Polytetrafluoroethylene Specification

Property		ASTM Test Method	Standard
Specific Gravity		D792	2.20
Tensile Strength〔MPa〕		D638	7～27
Tensile Elongation〔%〕		D638	225～600
Young's Modulus〔10^3MPa〕		D638	0.3
Compressive Strength at 5% strain〔MPa〕		D695	12
Flexural Strength〔MPa〕		D790	18
Izod Notched Impact Strength (1/2in×1/2in notched, 23℃) [J/m]		D256	157
Rockwell Hardness		D785	R40
Thermal Conductivity〔W/(m·K)〕		C177	0.18
Specific Heat〔J/(kg·K)〕		—	1,040
Coefficient of Linear Expansion〔10^{-5}/℃〕		D696	8.5
Continuous Use Temperature〔℃〕		—	260
Deflection Temperature〔℃〕	0.451MPa	D648	121
	1.813MPa		56
Volume Resistivity (23℃ 50% RH)〔Ω·m〕		D257	＞10^{18}
Dielectric Strength〔kV/mm〕	shorttime 3.2mm thickness	D149	24
	step 3.2mm thickness		19
Dielectric Constant	60Hz	D150	2.10
	10^3Hz		2.10
	10^6Hz		2.10
Dissipation Factor	60Hz	D150	＜3×10^{-4}
	10^3Hz		＜3×10^{-4}
	10^6Hz		＜3×10^{-4}
Arc resistance〔sec〕		D495	＞300
Water Absorption (24 hours 3.2mm Thickness)〔%〕		D570	＜0.01
Flammablity or Rate of Burning		D635/ UL94	incombustibility
sunlight resistances (color change)		—	resist
Weak acid resistances		D543	resist
Strong acid resistances		D543	resist
Weak alkali resistances		D543	resist
Strong alkali resistances		D543	resist
Organic solvent resistances		D543	resist
Transparency		—	opaque
Sand slurry Wear (SS400 =100)		(Original)	1,250
Thrust Wear (by S45C P＝1,960kPa V＝0.25m/sec)〔$\times10^{-6}$$cm^3$/(P·V·h)〕		(Original)	4.9
Allowable PV〔kPa·m/sec〕		(Original)	245

The material properties in above table are only for reference, measured by each test methods, and do not guarantee minimum value.
And these properties might be changed without notice, so it is recommended to refer the data in the newest catalogues.