Teflon® PTFE 8A X

Polytetrafluoroethylene

DuPont Fluoropolymers

Message:

Teflon ® PTFE 8A X is a free-flowing white powder composed of relatively large particles. It has high bulk density and good powder flow. It's most unique features are improved moldability at lower pressure and improved surface smoothness of finished parts. The high bulk density and low compression ratio of Teflon® PTFE 8A X permit the use of shallow molds for small parts and complex shapes. Good powder flow is necessary for use in equipment that feeds resin automatically, and for filling deep and narrow molds that are pressed isostatically. Reduced pressure is an advantage for moldings with large surface area and for isostatic molding. Teflon ® PTFE 8A X is often preferred for molding thick sheets and for isostatic moldings. It is sometimes used for ram extrusion of rod and tubing with thicker cross sections. Properly processed products made from neat Teflon ® PTFE 8A X provide the superior properties typical of the fluoropolymer resins: retention of properties after service at 260 °C (500 °F), useful properties at -240 °C (-400 °F), chemical inertness to nearly all industrial chemicals and solvents, and low friction and antistick surfaces. Dielectric properties are outstanding and stable with frequency and temperature. Molded products have moderate stiffness and high ultimate elongation. In a flame situation, products of Teflon ® PTFE 8A X resist ignition and do not themselves promote flame spread. When ignited by flame from other sources, their contribution of heat is small and with very little smoke. 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 Applications

Many end products are fabricated from moldings of Teflon ® PTFE 8A X, including small parts such as ball valve seats, seals, discs, and lab ware. Thick molded sheets are stock shapes made from Teflon ® PTFE 8A X. It is also chosen for lining pipes, valves, and valve plugs—and for ducting, expansion bellows, piston rings, and other large complex moldings.

General Information	
Features	Food Contact Acceptable
	Good Chemical Resistance
	Good Electrical Properties
	Good Flow
	Good Moldability
	Good Stiffness
	Good Surface Finish
	High Elongation
	Low Friction
	Low Smoke Emission
	Solvent Resistant
Uses	Labware
	Liners
	Seals
	Sheet
	Valves/Valve Parts
Agency Ratings	EU No 10/2011
	FDA 21 CFR 177.1550
Appearance	White
Forms	Powder

Processing Method	Ram Extrusion Sintering

Physical	Nominal Value	Unit	Test Method
Specific Gravity	2.14	g/cm³	ASTM D4894
Apparent Density	0.68	g/cm³	ASTM D4894
Molding Shrinkage - Flow [1]	2.8	%	ASTM D4894
Average Particle Size	490	µm	ASTM D4894
Flowability [2]	221	g/min	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength	41.4	MPa	ASTM D4894
Tensile Elongation (Break)	330	%	ASTM D4894
Thermal	**Nominal Value**	**Unit**	**Test Method**
Peak Melting Temperature			ASTM D4894
-- [3]	317 to 337	°C	
-- [4]	332 to 352	°C	

NOTE	
1.	at preform pressure of 35 MPa
2.	Modified D1855
3.	Second
4.	Initial

Recommended distributors for this material

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