

Hippe PA 6 Nylon 6

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Unreinforced

Material Notes:

Very tough, even at low temperatures. Hard. High attenuation properties. Technical components such as gear wheels, pinions, screws, nuts, bearings, seals, cloth components, guide components, pump components, armatures, housings, coils, etc. Information provided by Hippe.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Hippe-PA-6-Nylon-6.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.14 g/cc	1.14 g/cc	DIN 53 479
Moisture Absorption at Equilibrium	1.6 - 2.0 %	1.6 - 2.0 %	Absorption of humidity in standard operating environment; DIN 53 715
Water Absorption at Saturation	6.5 - 7.5 %	6.5 - 7.5 %	DIN 53 495

Mechanical Properties	Metric	English	Comments
Ball Indentation Hardness	190 MPa	27600 psi	DIN 53 456
	@Time 30.0 sec	@Time 0.00833 hour	
Tensile Strength	100 MPa	14500 psi	cond.; DIN 53 455
	110 MPa	16000 psi	dry; DIN 53 455
Elongation at Break	10 %	10 %	dry; DIN 53 455
	20 %	20 %	cond.; DIN 53 455
Tensile Modulus	3.50 GPa	508 ksi	DIN 53 457
Charpy Impact, Notched	NB	NB	DIN 53 453
Coefficient of Friction, Dynamic	0.34 - 0.42	0.34 - 0.42	Against steel, p=0.05 N/mm ² , v=0.6 m/s, hardened and ground

Thermal Properties	Metric	English	Comments
CTE, linear	55.0 $\mu\text{m}/\text{m}\cdot\text{C}$	30.6 $\mu\text{in}/\text{in}\cdot\text{F}$	
Specific Heat Capacity	1.50 J/g $\cdot\text{C}$	0.359 BTU/lb $\cdot\text{F}$	
Thermal Conductivity	0.230 W/m $\cdot\text{K}$	1.60 BTU-in/hr $\cdot\text{ft}^2\cdot\text{F}$	
Melting Point	295 C	563 F	DIN 53 736
Maximum Service Temperature, Air	100 C	212 F	Continuous use
	180 C	356 F	Short Periods

Thermal Properties Temperature at 1.8 MPa (264 psi)	Metric 110 °C	English 230 °F	Comments ISO 1173 Method A
Flammability, UL94	V-2	V-2	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	DIN 53 482, VDE 0303, Part 3
Dielectric Constant	4.0 @Frequency 1.00e+6 Hz	4.0 @Frequency 1.00e+6 Hz	DIN 53 483, IEC-250
Dielectric Strength	50.0 - 80.0 kV/mm	1270 - 2030 kV/in	Breakdown; DIN 53 481, IEC-243, VDE 0303 Part 1
Dielectric Loss Index	0.030 - 0.040 @Frequency 1.00e+6 Hz	0.030 - 0.040 @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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