Teflon® AF 2400

Fluoropolymer

DuPont Fluoropolymers

Message:

Teflon® AF is a family of amorphous fluoropolymers. These materials are similar to other amorphous polymers in optical clarity and mechanical properties, including strength. They also resemble fluoropolymers in their performance over a wide range of temperatures, outstanding electrical properties, and chemical resistance. They are distinct from other fluoropolymers in that they are soluble in selected solvents and have high gas permeability, high compressability, high creep resistance, and low thermal conductivity. They have the lowest dielectric constant of any known fluoropolymer.

General Information	
Features	High Gas Permeability
	Good electrical performance
	Good creep resistance
	Good chemical resistance
	amorphous
Uses	Bar
	Films
	Pipe fittings
	Sheet
	Coating application
Forms	Particle
Processing Method	Extrusion
	Impregnation coating method
	Sprayable
	Compression molding
	Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.67	g/cm³	ASTM D792
Water Absorption (24 hr)	< 0.010	%	ASTM D570
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (23°C)	98		ASTM D785
Durometer Hardness			ASTM D2240
Shore d, 220 c	65		ASTM D2240
Shaw D, 23°C	75		ASTM D2240
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	1500	MPa	ASTM D638
Tensile Strength			ASTM D638

Yield, 23°C	24.5 - 28.3	MPa	ASTM D638
Yield, 220°C	4.70 - 12.7	MPa	ASTM D638
23°C	24.5 - 28.3	MPa	ASTM D638
220°C	2.40 - 6.00	MPa	ASTM D638
Tensile Elongation			ASTM D638
Fracture, 23°C	5.6 - 10	%	ASTM D638
Fracture, 220°C	4.3 - 13	%	ASTM D638
Flexural Modulus			ASTM D790
23°C	1500 - 1700	MPa	ASTM D790
150°C	600 - 800	MPa	ASTM D790
Taber Abrasion Resistance (2000 Cycles)	200	mg	
Films	**Nominal Value**	**Unit**	**Test Method**
Oxygen Permeability	990	Barrer	
Carbon Dioxide Permeability	2800	Barrer	
Nitrogen Permeability	490	Barrer	
Water Permeation	4030	Barrer	
Abbe Number	113		
Contact Angle - with Water	105	°	
Surface Energy	16	dyne/cm	
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	200	°C	ASTM D648
1.8 MPa, not annealed	174	°C	ASTM D648
Glass Transition Temperature	230 - 250	°C	ASTM D3418
CLTE - Flow	3.0E-4	cm/cm/°C	ASTM E831
Electrical	**Nominal Value**	**Unit**	**Test Method**
Dielectric Strength	19	kV/mm	ASTM D149
Dielectric Constant	1.90		ASTM D150
Dissipation Factor	1.0E-4 - 3.0E-4		ASTM D150
Optical	**Nominal Value**	**Unit**	**Test Method**
Refractive Index	1.290		ASTM D542
Transmittance	> 95.0	%	ASTM D1003
Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Melt Viscosity (350°C, 100 sec^-1)	540	Pa·s	ASTM D3835

Recommended distributors for this material

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