

Hippe PP Polypropylene

Category : Polymer , Thermoplastic , Polypropylene (PP)

Material Notes:

Lower density compared with PE. Higher hardness and stiffness and better reset features. Non-fragile. Toughness in cold lesser than that of PE. Higher working temperatures than PE, not aromatic-resistant. Sterilizable. Physiologically safe. Very good dielectric properties. Information provided by Hippe.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hippe-PP-Polypropylene.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.910 g/cc	0.910 g/cc	DIN 53 479
Water Absorption at Saturation	0.030 %	0.030 %	DIN 53 495

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	80.0 MPa @Time 30.0 sec	11600 psi @Time 0.00833 hour	DIN 53 456
Tensile Strength	35.0 MPa	5080 psi	DIN 53 455
Elongation at Break	650 %	650 %	DIN 53 455
Tensile Modulus	1.30 GPa	189 ksi	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
Abrasion	11	11	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	110 µm/m-°C	61.1 µin/in-°F	
Specific Heat Capacity	1.70 J/g-°C	0.406 BTU/lb-°F	
Thermal Conductivity	0.220 W/m-K	1.53 BTU-in/hr-ft ² -°F	
Melting Point	165 °C	329 °F	DIN 53 736
Maximum Service Temperature, Air	100 °C	212 °F	Continuous use
	130 °C	266 °F	Short Periods
Deflection Temperature at 0.46 MPa (66 psi)	105 °C	221 °F	ISO-R 75 Method B

Thermal Properties (20 °C) Tensile strength at 1.8 MPa (264 psi)	Metric °C	English °F	Comments ISO 178 Method A
Glass Transition Temp, Tg	-18.0 °C	-0.400 °F	dynamic; DIN 53 736
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	>= 1.00e+17 ohm-cm	>= 1.00e+17 ohm-cm	DIN 53 482, VDE 0303, Part 3
Surface Resistance	>= 1.00e+13 ohm	>= 1.00e+13 ohm	DIN 53 482
Dielectric Constant	2.25 @Frequency 1.00e+6 Hz	2.25 @Frequency 1.00e+6 Hz	DIN 53 483, IEC-250
Dielectric Strength	100 kV/mm	2540 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	natural/green, black	
Creep Resistance	Grade CTI 600	DIN 53 480, IEC-112, VDE 0303 Part 1
Resistance to hot water, suds	resistant	

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