ROW INCORPORATED

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

FEP (Fluorinated Ethylene Propylene) Detailed Properties

Gain in-depth understanding of FEP (Fluorinated Ethylene Propylene) properties with our detailed chart, covering mechanical, thermal, electrical, and general characteristics essential for high-performance applications. This comprehensive overview provides valuable insights into FEP's durability, chemical resistance, and suitability for various environments. Perfect for engineers and materials scientists looking to make informed decisions. Download the PDF now for complete specifications.

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.

FEP Properties	ASTM or Unit	FEP Properties
MECHANICAL PROPERTIES		
Specific Gravity	D792	2.15
Elongation, %	D638	250~330
Tensile Strength (psi)	D638	2,800~5,000
Flexural Strength (psi)	D790	no break
Compressive Strength	D695	2,200
Tensile Elastic Modulus *(Young's Modulus) (psi)*	D638	50,000
(psi) Flexural Modulus	D790	78,000~92,000
103MPa (103kgf/cm2)	D790	0.5-0.6 (5.5-6.5)
Flex Life *(MIT cycles)*	D2176	5,000~ 80,000

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Web: www.row-inc.com • Email: sales@row-inc.com

FEP Properties	ASTM or Unit	FEP Properties
MECHANICAL PROPERTIES		
Hardness Durometer *Shore D*	D636	D55
Coefficient of Friction	On steel	0.05
Abrasion Resistance *1000 revs.*	Taber	14~20
Impact Strength IZOD *73°F/23°C, notched ft/lbs/in*	D256	No break
THERMAL PROPERTIES		
Melting Point	°C (°F)	260 (500)
Upper Service *Temperature(20,000h)*	°C (°F)	200 (392)
Flame Rating**	UL 94	V-0
Thermal Conductivity	BTU/hr/ft2/deg F in cal/sec/cm2,°C/cm	1.4 6 x 10-4
Linear Coefficient of Thermal Expansion 10-5 °C	D696	8.3~10.5
Heat of Fusion	BTU/LB	11
Heat of Combustion	BTU/LB	2,200
Low Temperature Embrittlement	°C (°F)	-268 (-450)

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FEP Properties	ASTM or Unit	FEP Properties
ELECTRICAL PROPERTIES		
Dielectric Constant	D150/103Hz	2.1
	D150/106Hz	2.1
Dielectric Strength *10 mil film*	D149	>2000
Volume Resistivity ohm-cm	D257	>1018
Surface Resistivity *ohm/sq.*	D257	>1017
GENERAL PROPERTIES		
Chemical/Solvent *Resistance*	D543	Excellent
Water Absorption, 24h	%	<0.01
Deformation Under Load	*D621/100°C	5.0
	**D621/25°C	3.0
Refractive Index	-	1.338
Limiting Oxygen Index	>95	>95

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