

Hippe PAI Polyamide-imide

Category : Polymer , Thermoplastic , Polyamide-imide (PAI)

Material Notes:

Particularly used where high strength in a wide range of temperature (-190°C...+260°C), high notched strength and very good dielectric properties are required. Features good chemical stability, flame resistance and high heat stability of shape. Information provided by Hippe.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hippe-PAI-Polyamide-imide.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.40 g/cc	1.40 g/cc	DIN 53 479
Moisture Absorption at Equilibrium	2.5 %	2.5 %	Absorption of humidity in standard operating environment; DIN 53 715
Water Absorption at Saturation	3.5 %	3.5 %	DIN 53 495

Mechanical Properties	Metric	English	Comments
Tensile Strength	192 MPa	27800 psi	DIN 53 455
Elongation at Break	15 %	15 %	DIN 53 455
Tensile Modulus	4.90 GPa	711 ksi	DIN 53 457
Flexural Modulus	5.00 GPa	725 ksi	from bending test; DIN 53 457
Coefficient of Friction, Dynamic	0.25 - 0.90	0.25 - 0.90	Against steel, p=0.05 N/mm ² , v=0.6 m/s, hardened and ground

Thermal Properties	Metric	English	Comments
CTE, linear	31.0 µm/m-°C	17.2 µin/in-°F	
Thermal Conductivity	0.260 W/m-K	1.80 BTU-in/hr-ft ² -°F	
Maximum Service Temperature, Air	260 °C	500 °F	Continuous use
	260 °C	500 °F	Short Periods
Deflection Temperature at 0.46 MPa (66 psi)	278 °C	532 °F	ISO-R 75 Method B
Deflection Temperature at 1.8 MPa (264 psi)	275 °C	527 °F	ISO-R 75 Method A
Glass Transition Temp, Tg	275 °C	527 °F	dynamic; DIN 53 736
Flammability, UL94	V-0	V-0	

Electrical Properties	Metric	English	Comments
Volume Resistivity	2.00e+15 ohm-cm	2.00e+15 ohm-cm	DIN 53 482, VDE 0303, Part 3
Surface Resistance	5.00e+18 ohm	5.00e+18 ohm	DIN 53 482
Dielectric Constant	3.9	3.9	DIN 53 483, IEC-250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	23.6 kV/mm	599 kV/in	Breakdown; DIN 53 481, IEC-243, VDE 0303 Part 1
Dielectric Loss Index	0.031	0.031	DIN 53 483, IEC-250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

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

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