

Hippe PS Polystyrene

Category : Polymer , Thermoplastic , Polystyrene (PS) , Polystyrene, Extrusion Grade

Material Notes:

Amorphous thermoplastic with brilliant surface. High hardness and stiffness, but brittle and susceptible to impact. Very good dielectric properties. Physiologically safe if it falls below a particular value of monomer content. Information provided by Hippe.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hippe-PS-Polystyrene.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.05 g/cc	1.05 g/cc	DIN 53 479
Moisture Absorption at Equilibrium	<= 0.10 %	<= 0.10 %	Absorption of humidity in standard operating environment; DIN 53 715

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	150 MPa @Time 30.0 sec	21800 psi @Time 0.00833 hour	DIN 53 456
Tensile Strength	45.0 MPa	6530 psi	DIN 53 455
Elongation at Break	3.0 %	3.0 %	DIN 53 455
Tensile Modulus	3.20 GPa	464 ksi	DIN 53 457
Flexural Modulus	3.20 GPa	464 ksi	from bending test; DIN 53 457
Charpy Impact, Notched	2.00 J/cm ²	9.52 ft-lb/in ²	DIN 53 453

Thermal Properties	Metric	English	Comments
CTE, linear	70.0 μm/m-°C	38.9 μin/in-°F	
Specific Heat Capacity	1.30 J/g-°C	0.311 BTU/lb-°F	
Thermal Conductivity	0.180 W/m-K	1.25 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	70.0 °C	158 °F	Continuous use
	80.0 °C	176 °F	Short Periods
Deflection Temperature at 1.8 MPa (264 psi)	70.0 °C	158 °F	ISO-R 75 Method A
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
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Volume Resistivity Electrical Properties	$\geq 1.00\text{e}+16$ ohm-cm Metric	$\geq 1.00\text{e}+16$ ohm-cm English	DIN 53 482, VDE 0303, Part 3 Comments
Surface Resistance	$\geq 1.00\text{e}+13$ ohm	$\geq 1.00\text{e}+13$ ohm	DIN 53 482
Dielectric Constant	2.5 @Frequency 1.00e+6 Hz	2.5 @Frequency 1.00e+6 Hz	DIN 53 483, IEC-250
Dielectric Strength	60.0 kV/mm	1520 kV/in	Breakdown; DIN 53 481, IEC-243, VDE 0303 Part 1
Dielectric Loss Index	0.00040 @Frequency 1.00e+6 Hz	0.00040 @Frequency 1.00e+6 Hz	DIN 53 483, IEC-250

Descriptive Properties	Value	Comments
Creep Resistance	Grade CTI 350	DIN 53 480, IEC-112, VDE 0303 Part 1

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