

**TYPICAL PROPERTIES OF
POLYCHLOROTRIFLUOROETHYLENE (PCTFE)**

ASTM	Property	PCTFE Grade	
		M-300H	M-400H
MECHANICAL			
D1430	Zero strength time (s)	200-300	330-380
D792	Specific gravity	2.10-2.17	2.10-2.17
D570	Water absorption, 24 h (%)	0	0
D638	Tensile strength, 23°C (psi)	4,570-5,430	4,860-5,710
D638	Elongation, 23°C (%)	50-200	100-250
D695	Compressive strength		
	23°C at 5% strain (psi)	5,710-6,430	5,280-6,000
D256	Impact strength, 23°C		
	Notched Izod (ft-lb/in)	2.5-3.5	3-5
D790	Flexural modulus, 23°C (psi)	9,860-10,600	9,570-10,300
D2240	Durometer hardness,		
	Shore D (D)	85-95	75-80
D1894	Coefficient of friction	—	—
D621	Deformation under load,		
	23°C, 1000 psi, 24 h (%)	0.2	0.2
THERMAL			
	Melting point (°C)	210-212	210-212
D648	Deflection temperature (°C)		
	At 66 psi	126	126
D2863	Oxygen index (%)	—	—
	Maximum service temperature (°C)	149	149
	Thermal conductivity (Btu/ft-hr-°F)	1.45	1.45
UL 94	Flammability rating	V-0	V-0
ELECTRICAL			
D257	Surface resistivity (ohm-sq)	10 ¹⁵	10 ¹⁵
D257	Volume resistivity (ohm-cm)	2 x 10 ¹⁷	2 x 10 ¹⁷
D149	Dielectric strength (V/mil)		
	68 mil film	450-550	450-550
D150	Dielectric constant		
	21°C, 10 ³ Hz	2.6	2.6
D150	Dissipation factor		
	21°C, 10 ³ Hz	0.02	0.02
D495	Arc resistance (s)	360	360

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ISO	Property	PCTFE Grade	
		M-300H	M-400H
MECHANICAL			
ASTM D1430	Zero strength time (s)	200-300	330-380
ISO1183	Specific gravity	2.10-2.17	2.10-2.17
ISO62	Water absorption, 24 h (%)	0	0
ISO527	Tensile strength, 23°C (MPa)	31.51-37.44	33.51-39.37
ISO527	Elongation, 23°C (%)	50-200	100-250
ISO604	Compressive strength		
	23°C at 5% strain (MPa)	39.37-44.33	36.40-41.37
ISO180	Notched Izod impact strength		
	(J/m), 23°C	133-187	160-267
ISO178	Flexural modulus, 23°C (MPa)	67.98-73.08	65.98-71.02
ISO868	Durometer hardness,		
	Shore D (D)	85-95	75-80
ISO8295	Coefficient of friction	—	—
ASTM D621	Deformation under load,		
	23°C, 69 bar, 24 h (%)	0.2	0.2
THERMAL			
	Melting point (°C)	210-212	210-212
ISO75	Deflection temperature (°C)		
	At 0.45 MPa	126	126
ASTM D2863	Oxygen index (%)	—	—
	Maximum service temperature (°C)	149	149
	Thermal conductivity (Btu/ft-hr-°F)	1.45	1.45
UL 94	Flammability rating	V-0	V-0
ELECTRICAL			
IEC60093	Surface resistivity (ohm-sq)	10 ¹⁵	10 ¹⁵
IEC093	Volume resistivity (ohm-cm)	2 x 10 ¹⁷	2 x 10 ¹⁷
ISO243	Dielectric strength (kV/mm)		
	1.7 mm film	17.7-21.6	17.7-21.6
IEC250	Dielectric constant		
	21°C, 10 ³ Hz	2.6	2.6
IEC250	Dissipation factor		
	21°C, 10 ³ Hz	0.02	0.02
ASTM D495	Arc resistance (s)	360	360