

LG Chemical 90HR SAN, High Transparency, Heat Resistance, Chemical Resistance

Category : Polymer , Thermoplastic , SAN Polymer

Material Notes:

Feature: Injection Molding, SAN, High Transparency, Heat Resistance, Chemical Resistance
Application: Battery Case, Light Cover
CAS No. 9003-54-7
Information provided by LG Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-90HR-SAN-High-Transparency-Heat-Resistance-Chemical-Resistance.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.08 g/cc	1.08 g/cc	ASTM D792
Maximum Moisture Content	0.010	0.010	Injection Molding
Linear Mold Shrinkage, Flow	0.0040 - 0.0070 cm/cm @Thickness 3.20 mm	0.0040 - 0.0070 in/in @Thickness 0.126 in	ASTM D955
Melt Flow	2.0 g/10 min @Load 5.00 kg, Temperature 200 Â°C	2.0 g/10 min @Load 11.0 lb, Temperature 392 Â°F	ASTM D1238
	10 g/10 min @Load 3.80 kg, Temperature 230 Â°C	10 g/10 min @Load 8.38 lb, Temperature 446 Â°F	ASTM D1238
	27 g/10 min @Load 10.0 kg, Temperature 220 Â°C	27 g/10 min @Load 22.0 lb, Temperature 428 Â°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	124	124	ASTM D785
Tensile Strength, Yield	76.5 MPa @Thickness 3.20 mm	11100 psi @Thickness 0.126 in	50mm/min; ASTM D638
Elongation at Break	9.0 % @Thickness 3.20 mm	9.0 % @Thickness 0.126 in	50mm/min; ASTM D638
Tensile Modulus	3.21 GPa @Thickness 3.20 mm	465 ksi @Thickness 0.126 in	1 mm/min; ASTM D638
Flexural Yield Strength	125 MPa @Thickness 3.20 mm	18100 psi @Thickness 0.126 in	15mm/min; ASTM D790

Mechanical Properties	Metric	English	Comments
	3.77 GPa	546 ksi	Condition, ASTM D790
	@Thickness 3.20 mm	@Thickness 0.126 in	
Izod Impact, Notched	0.0981 J/cm	0.184 ft-lb/in	ASTM D256
	@Thickness 6.40 mm, Temperature 23.0 Â°C	@Thickness 0.252 in, Temperature 73.4 Â°F	
	0.0981 J/cm	0.184 ft-lb/in	ASTM D256
	@Thickness 6.40 mm, Temperature -30.0 Â°C	@Thickness 0.252 in, Temperature -22.0 Â°F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	>= 92.0 Â°C	>= 198 Â°F	Unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	103 Â°C	217 Â°F	50Â°C/h; ASTM D1525
	@Load 5.00 kg	@Load 11.0 lb	
UL RTI, Electrical	50.0 Â°C	122 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	50.0 Â°C	122 Â°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
UL RTI, Mechanical with Impact	50.0 Â°C	122 Â°F	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	50.0 Â°C	122 Â°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
UL RTI, Mechanical without Impact	50.0 Â°C	122 Â°F	
	@Thickness <=1.50 mm	@Thickness <=0.0591 in	
	50.0 Â°C	122 Â°F	
	@Thickness <=3.00 mm	@Thickness <=0.118 in	
Flammability, UL94	HB	HB	
	@Thickness >=1.60 mm	@Thickness >=0.0630 in	
	HB	HB	
	@Thickness >=3.20 mm	@Thickness >=0.126 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+15 ohm-cm	1.00e+15 ohm-cm	
Dielectric Strength	27.0 kV/mm	686 kV/in	
Arc Resistance	120 - 180 sec	120 - 180 sec	ASTM D495
Comparative Tracking Index	400 - 600 V	400 - 600 V	
Hot Wire Ignition, HWI	7.0 - 15 sec	7.0 - 15 sec	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	15 - 30 sec	15 - 30 sec	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
High Amp Arc Ignition, HAI	>= 120 arcs	>= 120 arcs	
	@Thickness 1.50 mm	@Thickness 0.0591 in	
	>= 120 arcs	>= 120 arcs	
	@Thickness 3.00 mm	@Thickness 0.118 in	

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
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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