

LG Chemical ALPHALAC SG960 HIPS

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

Material Notes:

Description: Injection Molding, General Purpose, Good Processability Application: Washer Cover, Air-conditioner Panel, Refrigerator

PartsCAS No. 9003-55-8 Information provided by LG Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-ALPHALAC-SG960-HIPS.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
Melt Flow	5.0 g/10 min	5.0 g/10 min	ASTM D1238(G)
	@Load 5.00 kg, Temperature 200 Â°C	@Load 11.0 lb, Temperature 392 Â°F	
	15 g/10 min	15 g/10 min	ASTM D1238(I)
	@Load 3.80 kg, Temperature 230 Â°C	@Load 8.38 lb, Temperature 446 Â°F	
	64 g/10 min	64 g/10 min	ASTM D1238(G)
	@Load 10.0 kg, Temperature 220 Â°C	@Load 22.0 lb, Temperature 428 Â°F	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	107	107	ASTM D785
Tensile Strength, Yield	36.3 MPa	5260 psi	50mm/min; ASTM D638
	@Thickness 3.20 mm	@Thickness 0.126 in	
Elongation at Break	57 %	57 %	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	2.06 GPa	299 ksi	1mm/min; ASTM D638
	@Thickness 3.20 mm	@Thickness 0.126 in	
Flexural Yield Strength	54.9 MPa	7970 psi	15mm/min; ASTM D790
	@Thickness 3.20 mm	@Thickness 0.126 in	
	2.45 GPa	356 ksi	

Flexural Modulus Mechanical Properties	Metric @ Thickness 3.20 mm	English @ Thickness 0.126 in	15mm/min: ASTM D790 Comments
Izod Impact, Notched	0.196 J/cm @ Thickness 6.50 mm, Temperature -30.0 Å°C	0.367 ft-lb/in @ Thickness 0.256 in, Temperature -22.0 Å°F	ASTM D256
	0.392 J/cm @ Thickness 3.20 mm, Temperature -30.0 Å°C	0.735 ft-lb/in @ Thickness 0.126 in, Temperature -22.0 Å°F	ASTM D256
	0.981 J/cm @ Thickness 6.50 mm, Temperature 23.0 Å°C	1.84 ft-lb/in @ Thickness 0.256 in, Temperature 73.4 Å°F	ASTM D256
	1.47 J/cm @ Thickness 3.20 mm, Temperature 23.0 Å°C	2.76 ft-lb/in @ Thickness 0.126 in, Temperature 73.4 Å°F	ASTM D256

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	90.0 Å°C @ Thickness 6.40 mm	194 Å°F @ Thickness 0.252 in	Unannealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	79.0 Å°C @ Thickness 6.40 mm	174 Å°F @ Thickness 0.252 in	Unannealed; ASTM D648
Vicat Softening Point	91.0 Å°C @ Load 5.00 kg	196 Å°F @ Load 11.0 lb	50Å°C/h; ASTM D1525
UL RTI, Electrical	50.0 Å°C @ Thickness >=1.50 mm	122 Å°F @ Thickness >=0.0591 in	
	50.0 Å°C @ Thickness >=3.00 mm	122 Å°F @ Thickness >=0.118 in	
UL RTI, Mechanical with Impact	50.0 Å°C @ Thickness >=1.50 mm	122 Å°F @ Thickness >=0.0591 in	
	50.0 Å°C @ Thickness >=3.00 mm	122 Å°F @ Thickness >=0.118 in	
UL RTI, Mechanical without Impact	50.0 Å°C @ Thickness >=1.50 mm	122 Å°F @ Thickness >=0.0591 in	
	50.0 Å°C	122 Å°F	

Thermal Properties	Metric	English	Comments
Flammability, UL94	HB	HB	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	HB	HB	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	

Electrical Properties	Metric	English	Comments
Arc Resistance	180 - 240 sec	180 - 240 sec	ASTM D495
Hot Wire Ignition, HWI	15 - 30 sec	15 - 30 sec	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
High Amp Arc Ignition, HAI	>= 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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