

GEHR Plastics PA 12 TR Transparent Nylon 12

Category : Polymer , Thermoplastic , Nylon , Nylon 12

Material Notes:

Used for optical components that benefit from the transparency and the high dynamic strength
 Properties: Transparency Extremely high
 dynamic strength High chemical resistance High stress-cracking resistance Very high toughness Good weather resistance

Order this product through the following link:

http://www.lookpolymers.com/polymer_GEHR-Plastics-PA-12-TR-Transparent-Nylon-12.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.00 g/cc	1.00 g/cc	ISO 1183
Water Absorption	3.0 %	3.0 %	ISO 62
Moisture Absorption at Equilibrium	1.5 %	1.5 %	ISO 62

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	83	83	ISO 868
Ball Indentation Hardness	90.0 MPa	13100 psi	ISO 2039
Tensile Strength at Break	45.0 MPa	6530 psi	ISO 527
Tensile Strength, Yield	66.0 MPa	9570 psi	ISO 527
Elongation at Break	>= 50 %	>= 50 %	ISO 527
Elongation at Yield	6.0 %	6.0 %	ISO 527
Modulus of Elasticity	1.47 GPa	213 ksi	ISO 527
Charpy Impact, Notched	1.30 J/cm ²	6.19 ft-lb/in ²	ISO 179
	NB	NB	ISO 179

Thermal Properties	Metric	English	Comments
CTE, linear	90.0 Åµm/m-Â°C	50.0 Åµin/in-Â°F	ISO 11359
Melting Point	155 Â°C	311 Â°F	DIN EN ISO 314
Maximum Service Temperature, Air	100 Â°C	212 Â°F	
Deflection Temperature at 0.46 MPa (66 psi)	135 Â°C	275 Â°F	ISO 75
Deflection Temperature at 1.8 MPa (264 psi)	115 Â°C	239 Â°F	ISO 75
Glass Transition Temp, Tg	155 Â°C	311 Â°F	DIN EN ISO 3146

Thermal Properties	Metric	English	Comments
Flammability, UL 94	HB	HB	

Optical Properties	Metric	English	Comments
Transmission, Visible	90 %	90 %	Transparent, thickness not specified

Electrical Properties	Metric	English	Comments
Volume Resistivity	$\geq 1.00 \times 10^{11}$ ohm-cm	$\geq 1.00 \times 10^{11}$ ohm-cm	IEC 60093
Surface Resistivity per Square	$\geq 1.00 \times 10^{13}$ ohm	$\geq 1.00 \times 10^{13}$ ohm	IEC 60093
Dielectric Strength	34.0 kV/mm	864 kV/in	IEC 60243-1
Comparative Tracking Index	60 V	60 V	IEC 60112

Descriptive Properties	Value	Comments
Bondability	yes	
Color	transparent	
Physiological indifference according	Yes	FDA, NSF
	yes	EEC
UV Stabilization	yes	

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