

Generic PTFE

Polytetrafluoroethylene

Generic

PROSPECTOR®

www.ulprospector.com

Technical Data

Product Description

This data represents typical values that have been calculated from all products classified as: Generic PTFE

This information is provided for comparative purposes only.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity			
--	2.12 to 2.20	2.12 to 2.20 g/cm ³	ASTM D792
--	2.15 to 2.31 g/cm ³	2.15 to 2.31 g/cm ³	ISO 1183
Apparent (Bulk) Density			
--	0.32 to 0.83 g/cm ³	0.32 to 0.83 g/cm ³	ASTM D1895
--	0.44 to 0.56 g/cm ³	0.44 to 0.56 g/cm ³	ISO 60
Molding Shrinkage			
Flow	0.026 to 0.058 in/in	2.6 to 5.8 %	ASTM D955
--	2.8 to 6.5 %	2.8 to 6.5 %	ISO 294-4
Water Absorption			ASTM D570
24 hr	0.010 to 0.10 %	0.010 to 0.10 %	
Equilibrium	0.010 to 0.10 %	0.010 to 0.10 %	
Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus	77300 to 254000 psi	533 to 1750 MPa	ASTM D638
Tensile Strength			ASTM D638
Yield	2690 to 5000 psi	18.6 to 34.5 MPa	
--	1410 to 6090 psi	9.70 to 42.0 MPa	
Tensile Elongation			
Yield	200 to 450 %	200 to 450 %	ASTM D638
Break	200 to 450 %	200 to 450 %	ASTM D638
Break	42 to 380 %	42 to 380 %	ISO 527-2
Flexural Modulus	80000 to 353000 psi	552 to 2440 MPa	ASTM D790
Compressive Strength			
--	1700 to 1830 psi	11.7 to 12.6 MPa	ASTM D695
--	1450 to 3630 psi	10.0 to 25.0 MPa	ISO 604
Shear Strength	1350 to 3050 psi	9.31 to 21.1 MPa	ASTM D732
Coefficient of Friction	0.045 to 0.25	0.045 to 0.25	ASTM D1894
Deformation Under Load	3.00 to 17.0 %	3.00 to 17.0 %	ASTM D621
Wear Factor	8.0 to 2500 ^{10⁻⁴} in ³ ·min/ ft·lb·hr	16 to 5000 ^{10⁻⁸} mm ³ /N·m	ASTM D3702
Films	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength - MD (Yield)	200 to 18000 psi	1.38 to 124 MPa	ASTM D882
Tensile Elongation - MD (Break)	89 to 340 %	89 to 340 %	ASTM D882
Elastomers	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Strength	1740 to 3260 psi	12.0 to 22.5 MPa	ASTM D412
Tensile Elongation (Break)	67 to 200 %	67 to 200 %	ASTM D412



Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness	29 to 32	29 to 32	ASTM D785
Durometer Hardness			
--	54 to 59	54 to 59	ASTM D2240
--	60 to 68	60 to 68	ISO 868
Thermal	Nominal Value (English)	Nominal Value (SI)	Test Method
Continuous Use Temperature	498 to 500 °F	259 to 260 °C	ASTM D794
Melting Temperature			
--	620 to 652 °F	327 to 344 °C	
--	620 to 621 °F	327 °C	ASTM D3418
CLTE - Flow	2.8E-5 to 9.7E-5 in/in/°F	5.0E-5 to 1.8E-4 cm/cm/°C	ISO 11359-2
Electrical	Nominal Value (English)	Nominal Value (SI)	Test Method
Dielectric Strength	420 to 4200 V/mil	17 to 160 kV/mm	ASTM D149
Dielectric Constant	2.05 to 2.10	2.05 to 2.10	ASTM D150
Dissipation Factor	2.0E-4 to 2.1E-3	2.0E-4 to 2.1E-3	ASTM D150
Injection	Nominal Value (English)	Nominal Value (SI)	
Injection Pressure	2320 to 10000 psi	16.0 to 69.2 MPa	

Injection Notes

This data represents typical values that have been calculated from all products classified as: Generic PTFE

This information is provided for comparative purposes only.

Notes

¹ Typical properties: these are not to be construed as specifications.