LG Chemical HIPS MI770 PS, Impact Modified

Category : Polymer , Thermoplastic , Polystyrene (PS) , Polystyrene, Impact Modified

Material Notes:

Description: Injection Molding, PS, Impact Modified, High GlossApplication: Electric/Electronic Components, Stationary Articles, Food Containers, etc.CAS: 9003-55-8Information provided by LG Chemical

Order this product through the following link:
http://www.lookpolymers.com/polymer_LG-Chemical-HIPS-MI770-PS-Impact-Modified.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.05 g/cc	1.05 g/cc	ASTM D792
Maximum Moisture Content	0.010	0.010	Injection Molding
Linear Mold Shrinkage, Flow	0.0040 - 0.0080 cm/cm @Thickness 3.20 mm	0.0040 - 0.0080 in/in @Thickness 0.126 in	ASTM D955
Melt Flow	6.0 g/10 min @Load 5.00 kg, Temperature 200 Â°C	6.0 g/10 min @Load 11.0 lb, Temperature 392 Â°F	ASTM D1238 (G)
	16 g/10 min @Load 3.80 kg, Temperature 230 Â°C	16 g/10 min @Load 8.38 lb, Temperature 446 Â°F	ASTM D1238 (I)
	69 g/10 min @Load 10.0 kg, Temperature 220 Â°C	69 g/10 min @Load 22.0 lb, Temperature 428 Â°F	ASTM D1238 (G)

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	109	109	ASTM D785
Tensile Strength, Yield	34.3 MPa @Thickness 3.20 mm	4980 psi @Thickness 0.126 in	50mm/min; ASTM D638
Elongation at Break	79 % @Thickness 3.20 mm	79 % @Thickness 0.126 in	50mm/min; ASTM D638
Elongation at Yield	4.0 % @Thickness 3.20 mm	4.0 % @Thickness 0.126 in	50mm/min; ASTM D638
Tensile Modulus	2.26 GPa @Thickness 3.20 mm	327 ksi @Thickness 0.126 in	1mm/min; ASTM D638
	53.9 MPa	7820 psi	

Mechanical Properties	Metric	English	Comments
Flexural Yield Strength	@Thickness 3.20 mm	@Thickness 0.126 in	15mm/min; ASTM D790
Flexural Modulus	2.67 GPa @Thickness 3.20 mm	387 ksi @Thickness 0.126 in	15mm/min; ASTM D790
Izod Impact, Notched	0.490 J/cm @Thickness 3.20 mm, Temperature -30.0 Â°C	0.918 ft-lb/in @Thickness 0.126 in, Temperature -22.0 Â°F	ASTM D256
	0.490 J/cm @Thickness 6.40 mm, Temperature -30.0 Â°C	0.918 ft-lb/in @Thickness 0.252 in, Temperature -22.0 Â°F	ASTM D256
	0.588 J/cm @Thickness 6.40 mm, Temperature 23.0 Â°C	1.10 ft-lb/in @Thickness 0.252 in, Temperature 73.4 Â°F	ASTM D256
	1.08 J/cm @Thickness 3.20 mm, Temperature 23.0 Â°C	2.02 ft-lb/in @Thickness 0.126 in, Temperature 73.4 Â°F	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	92.0 Â°C @Thickness 6.40 mm	198 Â°F @Thickness 0.252 in	Unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	83.0 Â°C @Thickness 6.40 mm	181 Â°F @Thickness 0.252 in	Unannealed; ASTM D648
Vicat Softening Point	95.0 Â°C @Load 5.00 kg	203 Â°F @Load 11.0 lb	50Â°C/h; ASTM D1525
UL RTI, Electrical	50.0 Â°C @Thickness >=1.50 mm	122 Â°F @Thickness >=0.0591 in	
	50.0 Â°C @Thickness >=3.00 mm	122 Â°F @Thickness >=0.118 in	
UL RTI, Mechanical with Impact	50.0 Â°C @Thickness >=1.50 mm	122 Â°F @Thickness >=0.0591 in	
	50.0 Â°C @Thickness >=3.00 mm	122 Â°F @Thickness >=0.118 in	
UL RTI, Mechanical without Impact	50.0 Â°C	122 Â°F	

Thermal Properties	Metric	English	Comments
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	50.0 Â°C @Thickness >=3.00 mm	122 Â°F @Thickness >=0.118 in	
Flammability, UL94	HB @Thickness >=1.60 mm	HB @Thickness >=0.0630 in	
	HB @Thickness >=3.20 mm	HB @Thickness >=0.126 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	
Dielectric Strength	40.0 kV/mm	1020 kV/in	
Arc Resistance	120 - 180 sec	120 - 180 sec	ASTM D495
Hot Wire Ignition, HWI	7.0 - 15 sec @Thickness >=1.50 mm	7.0 - 15 sec @Thickness >=0.0591 in	
	15 - 30 sec @Thickness >=3.00 mm	15 - 30 sec @Thickness >=0.118 in	
High Amp Arc Ignition, HAI	60 - 120 arcs @Thickness 1.50 mm	60 - 120 arcs @Thickness 0.0591 in	
	>= 120 arcs @Thickness 3.00 mm	>= 120 arcs @Thickness 0.118 in	
High Voltage Arc-Tracking Rate, HVTR	25.4 - 50.0 mm/min	1.00 - 1.97 in/min	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	170 - 190 Â°C	338 - 374 Â°F	Injection Molding
Middle Barrel Temperature	180 - 200 Â°C	356 - 392 Â°F	Injection Molding
Front Barrel Temperature	190 - 210 Â°C	374 - 410 Â°F	Injection Molding
Nozzle Temperature	190 - 220 Â°C	374 - 428 Â°F	Injection Molding
Melt Temperature	190 - 220 Â°C	374 - 428 Â°F	Injection Molding
Mold Temperature	40.0 - 70.0 Â°C	104 - 158 Â°F	Injection Molding

Processing Properties	Metric	English	Comments
Drying Temperature	80.0 Â°C	176 Â°F	Injection Molding
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	Injection Molding
Back Pressure	29.4 - 58.8 MPa	4260 - 8530 psi	Injection Molding
Screw Speed	30 - 60 rpm	30 - 60 rpm	Injection Molding

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