

Hippe PTFE

Category : Polymer , Thermoplastic , Fluoropolymer , PTFE

Material Notes:

Good chemical resistance. High thermal stability. Flame resistance. Lowest coefficient of friction among all solid plastics. Very good dielectric properties. Very high weathering resistance. Information provided by Hippe.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hippe-PTFE.php

Physical Properties	Metric	English	Comments
Specific Gravity	2.18 g/cc	2.18 g/cc	DIN 53 479
Moisture Absorption at Equilibrium	<= 0.050 %	<= 0.050 %	Absorption of humidity in standard operating environment; DIN 53 715
Water Absorption at Saturation	<= 0.050 %	<= 0.050 %	DIN 53 495

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	30.0 MPa @Time 30.0 sec	4350 psi @Time 0.00833 hour	DIN 53 456
Tensile Strength	25.0 MPa	3630 psi	DIN 53 455
Elongation at Break	500 %	500 %	DIN 53 455
Tensile Modulus	0.700 GPa	102 ksi	DIN 53 457
Charpy Impact, Notched	NB	NB	DIN 53 453
Coefficient of Friction, Dynamic	0.080 - 0.10	0.080 - 0.10	Against steel, p=0.05 N/mm ² , v=0.6 m/s, hardened and ground
Abrasion	21	21	µm/km; Against steel, p=0.05 N/mm ² , v=0.6 m/s, hardened and ground

Thermal Properties	Metric	English	Comments
CTE, linear	200 µm/m-°C	111 µin/in-°F	
Specific Heat Capacity	1.00 J/g-°C	0.239 BTU/lb-°F	
Thermal Conductivity	0.250 W/m-K	1.74 BTU-in/hr-ft ² -°F	
Melting Point	327 °C	621 °F	DIN 53 736
Maximum Service Temperature, Air	260 °C	500 °F	Continuous use
	260 °C	500 °F	Short Periods
Deflection Temperature at 0.46 MPa	121 °C	250 °F	

(56 psi) Thermal Properties	Metric	English	ISO-R 75 Method B Comments
Deflection Temperature at 1.8 MPa (264 psi)	55.0 °C	131 °F	ISO-R 75 Method A
Glass Transition Temp, Tg	-20.0 °C	-4.00 °F	dynamic; DIN 53 736
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+18 ohm-cm	1.00e+18 ohm-cm	DIN 53 482, VDE 0303, Part 3
Dielectric Constant	2.1 @Frequency 1.00e+6 Hz	2.1 @Frequency 1.00e+6 Hz	DIN 53 483, IEC-250
Dielectric Strength	48.0 kV/mm	1220 kV/in	Breakdown; DIN 53 481, IEC-243, VDE 0303 Part 1
Dielectric Loss Index	0.00020 @Frequency 1.00e+6 Hz	0.00020 @Frequency 1.00e+6 Hz	DIN 53 483, IEC-250

Descriptive Properties	Value	Comments
Color	white	
Creep Resistance	Grade CTI 600	DIN 53 480, IEC-112, VDE 0303 Part 1
Resistance to hot water, suds	resistant	

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