



Manufacturer of TFE-O-SIL<sup>®</sup> O-Rings & Gaskets Since 1976  
 FEP & PFA Encapsulated Silicone, Flouroelastomer & EPDM

# PFA (Perfluoroalkoxy) Detailed Properties

*The table below lists a generally accepted summary of properties that we believe to be reliable. Please note that many of these resins are produced in several varieties and property characteristics may vary. Therefore, determination of resin is dependent on the application and this table is only meant to serve as a general guideline.*

PFA Properties	ASTM or Unit	PFA Properties
<b>MECHANICAL PROPERTIES</b>		
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	
Tensile Elastic Modulus (Young's Modulus) (psi)	D638	72,500~87,000
(psi) Flexural Modulus	D790	94,000~99,000
103MPa (103kgf/cm <sup>2</sup> )	D790	0.6-0.7 (6.6-7.0)
Flex Life (MIT cycles)	D2176	10,000~500,000 80,000
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

**PFA Properties****ASTM or Unit****PFA Properties****THERMAL PROPERTIES**

Melting Point	°C	305
	(°F)	(582)
Upper Service	°C	260
<i>Temperature(20,000h)</i>	(°F)	(500)
Flame Rating**	UL 94	V-0
Thermal Conductivity	BTU/hr/ft2/deg F in	1.3
	cal/sec/cm2, °C/cm	6 x 10-6
Linear Coefficient of	D696	13
Thermal Expansion 10-5 °C		
Heat of Fusion	BTU/LB	13
Heat of Combustion	BTU/LB	2,300
Low Temperature Embrittlement	°C	-268
	(°F)	(-450)

**ELECTRICAL PROPERTIES**

Dielectric Constant	D150/103Hz	2.1
	D150/106Hz	2.1
Dielectric Strength	D149	>2000
<i>10 mil film</i>		
Volume Resistivity ohm-cm	D257	>1018
Surface Resistivity	D257	>1017
<i>ohm/sq.</i>		

**PFA Properties**

**ASTM or Unit**

**PFA Properties**

**GENERAL PROPERTIES**

Chemical/Solvent <i>Resistance</i>	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

\*6.8 MPa (986 psi),24h

\*\*13.7 MPa (1987 psi),24h