

Hippe PA 46 Nylon 46

Category : Polymer , Thermoplastic , Nylon , Nylon 46 , Nylon 46, Unreinforced

Material Notes:

PA 46 is primarily used in higher temperature ranges where stiffness, creep resistance, continuous heat stability and fatigue strength are required. Therefore PA 46 is suitable for high quality applications in plant engineering, electrical industry and in automotive industry. Information provided by Hippe.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hippe-PA-46-Nylon-46.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.18 g/cc	1.18 g/cc	DIN 53 479
Moisture Absorption at Equilibrium	3.7 %	3.7 %	Absorption of humidity in standard operating environment; DIN 53 715
Water Absorption at Saturation	14 %	14 %	DIN 53 495

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	170 - 200 MPa @Time 30.0 sec	24700 - 29000 psi @Time 0.00833 hour	DIN 53 456
Tensile Strength	65.0 MPa	9430 psi	cond.; DIN 53 455
	80.0 MPa	11600 psi	dry; DIN 53 455
Elongation at Break	30 %	30 %	dry; DIN 53 455
	280 %	280 %	cond.; DIN 53 455
Tensile Modulus	1.20 GPa	174 ksi	cond.; DIN 53 457
	3.50 GPa	508 ksi	dry; DIN 53 457
Charpy Impact, Notched	NB	NB	DIN 53 453
Coefficient of Friction, Dynamic	0.20 - 0.45	0.20 - 0.45	Against steel, p=0.05 N/mm ² , v=0.6 m/s, hardened and ground

Thermal Properties	Metric	English	Comments
CTE, linear	75.0 μm/m-°C	41.7 μin/in-°F	
Specific Heat Capacity	2.10 J/g-°C	0.502 BTU/lb-°F	
Thermal Conductivity	0.300 W/m-K	2.08 BTU-in/hr-ft ² -°F	
Melting Point	295 °C	563 °F	DIN 53 736

Maximum Service Temperature, Air Thermal Properties	140 °C Metric	284 °F English	Continuous use Comments
	280 °C	536 °F	Short Periods
Deflection Temperature at 1.8 MPa (264 psi)	160 °C	320 °F	ISO-R 75 Method A
Flammability, UL94	V-2	V-2	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+13 ohm-cm	1.00e+13 ohm-cm	DIN 53 482, VDE 0303, Part 3
Dielectric Constant	9.4 - 11 @Frequency 1.00e+6 Hz	9.4 - 11 @Frequency 1.00e+6 Hz	DIN 53 483, IEC-250
Dielectric Strength	>= 20.0 kV/mm	>= 508 kV/in	Breakdown; DIN 53 481, IEC-243, VDE 0303 Part 1
Dielectric Loss Index	0.21 - 0.35 @Frequency 1.00e+6 Hz	0.21 - 0.35 @Frequency 1.00e+6 Hz	DIN 53 483, IEC-250

Descriptive Properties	Value	Comments
Color	reddish brown	
Creep Resistance	Grade CTI 400	DIN 53 480, IEC-112, VDE 0303 Part 1
Resistance to hot water, suds	resistant in some conditions	

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