

Perfluoroalkoxy (PFA)

KEY FEATURES

- Exceptional Dielectric Insulation Properties
- Negligible Moisture Absorption
- Low Coefficient to Friction
- Non-Stick Surface
- Very Low Gas Permeation and Outgassing
- Temperature Range: -320°F to +500°F
- May Be Welded with Hot Air Welding Equipment
- High Resistance to Outdoor Weathering
- Chemically Inert to All Industrial Chemicals and Solvents
- Does Not Support Combustion
- Low Metals and Ion Extractables

DESCRIPTION

Perfluoroalkoxy (PFA) is a high-performance, melt-processible fluoropolymer that exhibits similar characteristics to PTFE. It performs extremely well in extreme thermal and chemical environments.

TYPICAL PROPERTY VALUES

Physical	Properties	Condition	Units	Value	ASTM Test
	Density		g/cm ³	2.12-2.17	D792
	Chemical Designation			PFA	
	Filler				

Mechanical	Properties	Condition	Units	Value	ASTM Test
	Tensile Modulus	@ 73 °F (23°C)	PSI		
	Tensile Strength	@ 73 °F (23°C)	PSI	3,625-4,000	D1708
	Shear Strength	@ 73 °F (23°C)	PSI		
	Elongation	@ 73 °F (23°C)	%	300	D1708
	Flexural Modulus	@ 73 °F (23°C)	PSI	90,000	D790
	Flexural Strength	@ 73 °F (23°C)	PSI		
	Compressive Modulus	@ 73 °F (23°C)	PSI		
	Compressive Strength	@ 73 °F (23°C)	PSI	3,500	D695
	Izod (Charpy) Impact Strength	@ 73 °F (23°C)	J/m	no break	D256
	Durometer Hardness, Shore D		D	55-60	D2240
	Coefficient of Friction	Dynamic, 40PSI, 50 FPM		0.21	D1894
Deformation Under Load	73 °F (23°C), 100 psi, 10 hr	%	2	D621	

Thermal	Properties	Condition	Units	Value	ASTM Test
	Thermal Expansion (CLTE)	149°C to 208°C	mm/mm/°C	22*10 ⁻⁵	D696
	Thermal Expansion (CLTE)	21°C to 100°C	mm/mm/°C	14*10 ⁻⁵	D696
	Thermal Expansion (CLTE)	100°C to 149°C	mm/mm/°C	18*10 ⁻⁵	D696
	Maximum Service Temperature		°C	260	
Thermal Conductivity		W/m-K	0.19	DuPont	

Electrical	Properties	Condition	Units	Value	ASTM Test
	Surface Resistivity		ohms/square	1*10 ¹⁷	D257
	Volume Resistivity		ohm-cm	1.0*10 ¹⁸	D257
	Dielectric Constant	@23°C, 60 -10 ⁶ Hz		2.03 - 2.1	D150
	Dielectric Strength Short Time		V/mil	2,000	D149
Dissipation Factor	@23°C, 60 -10 ⁶ Hz		0.0001	D150	

Other	Properties	Condition	Units	Value	ASTM Test
	Moisture Absorption	24 hrs	%	<0.03	D570
	Moisture Absorption	@ Saturation, 73 °F	%		
	Flammability	UL 94		V-O	
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