Table 1
Typical Properties of *Teflon*® PTFE Fluoropolymer Resins

Property	ASTM Method	Unit	*Teflon*® PTFE Granular Resin	Fine Powder
Tensile Strength, 23°C (73°F)	D4894/4895	MPa (psi)	31.0 (4,500)	20.7 min. (3,000 min.)
Elongation, 23°C (73°F)	D4894/4895	%	400	200 min.
MIT Flex, 2 kg load, 10 mil	D2176		Did not break at 10^6 cycles	
Flex Modulus, 23°C (73°F)	D790	MPa (psi)	345–620 (50,000–90,000)	275–620 (40,000–90,000)
Stretching Void Index	D4895		—	15–200+
Impact Strength, Izod	D256	J/m (ft·lb/in)		
–40°C (–40°F)			80 (1.5)	133–267 (2.5–5)
21°C (70°F)			106 (2)	—
24°C (75°F)			160 (3)	—
77°C (170°F)			>320 (>6)	—
204°C (400°F)			No break	No break
Hardness, Durometer	D2240	Shore D	55	50–65
Coefficient of Linear Thermal Expansion per °C (°F), 23–60°C (73–140°F)	E228	mm/mm·°C (in/in·°F)	10×10^{-5} (7×10^{-5})	—
Thermal Conductivity, 4.6 mm (0.18 in)	D435[a]	W/m·K (Btu·in/h·ft^2·°F)	0.25 (1.7)	—
Specific Heat	D4591	kJ/kg·K (Btu/lb·°F)		
20°C (68°F)			1.4 (0.33)	1.5 (0.35)
40°C (104°F)			1.2 (0.29)	1.2 (0.29)
150°C (302°F)			1.3 (0.31)	1.3 (0.31)
260°C (500°F)			1.5 (0.37)	1.4 (0.33)
Thermal Instability Index	D4894/4895		50 max.	50 max.
Deformation Under Load, 23°C (73°F)	D621	%		
3.4 MPa (500 psi)			<0.5	<0.5
6.9 MPa (1000 psi)			2	2
14 MPa (2000 psi)			10	5
Heat Deflection Temperature	D648	°C (°F)		
450 kPa (66 psi)			73 (160)	140 (280)
1800 kPa (264 psi)			45 (115)	55 (130)
Dielectric Strength, Short Time, 2.03 mm (0.080 in)	D149	kV/mm (V/mil)	24 (600)	24 (600)
Surface Arc-Resistance[b]	D495	sec	>300	>300
Volume Resistivity	D257	ohm·cm	$>10^{18}$	$>10^{18}$
Surface Resistivity	D257	ohm·sq	$>10^{18}$	—
Dielectric Constant, 60 to 2 x 109 Hz	D150		2.1	2.1
Dissipation Factor, 60 to 2 x 109 Hz	D150		<0.0001	—
Water Absorption, 24 hr	D570	%	<0.01	<0.01
UL 94 Flame Rating[c]			94 V-0	94 V-0
Resistance to Weathering			Excellent	Excellent
Static Coefficient of Friction Against Polished Steel[d]			0.05–0.08	—
Specific Gravity	D4894/4895		2.16	2.1–2.3

[a]This standard is no longer in use.

[b]Does not track

[c]These numerical flame spread ratings are not intended to reflect hazards presented by this or any other material under actual fire conditions.

[d]Various methods used