

LG Chemical ALPHALAC SH860 HIPS

Category : Polymer , Thermoplastic , Polystyrene (PS) , Polystyrene, Impact Grade, Glass Filled

Material Notes:

Description: Injection Molding, General Purpose, Good Processability
Application: Refrigerator Inner Liner
CAS No. 9003-55-8
Information provided by LG Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-ALPHALAC-SH860-HIPS.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.03 g/cc	1.03 g/cc	ASTM D792
Maximum Moisture Content	0.010	0.010	Injection Molding
Melt Flow	3.0 g/10 min	3.0 g/10 min	ASTM D1238(G)
	@Load 5.00 kg, Temperature 200 Â°C	@Load 11.0 lb, Temperature 392 Â°F	
	10 g/10 min	10 g/10 min	
	@Load 3.80 kg, Temperature 230 Â°C	@Load 8.38 lb, Temperature 446 Â°F	ASTM D1238(I)
	43 g/10 min	43 g/10 min	
	@Load 10.0 kg, Temperature 220 Â°C	@Load 22.0 lb, Temperature 428 Â°F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	85	85	
Tensile Strength, Yield	28.4 MPa	4120 psi	50mm/min; ASTM D638
	@Thickness 3.20 mm	@Thickness 0.126 in	
Elongation at Break	131 %	131 %	50mm/min; ASTM D638
	@Thickness 3.20 mm	@Thickness 0.126 in	
Elongation at Yield	5.0 %	5.0 %	50mm/min; ASTM D638
	@Thickness 3.20 mm	@Thickness 0.126 in	
Tensile Modulus	2.16 GPa	313 ksi	1mm/min; ASTM D638
	@Thickness 3.20 mm	@Thickness 0.126 in	
Flexural Yield Strength	46.1 MPa	6680 psi	15mm/min; ASTM D790
	@Thickness 3.20 mm	@Thickness 0.126 in	
	1.67 GPa	242 ksi	

Flexural Modulus Mechanical Properties	Metric @ Thickness 3.20 mm	English @ Thickness 0.126 in	15mm/min: ASTM D790 Comments
Izod Impact, Notched	0.588 J/cm	1.10 ft-lb/in	ASTM D256
	@Thickness 6.50 mm, Temperature -30.0 Â°C	@Thickness 0.256 in, Temperature -22.0 Â°F	
	0.686 J/cm	1.29 ft-lb/in	ASTM D256
	@Thickness 3.20 mm, Temperature -30.0 Â°C	@Thickness 0.126 in, Temperature -22.0 Â°F	
	0.981 J/cm	1.84 ft-lb/in	ASTM D256
	@Thickness 6.50 mm, Temperature 23.0 Â°C	@Thickness 0.256 in, Temperature 73.4 Â°F	
	1.37 J/cm	2.57 ft-lb/in	ASTM D256
	@Thickness 3.20 mm, Temperature 23.0 Â°C	@Thickness 0.126 in, Temperature 73.4 Â°F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	93.0 Â°C	199 Â°F	Unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	83.0 Â°C	181 Â°F	Unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	92.0 Â°C	198 Â°F	50Â°C/h; ASTM D1525
	@Load 5.00 kg	@Load 11.0 lb	
Flammability, UL94	HB	HB	
	@Thickness >=1.60 mm	@Thickness >=0.0630 in	
	HB	HB	
	@Thickness >=3.20 mm	@Thickness >=0.126 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

Processing Properties	Metric	English	Comments
Drying Temperature	100-110 °C	212-230 °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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