

# Tefzel® 200

Ethylene Tetrafluoroethylene Copolymer

DuPont Fluoropolymers

## Message:

DuPont™ Tefzel ® fluoropolymer 200 is a general purpose resin available in translucent, 2.5-mm (0.1-in.) pellets. Compared to other grades of Tefzel ®, its most unique features are an intermediate flow rate and a balance of properties that make it suitable for a variety of processes and demanding end uses.

Tefzel ® 200 and the other Tefzel ® fluoropolymers are melt processible, modified copolymers of ethylene and tetrafluoroethylene. They are highperformance resins that can be processed at relatively high rates compared to fluorocarbon resins. They are mechanically tough and offer an excellent balance of properties.

Tefzel ® 200 can perform successfully in applications where other thermoplastics are lacking in mechanical toughness, broad thermal capability, ability to meet difficult environmental conditions, or limited by fabricating problems.

Properly processed products made from virgin Tefzel ® 200 are inert to most solvents and chemicals, hydrolytically stable and weather resistant. 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. High energy radiation resistance meets IEEE 383 and the resin is approved for nuclear power plant use.

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 ® 200 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 dishes; battery or instrument components that require chemical inertness; chemical service items, such as valve components, seal glands, pipe plugs and corrugated tubing; and film.

Tefzel ® 200 is ASTM D3159 Type I, Grade 1.

General Information	
UL YellowCard	E54681-244671
Features	Copolymer
	Anti-gamma radiation
	Solvent resistance
	Impact resistance, good
	Good electrical performance
	Good wear resistance
	Medium liquidity
	Good chemical resistance
	Good weather resistance
	Good toughness
	Hydrolysis stability
Uses	Films
	Electrical/Electronic Applications
	Valve/valve components
	Pipe fittings
	Nuclear energy applications
	Switch
	Connector
	Container

## Laboratory apparatus

Agency Ratings	IEEE 383
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
Melt Mass-Flow Rate (MFR) (297°C/5.0 kg)	7.0	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)	45.0	MPa	ASTM D3159
Tensile Elongation (Break, 23°C)	300	%	ASTM D3159
Flexural Modulus (23°C)	1200	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 D3159
CLTE - Flow (0 to 100°C)	1.3E-4	cm/cm/°C	ASTM E831
Maximum Service Temperature	150	°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)	3.1E-3		ASTM D1531
Arc Resistance	122	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Oxygen Index	30 - 32	%	ASTM D2863
Additional Information			

Weather and Chemical Resistance: Excellent

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