

Typical Properties of Fluoropolymer											
	Properties		Unit	ASTMest Method	PTFE	PFA	FEP	PCTFE	ETFE	ECTFE	PVDF
Physical	Melting Point		°C	-	327	310	275	220	270	220-245	156-178
	Specific Gravity		-	D792	2.14-2.20	2.12-2.17	1.12-2.17	2.03-2.2	1,70	1.68-1.69	1.75-1.78
Mechanical	Tensile Strength		Mpa	D638	13.7-34.3	27.5-29.4	18.6-21.6	30.9-41.2	45.1	41.2	24.5-50.0
			(Kgf/cm²)		(140-350)	(280-300)	(190-220)	(315-420)	(460)	(420)	(250-510)
	Elongation		%	D638	200-400	300	250-330	80-250	100-400	200-300	12-430
	Compression Strength		Mpa	D695	11.8	-	15.2	31.4-51.0	49.0	-	45.1-96.1
			(Kgf/cm²)		(120)	-	(155)	(320-520)	(500)	-	(460-980)
	Impact Strength		J/m	D526A	160	Not Broken	Not Broken	133-144	Not Broken	Not broken	160-374
			(Kgf cm/cm)	(16.3)				(13.6-14.7)			(16.3-38.1)
	Hardness (Rockwell)		-	D785	-	-	-	R75-112	R50	R93-95	R77-83
	Hardness(shore)		-	D2240	D50-55	D64	D60-65	D75-80	D75	D55	D75-77
	Flexural Modulus		Gpa	D790	0.55	0.82	0.55-0.66	1.25-1.79	1.37	0.66-0.69	2.00-2.48
			(10³ Kgf/cm²)		(5.6)	(8.4)	(5.6-6.7)	(12.7-18.3)	(14)	(6.7-7.0)	(20.4-25,3)
	Tensile Modulus		GPa	D638	0.40-0.55	-	0.34	0.049-2.06	0.83	1.65	1.00-2.94
			(10³ Kgf/cm²)		(4.1-5.6)	-	(3.5)	(0.5-21)	(8.4)	(16.8)	(10.2-30)
	Coefficient of Kinetic Friction		-		0,69MPa						
				(7Kgf/cm²)	0.10	0.2	0.3	0.37	0.4	-	0.39
				3m/min							
Thermal	Thermal Conductivity		W/(m.K)	C177	0.25	0.25	0.25	0.20-0.22	0.24	0.16	0.10-0.13
			(10 <sup>-4</sup> cal/cm. sec.°C)		(6.0)	(6.0)	(6.0)	(4.7-5.3)	(5.7)	(3.8)	(2.4-3.1)
	Specific Heat		10² J/(Kg,K)	-	1.0	1.0	1.2	0.92	1.9-2.0	-	1.4
			(cal/(°C,g)	-	(0.25)	(0.25)	(0.28)	(0.22)	(0.46-0.47)	-	(0.33)
	Linear Coefficient of Thermal Expansion		10 <sup>-5</sup> /°C	D696	10	12	8.3-10.5	4.5-7.0	5.9	8	7-14
	Ball Pressure		°C	-	180	230	170	170	185	-	-
	Thermal Distortion Temperature	1,81MPa (18,5Kgf/cm²)	°C	D648	55	47	50	-	74	77	54-115
0,45 Mpa (4,6Kgf/cm²)		°C	-	121	74	72	126	104	116	138	
Maximum Service Temperature (continuous)		°C	(Not Loaded)	260	260	200	177-200	150-180	165-180	150	
Electrical	Volume Resistivity		Ω . Cm	D257(50%RH.23°C)	(10)18	>1018	>1018	1,2x1018	>1016	> 1015	2x1014
	Dielectric Strength (at short time)		MV/m (kV/mm) (3,2mm thickness)	D149	19	20	20-24	20-24	16	20	10-11
	Dielectric Constant	60Hz	pF/m	D150	<18,6(<2,1)	<18,6(<2,1)	<18,6(<2,1)	19,8-24,8 (2,24-2,8)	23,0 (2,6)	23,0 (2,6)	74,4 (8,4)
		10³ HZ	pF/m	D150	<18,6(<2,1)	<18,6(<2,1)	<18,6(<2,1)	20,4-23,9 (2,3-2,7)	23,0 (2,6)	23,0 (2,6)	68,4 (7,72)
		106 HZ	pF/m	D150	<18,6(<2,1)	<18,6(<2,1)	<18,6(<2,1)	20,4-22,1 (2,3-2,5)	23,0(2,6)	23,0(2,6)	56,9(6,43)
	Dissipation Factor	60 HZ	-	D150	<0,0002	<0,0002	<0,0002	0,0012	0,0006	<0,0005	0,049
		103 HZ	-	D150	<0,0002	<0,0002	<0,0002	0.			
106HZ		-	D150	<0,0002	<0,0002	<0,0002	0,023-0,027	0,0008	0,0015	0,018	
ARC Resistance		sec	D495	>300	>300	>300	>360	75	18	50-70	
Chemical Resistance and Other Properties	Water Absorption (24h)		%	D570	<0,01	0,03	<0,01	0,00	0,029	0,01	0,03-0,06
	Flammability		2mm thickness	(UL-94)	V-0	V-0	V-0	V-0	V-0	V-0	V-0
	Oxygen Index		-	D2863	>95	>95	>95	>95	30	60	44
	Influence of Direct sunlight		-	-	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected
	Influence of Weak Acid		-	D543	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected
	Influence of Strong Acid		-	D543	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Affected by fuming sulfuric Acid
	Influence of Weak Alkali		-	D543	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected
	Influence of Strong Alkali		-	D543	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected	Not Affected
Influence of Solvent		-	D543	Not Affected	Not Affected	Not Affected	Slightly swelled by Halogenated Solvent	Not Affected	Serviceable	Not affected by most solvents	