

Materials Properties

PROPERTY	UNIT	SPECIFICATION (ASTM)	PTFE	PFA	FEP	PVDF
MECHANICAL						
Specific Gravity	gr/cm ³	D792	2.15	2.15	2.15	1.78
Tensile strength	Kg/ cm ²	D638 D1708	180-280	280	250	350
Coefficient of friction	Dynamic (<3m/ min)	-	0.1	0.2	0.2	0.3
Compressive strenght	Kg/ cm ²	D695	250	150	150	800
Elongation	%	D638 D1708	250-400	300	300	150
Hardness	Shore D	D2240	D 55-65	D 60-65	D 55-60	D 78
Tensile modulus	Kg/ cm ²	D638	5.600	2.800	3.500	15.000
ELECTRICAL						
Dielectric constant	-	D150	2.1	2.1	2.1	7.2
Dielectric strength	KV/mm	D149	>55	>75	>75	>40
Dielectric dissipation factor	-	D150(10 ³ Hz)	0.0002	0.0002	0.0001	0.03
Volume resistivity	Ohm/cm	D257	>10 ¹⁸	>10 ¹⁸	>10 ¹⁸	>10 ¹⁴
THERMAL						
Melting point	°C	-	+327	+310	+275	+170
Maxi. service temperature	°C	-	+260	+260	+205	+140
Mini. service temperature	°C	-	-60	-60	-60	-40
CHEMICAL						
Chemical resistance	-	-	Excellent	Excellent	Excellent	Good
Weather resistance	-	-	Excellent	Excellent	Excellent	Excellent
OTHER						
Aspect	-	-	White translucent	Transparent	Transparent	White opaque
Flammability	UL94	-	V-0	V-0	V-0	V-0
Limiting oxygen index	D2863	%	>95	>95	>95	40
Water absorption	%	D570	<0.01	<0.03	<0.01	<0.04