



FEP Detailed Properties (Fluorinated Ethylene Propylene)

Properties	ASTM or Unit	FEP
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 103MPa (103kgf/cm ²)	D790	78,000~ 92,000
	D790	0.5-0.6 (5.5-6.5)
Flex Life (MIT cycles)	D2176	5,000~ 80,000
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/ft ² /deg F in	1.4
	cal/sec/cm ² ,°C/cm	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	2200
Low Temperature Embrittlement	°C (°F)	-268 (-450)

ELECTRICAL PROPERTIES

Dielectric Constant	D150/10 ³ Hz	2.1
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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	%	<0.01
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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*6.8 MPa (986 psi),24h
 **13.7 MPa (1987 psi),24h

