

Hippe PE 1000 Polyethylene

Category : Polymer , Thermoplastic , Polyethylene (PE)

Material Notes:

Tough, flexible and stiff, depending on the crystalline structure (density). Resinous surface. Excellent dielectric properties, Good resistance against solvents, acids and alkalis. Physiologically safe. Low water absorption, not aromatic-resistant. Manifold usable. Easily machinable. Excellent sliding properties. PE 1000 with high molecular weight can be used to -260°C. The abrasion is very low. Information provided by Hippe.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hippe-PE-1000-Polyethylene.php

Physical Properties	Metric	English	Comments
Specific Gravity	0.930 g/cc	0.930 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	38.0 MPa @Time 30.0 sec	5510 psi @Time 0.00833 hour	DIN 53 456
Tensile Strength	20.0 MPa	2900 psi	DIN 53 455
Elongation at Break	>= 350 %	>= 350 %	DIN 53 455
Tensile Modulus	0.600 GPa	87.0 ksi	DIN 53 457
Flexural Modulus	0.800 GPa	116 ksi	from bending test; DIN 53 457
Charpy Impact, Notched	NB	NB	DIN 53 453
Coefficient of Friction, Dynamic	0.29	0.29	Against steel, p=0.05 N/mm ² , v=0.6 m/s, hardened and ground
Tear Strength Test	40	40	in MPa; DIN 53 455

Thermal Properties	Metric	English	Comments
CTE, linear	170 µm/m-°C	94.4 µin/in-°F	
Specific Heat Capacity	1.84 J/g-°C	0.440 BTU/lb-°F	
Thermal Conductivity	0.410 W/m-K	2.85 BTU-in/hr-ft ² -°F	
Melting Point	130 - 135 °C	266 - 275 °F	DIN 53 736

Maximum Service Temperature, Air Thermal Properties	100 °C Metric	212 °F English	Continuous use Comments
	125 °C	257 °F	Short Periods
Deflection Temperature at 0.46 MPa (66 psi)	70.0 °C	158 °F	ISO-R 75 Method B
Deflection Temperature at 1.8 MPa (264 psi)	42.0 °C	108 °F	ISO-R 75 Method A
Glass Transition Temp, Tg	-95.0 °C	-139 °F	dynamic; DIN 53 736
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00\text{e}+14$ ohm-cm	$\geq 1.00\text{e}+14$ ohm-cm	DIN 53 482, VDE 0303, Part 3
Surface Resistance	$1.00\text{e}+11$ ohm	$1.00\text{e}+11$ ohm	DIN 53 482
Dielectric Constant	3.0 @Frequency $1.00\text{e}+6$ Hz	3.0 @Frequency $1.00\text{e}+6$ Hz	DIN 53 483, IEC-250
Dielectric Strength	45.0 kV/mm	1140 kV/in	Breakdown; DIN 53 481, IEC-243, VDE 0303 Part 1

Descriptive Properties	Value	Comments
Color	natural/green, black	
Creep Resistance	Grade KA 3c, KB >600, KC >600	DIN 53 480, IEC-112, VDE 0303 Part 1
Resistance to hot water, suds	resistant	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China