

Zell-Metall Engineering Plastics Zellamid 1100 at 50% RH

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6 , Cast

Material Notes:

Zellamid® 1100 is the registered trademark for Zell-Metall's cast nylon 6 in different qualities. Our standard quality is a heavy duty, high impact, wear and heat resistant polyamide. It offers excellent machineability and chemical resistance. Standard color is ivory. Black and blue are available upon request. Zellamid® 1100 is ideally suited for heavy duty plastic components and offers many advantages in comparison with steel: corrosion resistance, low weight, and low wear - e.g. for crane sheaves or carriage wheels for ropeways which are produced as finished parts by spin casting.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Zell-Metall-Engineering-Plastics-Zellamid-1100-at-50-RH.php

Physical Properties	Metric	English	Comments
Density	1.15 g/cc	0.0415 lb/in ³	Dry Density
Moisture Absorption at Equilibrium	2.5 - 3.0 %	2.5 - 3.0 %	Saturation at 50% RH
Water Absorption at Saturation	6.0 - 7.0 %	6.0 - 7.0 %	23°C

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	78 - 80	78 - 80	DIN 53505
Tensile Strength at Break	68.0 - 70.0 MPa	9860 - 10200 psi	DIN 53455
Elongation at Break	40 - 80 %	40 - 80 %	DIN 53455
Tensile Modulus	2.50 GPa	363 ksi	DIN 53457
	0.400 GPa @Temperature 100 °C	58.0 ksi @Temperature 212 °F	DIN 53457
Charpy Impact, Notched	5.00 - 10.0 J/cm ²	23.8 - 47.6 ft-lb/in ²	DIN 53453
Coefficient of Friction	0.050 - 0.10	0.050 - 0.10	to steel, added lubrication
	0.30 - 0.35	0.30 - 0.35	to steel, no lubrication; ISO/DTR 7147
Tensile Creep Modulus, 1000 hours	<= 500 MPa	<= 72500 psi	DIN 53444

Thermal Properties	Metric	English	Comments
CTE, linear	80.0 µm/m-°C @Temperature 20.0 °C	44.4 µin/in-°F @Temperature 68.0 °F	
Specific Heat Capacity	1.67 J/g-°C	0.399 BTU/lb-°F	

Thermal Properties	0.280 W/m-K Metric	1.94 BTU-in/hr-ft ² -°F English	DIN 52612 Comments
Melting Point	220 °C	428 °F	
Maximum Service Temperature, Air	100 - 120 °C	212 - 248 °F	long time operation
	120 - 140 °C	248 - 284 °F	medium time operation
	160 °C	320 °F	a few hours operation
Minimum Service Temperature, Air	-40.0 °C	-40.0 °F	
Flammability, UL94	HB	HB	

Electrical Properties	Metric	English	Comments
Volume Resistivity	3.00e+12 - 5.00e+12 ohm-cm	3.00e+12 - 5.00e+12 ohm-cm	DIN 53482
Surface Resistance	1.00e+10 - 3.00e+10 ohm	1.00e+10 - 3.00e+10 ohm	DIN 53482
Dielectric Constant	12	12	DIN 53483
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dielectric Strength	15.0 - 20.0 kV/mm	381 - 508 kV/in	DIN 53481
Dissipation Factor	0.15	0.15	DIN 53483
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Comparative Tracking Index	600 V	600 V	KV Method; DIN 53480

Descriptive Properties	Value	Comments
Time yield limit	up to 8.5	s1/1000; DIN.53444

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China