

# 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

	Properties	Condition	Units	Value	Value
<b>Physical</b>	Chemical Designation			PFA	
	Filler				
	Density		g/cm <sup>3</sup>	2.12-2.17	D792
<b>Mechanical</b>	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		0.21	D1894
	Deformation Under Load	73 °F (23°C), 100 psi, 10 hr		%	2

## TYPICAL PROPERTY VALUES

	Properties	Condition	Units	Value	ASTM Test
<b>Thermal</b>	Vicat Softening Point				
	Melting Temperature		°C	302-310	D3418
	Thermal Expansion (CLTE)	21°C to 100°C	mm/mm/°C	14 x 10 <sup>-5</sup>	D696
	Thermal Expansion (CLTE)	100°C to 149°C	mm/mm/°C	18 x 10 <sup>-5</sup>	D696
	Thermal Expansion (CLTE)	149°C to 208°C	mm/mm/°C	22 x 10 <sup>-5</sup>	D696
	Maximum Service Temperature		°C	260	
	Thermal Conductivity		W/m-K	0.19	DuPont
<b>Electrical</b>	Surface Resistivity		ohms-square	1 x 10 <sup>17</sup>	D257
	Volume Resistivity		ohm-cm	1 x 10 <sup>18</sup>	D257
	Dielectric Strength Short Time		V/mil	2,000	D149
	Dielectric Constant	@23°C, 60 -10 <sup>6</sup> Hz		2.03 - 2.1	D150
	Dissipation Factor	@23°C, 60 -10 <sup>6</sup> Hz		0.0001	D150
<b>Other</b>	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.