

# Fluorinated Ethylene Propylene (FEP)

## KEY FEATURES

- High Resistance to Outdoor Weathering
- Compatible with Hot Air Welding Equipment
- Negligible Moisture Absorption
- High Degree of Stress Crack Resistance
- Exceptional Dielectric Insulation Properties
- Chemically Inert to Most Industrial Chemicals
- Low Coefficient of Friction
- Very Low Gas Permeation and Outgassing
- Non Stick Surfaces
- Temperature Range: -400°F to +392°F

## DESCRIPTION

Fluorinated Ethylene Propylene (FEP) is a copolymer of tetrafluoroethylene and hexafluoropropylene. This melt-processible fluoropolymer exhibits excellent resistance to heat, wear and chemicals. Typical applications are pump housings, chemical processing equipment, food processing, and medical components.

## TYPICAL PROPERTY VALUES

Physical	Properties	Condition	Units	Value	ASTM Test
	Density		g/cm <sup>3</sup>	2.12 - 2.17	D792
	Chemical Designation			FEP	
	Filler				

Mechanical	Properties	Condition	Units	Value	ASTM Test
	Tensile Modulus	@ 73 °F (23°C)	PSI		
	Tensile Strength	@ 73 °F (23°C)	PSI	4,350	D638
	Shear Strength	@ 73 °F (23°C)	PSI		
	Ultimate Elongation	@ 73 °F (23°C)	%	300-325	D638
	Flexural Modulus	@ 73 °F (23°C)	PSI	95,000	D790
	Flexural Strength	@ 73 °F (23°C)	PSI		
	Compressive Modulus	@ 73 °F (23°C)	PSI		
	Compressive Strength	@ 73 °F (23°C)	PSI		
	Izod (Charpy) Impact Strength	@ 73 °F (23°C)	J/m	no break	D256
	Durometer Hardness		D	55-56	D2240
Coefficient of Friction			0.25	D1894	

Thermal	Properties	Condition	Units	Value	ASTM Test
	Thermal Expansion (CLTE)	0°C to 100°C	mm/mm/°C		
	Continuous Service Temperature		°C	205	
	Limiting Oxygen Index		%	> 95	D2863

Electrical	Properties	Condition	Units	Value	ASTM Test
	Surface Resistivity		ohms-sq	<sub>10</sub> 16	D257
	Dielectric Constant	@23°C, 10 <sup>3</sup> Hz		2.15	D150
	Volume Resistivity		ohm-cm	<sub>10</sub> 18	D257
	Dielectric Strength (10 mil film)		V/mil	2,000	D149
	Dissipation Factor	@23°C, 10 <sup>3</sup> Hz		0.0003	D150

Other	Properties	Condition	Units	Value	ASTM Test
	Moisture Absorption	24 hrs	%	<0.01	D570
	Moisture Absorption	@ Saturation, 73 °F	%		
	Flammability	UL 94		V-O	UL 94
Food Grade			Y		

• The data stated above are typical values intended for reference and comparison purposes only.  
• The data should not be used as a basis for design specifications or quality control.

• The information is provided as a guide to the best of our knowledge and given without obligation or liability.  
• Testing under individual application circumstances is recommended