

PFA Detailed Properties
(Perfluoroalkoxy)



Properties	ASTM or Unit	PFA
MECHANICAL PROPERTIES		
Specific Gravity	D792	2.15
Elongation %	D638	280~400
Tensile Strength (psi)	D638	4,000~4,500
Flexural Strength (psi)	D790	no break
Compressive Strength	D695	710~860
Tensile Elastic Modulus (Young's Modulus) (psi)	D638	72,500~87,000
(psi) Flexural Modulus	D790	94,000~99,000
103MPa (103kgf/cm ²)	D790	0.6-0.7 (6.6-7.0)
Flex Life (MIT cycles)	D2176	10,000~500,000
Hardness Durometer Shore D	D636	D55~60
Coefficient of Friction	on steel	0.2
Abrasion Resistance 1000 revs.	Taber	9~17
Impact Strength IZOD 73°F/23°C, notched ft/lbs/in	D256	no break
THERMAL PROPERTIES		
Melting Point	°C (°F)	305 (582)
Upper Service Temperature(20,000h)	°C (°F)	260 (500)
Flame Rating**	UL 94	V-0
Thermal Conductivity	BTU/hr/ft ² /deg F in	1.3
	cal/sec/cm ² ,°C/cm	6 x 10 ⁻⁶





Linear Coefficient of Thermal Expansion 10-5 °C	D696	13
Heat of Fusion	BTU/LB	13
Heat of Combustion	BTU/LB	2300
Low Temperature Embrittlement	°C (°F)	-268 (-450)
ELECTRICAL PROPERTIES		
Dielectric Constant	D150/103Hz	2.1
	D150/106Hz	2.1
Dielectric Strength 10 mil film	D149	>2000
Volume Resistivity ohm-cm	D257	>10 ¹⁸
Surface Resistivity ohm/sq.	D257	>10 ¹⁷
GENERAL PROPERTIES		
Chemical/Solvent Resistance	D543	Excellent
Water Absorption, 24h	%	<0.03
Deformation Under Load	*D621/100°C	2.4
	**D621/25°C	2.7
Refractive Index		1.34
Limiting Oxygen Index	>95	>95
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*6.8 MPa (986 psi),24h

**13.7 MPa (1987 psi),24h

