

LG Chemical Lupox® GP1000D PBT

Category : Polymer , Thermoplastic , Polyester, TP , Polybutylene Terephthalate (PBT)

Material Notes:

Description: Injection Molding, PBT, General Purpose
Application: Automotive (Head Lamp Bezel)
CAS No. 30965-26-5
Information provided by LG Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-Lupox-GP1000D-PBT.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.30 g/cc	1.30 g/cc	ASTM D792
Maximum Moisture Content	0.020	0.020	Injection Molding
Linear Mold Shrinkage, Flow	0.018 cm/cm @Thickness 3.20 mm	0.018 in/in @Thickness 0.126 in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength, Yield	58.8 MPa @Thickness 3.20 mm	8530 psi @Thickness 0.126 in	50mm/min; ASTM D638
Elongation at Break	40 % @Thickness 3.20 mm	40 % @Thickness 0.126 in	50mm/min; ASTM D638
Flexural Yield Strength	90.2 MPa @Thickness 3.20 mm	13100 psi @Thickness 0.126 in	2.8mm/min; ASTM D790
Flexural Modulus	2.64 GPa @Thickness 3.20 mm	383 ksi @Thickness 0.126 in	2.8mm/min; ASTM D790
Izod Impact, Notched	0.363 J/cm @Thickness 3.20 mm, Temperature 23.0 Â°C	0.680 ft-lb/in @Thickness 0.126 in, Temperature 73.4 Â°F	ASTM D256

Thermal Properties	Metric	English	Comments
Melting Point	225 Â°C	437 Â°F	@ Break; ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	170 Â°C @Thickness 6.40 mm	338 Â°F @Thickness 0.252 in	Unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	61.0 Â°C @Thickness 6.40 mm	142 Â°F @Thickness 0.252 in	Unannealed; ASTM D648

Thermal Properties UL RTI, Electrical	140 Â°C Metric	284 Â°F English	Comments
	@Thickness >=0.710 mm	@Thickness >=0.0280 in	
	140 Â°C	284 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	140 Â°C	284 Â°F	
	@Thickness >=3.30 mm	@Thickness >=0.130 in	
UL RTI, Mechanical with Impact	130 Â°C	266 Â°F	
	@Thickness >=0.710 mm	@Thickness >=0.0280 in	
	130 Â°C	266 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	130 Â°C	266 Â°F	
	@Thickness >=3.30 mm	@Thickness >=0.130 in	
UL RTI, Mechanical without Impact	140 Â°C	284 Â°F	
	@Thickness >=0.710 mm	@Thickness >=0.0280 in	
	140 Â°C	284 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	140 Â°C	284 Â°F	
	@Thickness >=3.30 mm	@Thickness >=0.130 in	
Flammability, UL94	HB	HB	
	@Thickness >=0.710 mm	@Thickness >=0.0280 in	
	HB	HB	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	HB	HB	
	@Thickness >=3.30 mm	@Thickness >=0.130 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+17 ohm-cm	1.00e+17 ohm-cm	ASTM D257
	23.0 kV/mm	584 kV/in	

Dielectric Strength Electrical Properties	Metric @ Thickness 1.00 mm	English @ Thickness 0.0394 in	ASTM D149 Comments
Arc Resistance	120 - 180 sec	120 - 180 sec	ASTM D495
Comparative Tracking Index	600 V	600 V	Solution A; IEC 60112
Hot Wire Ignition, HWI	7.0 - 15 sec @Thickness >=1.50 mm	7.0 - 15 sec @Thickness >=0.0591 in	
	15 - 30 sec @Thickness >=3.30 mm	15 - 30 sec @Thickness >=0.130 in	
High Amp Arc Ignition, HAI	>= 120 arcs @Thickness 1.50 mm	>= 120 arcs @Thickness 0.0591 in	
	>= 120 arcs @Thickness 3.30 mm	>= 120 arcs @Thickness 0.130 in	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	245 - 255 Â°C	473 - 491 Â°F	Injection Molding
Middle Barrel Temperature	245 - 260 Â°C	473 - 500 Â°F	Injection Molding
Front Barrel Temperature	245 - 260 Â°C	473 - 500 Â°F	Injection Molding
Nozzle Temperature	250 - 265 Â°C	482 - 509 Â°F	Injection Molding
Mold Temperature	40.0 - 80.0 Â°C	104 - 176 Â°F	Injection Molding
Drying Temperature	100 - 120 Â°C	212 - 248 Â°F	Injection Molding
Dry Time	3.00 - 5.00 hour	3.00 - 5.00 hour	Injection Molding

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