

Hippe PA 66 Nylon 66

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, Unreinforced

Material Notes:

The polyamide with high degree of hardness, stiffness, scuff strength and stability of shape under heat. Preferred polyamide for components subjected to high load and heat stress in electrical, mechanical, automobile and plant engineering. Information provided by Hippe.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hippe-PA-66-Nylon-66.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.14 g/cc	1.14 g/cc	DIN 53 479
Moisture Absorption at Equilibrium	2.8 %	2.8 %	Absorption of humidity in standard operating environment; DIN 53 715
Water Absorption at Saturation	8.5 %	8.5 %	DIN 53 495

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	100 - 170 MPa	14500 - 24700 psi	DIN 53 456
	@Time 30.0 sec	@Time 0.00833 hour	
Tensile Strength	70.0 MPa	10200 psi	cond.; DIN 53 455
	90.0 MPa	13100 psi	dry; DIN 53 455
Elongation at Break	40 %	40 %	dry; DIN 53 455
	150 %	150 %	cond.; DIN 53 455
Tensile Modulus	2.00 GPa	290 ksi	cond.; DIN 53 457
	3.30 GPa	479 ksi	dry; DIN 53 457
Flexural Modulus	2.83 GPa	410 ksi	from bending test; DIN 53 457
Charpy Impact, Notched	NB	NB	DIN 53 453
Coefficient of Friction, Dynamic	0.35 - 0.42	0.35 - 0.42	Against steel, p=0.05 N/mm ² , v=0.6 m/s, hardened and ground
Abrasion	0.90	0.90	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	70.0 µm/m-°C	38.9 µin/in-°F	
Specific Heat Capacity	1.70 J/g-°C	0.406 BTU/lb-°F	

Thermal Properties	Metric W/m-K	English U-in/hr-ft ² -°F	Comments
Melting Point	255 °C	491 °F	DIN 53 736
Maximum Service Temperature, Air	100 °C	212 °F	Continuous use
	200 °C	392 °F	Short Periods
Deflection Temperature at 0.46 MPa (66 psi)	>= 200 °C	>= 392 °F	ISO-R 75 Method B
Deflection Temperature at 1.8 MPa (264 psi)	100 °C	212 °F	ISO-R 75 Method A
Glass Transition Temp, Tg	5.00 °C	41.0 °F	cond., dynamic; DIN 53 736
	50.0 °C	122 °F	dry, dynamic; DIN 53 736
Flammability, UL94	V-2	V-2	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+12 - 1.00e+15 ohm-cm	1.00e+12 - 1.00e+15 ohm-cm	DIN 53 482, VDE 0303, Part 3
Surface Resistance	1.00e+13 ohm	1.00e+13 ohm	DIN 53 482
Dielectric Constant	3.6 - 5.0 @Frequency 1.00e+6 Hz	3.6 - 5.0 @Frequency 1.00e+6 Hz	DIN 53 483, IEC-250
Dielectric Strength	28.0 - 30.0 kV/mm	711 - 762 kV/in	Breakdown; DIN 53 481, IEC-243, VDE 0303 Part 1
Dielectric Loss Index	0.026 - 0.20 @Frequency 1.00e+6 Hz	0.026 - 0.20 @Frequency 1.00e+6 Hz	DIN 53 483, IEC-250

Descriptive Properties	Value	Comments
Color	natural/black	
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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