Teflon® PTFE 7C X

Polytetrafluoroethylene

DuPont Fluoropolymers

Message:

Teflon ® PTFE 7C X is a white powder with small particle size. Its most unique feature is the irregular, fibrous character of the particles. The small particle size of Teflon ® PTFE 7C X helps to minimize voids even at relatively low molding pressures. The fibrous particles promote good capture and uniform distribution of inorganic fillers when they are added to modify the mechanical properties of moldings. Teflon ® PTFE 7C X exhibits relatively high mold shrinkage. Teflon ® PTFE 7C X is preferred for moldings requiring optimum mechanical and electrical properties. Its relatively low bulk density limits the size of moldings from a given mold or press opening. It is often preferred for making filled compounds, especially with metal powders that are difficult to mix because of density differences.

Properly processed products made from neat Teflon ® PTFE 7C 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 7C 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 molded or fabricated from moldings of Teflon ® PTFE 7C X, or made with filled compounds based on Teflon ® PTFE 7C X. The filled compounds provide a wide choice of modified mechanical properties. End products using Teflon ® PTFE 7C X include skived film and sheet, gaskets, bridge or pipeline bearing pads, piston rings, and diaphragms.

General Information	
Features	Food Contact Acceptable
	Good Chemical Resistance
	Good Electrical Properties
	Good Stiffness
	High Elongation
	High Shrinkage
	Low Friction
	Low Smoke Emission
	Solvent Resistant
Uses	Bearings
	Compounding
	Diaphragms
	Film
	Gaskets
	Sheet
Agency Ratings	FDA 21 CFR 177.1550
Appearance	White
Forms	Powder
Processing Method	Sintering

Physical	Nominal Value	Unit	Test Method
Specific Gravity	2.15	g/cm³	ASTM D4894

Apparent Density	0.26	g/cm³	ASTM D4894
Molding Shrinkage - Flow [1]	5.7	%	ASTM D4894
Average Particle Size	27	µm	ASTM D4894
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Strength	42.1	MPa	ASTM D4894
Tensile Elongation (Break)	400	%	ASTM D4894
Thermal	**Nominal Value**	**Unit**	**Test Method**
Peak Melting Temperature			ASTM D4894
-- [2]	317 to 337	°C	
-- [3]	332 to 352	°C	

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

Recommended distributors for this material

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