

Hippe PVDF

Category : Polymer , Thermoplastic , Fluoropolymer , PVDF , Polyvinylidene fluoride (PVDF), Molded/Extruded

Material Notes:

Better mechanical strength compared to other fluorinated polymers. Tough and hard. High-grade electrical feature. Good weathering stability. Physiologically safe. Not as good as fluorinated polymers in terms of dielectricity. Information provided by Hippe.

Order this product through the following link:

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

Physical Properties	Metric	English	Comments
Specific Gravity	1.79 g/cc	1.79 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	105 MPa @Time 30.0 sec	15200 psi @Time 0.00833 hour	DIN 53 456
Tensile Strength	55.0 MPa	7980 psi	DIN 53 455
Elongation at Break	20 - 400 %	20 - 400 %	DIN 53 455
Tensile Modulus	2.00 GPa	290 ksi	DIN 53 457
Flexural Modulus	2.00 GPa	290 ksi	from bending test; DIN 53 457
Charpy Impact, Notched	NB	NB	DIN 53 453
Coefficient of Friction, Dynamic	0.30	0.30	Against steel, p=0.05 N/mm ² , v=0.6 m/s, hardened and ground

Thermal Properties	Metric	English	Comments
CTE, linear	130 µm/m-°C	72.2 µin/in-°F	
Specific Heat Capacity	1.20 J/g-°C	0.287 BTU/lb-°F	
Thermal Conductivity	0.110 W/m-K	0.763 BTU-in/hr-ft ² -°F	
Melting Point	178 °C	352 °F	DIN 53 736
Maximum Service Temperature, Air	150 °C	302 °F	Continuous use
	150 °C	302 °F	Short Periods
Deflection Temperature at 0.46 MPa	140 °C	284 °F	

(56 psi) Thermal Properties	Metric	English	ISO-R 75 Method B Comments
Deflection Temperature at 1.8 MPa (264 psi)	95.0 °C	203 °F	ISO-R 75 Method A
Glass Transition Temp, Tg	-18.0 °C	-0.400 °F	dynamic; DIN 53 736
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Volume Resistivity	4.00e+14 ohm-cm	4.00e+14 ohm-cm	DIN 53 482, VDE 0303, Part 3
Surface Resistance	>= 1.00e+13 ohm	>= 1.00e+13 ohm	DIN 53 482
Dielectric Constant	8.0 @Frequency 1.00e+6 Hz	8.0 @Frequency 1.00e+6 Hz	DIN 53 483, IEC-250
Dielectric Strength	17.0 - 150 kV/mm	432 - 3810 kV/in	Breakdown; DIN 53 481, IEC-243, VDE 0303 Part 1
Dielectric Loss Index	0.060 @Frequency 1.00e+6 Hz	0.060 @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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