASTM D149
Dielectric Constant (23°C, 1 MHz)	2.50 - 2.60		ASTM D1531
Dissipation Factor (23°C, 1 MHz)	5.4E-3		ASTM D1531
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-0		UL 94
Oxygen Index	30 - 32	%	ASTM D2863
Additional Information			

Weather and Chemical Resistance: Excellent

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