

# Tefzel® HT-2183

Ethylene Tetrafluoroethylene Copolymer

DuPont Fluoropolymers

## Message:

DuPont™ Tefzel ® HT-2183 fluoropolymer is a premium resin available in translucent, 2.5-mm (0.1-in) pellets. Compared with other grades of Tefzel ®, its most unique features are a greatly enhanced flex life and resistance to environmental stress.

Tefzel ® HT-2183 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 other fluorocarbon resins. They are mechanically tough and offer an excellent balance of properties.

Tefzel ® HT-2183 is preferred for applications where other thermoplastics are lacking in mechanical toughness; broad thermal capability; ability to meet unusual thermal, mechanical, and chemical environmental extremes; or limited by fabricating problems. Examples are components and linings for the chemical industry and molded parts with metal inserts or thick sections for use at high temperatures.

Properly processed products made from neat Tefzel ® HT-2183 are inert to most solvents and chemicals, hydrolytically stable, and weather-resistant. The recommended upper service temperature is 155°C (311°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. They are resistant to environmental stress cracking and have outstanding impact strength, cutthrough, 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-2183 is ideal for many end products, including chemical service items, such as lined valves and fittings, pump housings and impellers, column packings, and other abrasion-resistant linings; high-temperature electrical components and insulation; fasteners, corrugated tubing, and duct work; and film.

General Information	
UL YellowCard	E54681-101244452
Features	High ESCR (Stress Cracking Resistance)
	Copolymer
	Solvent resistance
	Impact resistance, high
	Good electrical performance
	Good wear resistance
	Good chemical resistance
	Good weather resistance
	Good toughness
	Hydrolysis stability
Uses	Abrasion Resistant Liners
	Films
	Pump parts
	Lining
	Electrical/Electronic Applications
	Electronic insulation
	Valve/valve components
	Pipe fittings
	Fasteners
	Accessories

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

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.70	g/cm <sup>3</sup>	ASTM D792
Apparent Density	1.30	g/cm <sup>3</sup>	Internal method
Melt Mass-Flow Rate (MFR) (297°C/5.0 kg)	6.0	g/10 min	ASTM D3159
Water Absorption (24 hr)	7.0E-3	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D)	67		ASTM D2240
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
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)	7.2E-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			

The information and data on this page are provided by manufacturers and document providers. SHANGHAI SUSHENG assumes no legal liability. It is strongly recommended to verify all technical data with material suppliers before final material selection. All rights belong to the original authors. If any infringement occurs, please contact us immediately.

Recommended distributors for this material

# Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

