

LG Chemical AF345 ABS, Flame Retardant

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Molded

Material Notes:

Feature: Injection Molding, Flame Retardant
 Application: Electric/Electronic Applications (TV, Monitor Housing) IT/OA device
 CAS No. 9003-56-9, 40039-93-8 and 1309-64-4
 Information provided by LG Chemical

Order this product through the following link:

http://www.lookpolymers.com/polymer_LG-Chemical-AF345-ABS-Flame-Retardant.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.19 g/cc	1.19 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	37 g/10 min @Load 10.0 kg, Temperature 220 Å°C	37 g/10 min @Load 22.0 lb, Temperature 428 Å°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	103	103	ASTM D785
Tensile Strength, Yield	42.2 MPa @Thickness 3.20 mm	6120 psi @Thickness 0.126 in	50 mm/min; ASTM D638
Elongation at Break	20 % @Thickness 3.20 mm	20 % @Thickness 0.126 in	50 mm/min; ASTM D638
Elongation at Yield	>= 5.0 % @Thickness 3.20 mm	>= 5.0 % @Thickness 0.126 in	50 mm/min; ASTM D638
Tensile Modulus	2.16 GPa @Thickness 3.20 mm	313 ksi @Thickness 0.126 in	1 mm/min; ASTM D638
Flexural Yield Strength	68.6 MPa @Thickness 6.40 mm	9960 psi @Thickness 0.252 in	15 mm/min; ASTM D790
Flexural Modulus	2.35 GPa @Thickness 6.40 mm	341 ksi @Thickness 0.252 in	15 mm/min; ASTM D790
Izod Impact, Notched	1.77 J/cm @Thickness 6.40 mm,	3.31 ft-lb/in @Thickness 0.252 in,	ASTM D256

Mechanical Properties	Temperature 23.0 Å°C Metric	Temperature 73.4 Å°F English	Comments
	2.06 J/cm	3.86 ft-lb/in	ASTM D256
	@Thickness 3.20 mm, Temperature 23.0 Å°C	@Thickness 0.126 in, Temperature 73.4 Å°F	
Izod Impact, Unnotched	0.588 J/cm	1.10 ft-lb/in	ASTM D256
	@Thickness 6.40 mm, Temperature -30.0 Å°C	@Thickness 0.252 in, Temperature -22.0 Å°F	
	0.588 J/cm	1.10 ft-lb/in	ASTM D256
	@Thickness 3.20 mm, Temperature -30.0 Å°C	@Thickness 0.126 in, Temperature -22.0 Å°F	

Thermal Properties	Metric	English	Comments
Deflection Temperature at 0.46 MPa (66 psi)	89.0 Å°C	192 Å°F	Unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Deflection Temperature at 1.8 MPa (264 psi)	80.0 Å°C	176 Å°F	Unannealed; ASTM D648
	@Thickness 6.40 mm	@Thickness 0.252 in	
Vicat Softening Point	88.0 Å°C	190 Å°F	50Å°C/h; ASTM D1525
	@Load 5.00 kg	@Load 11.0 lb	
UL RTI, Electrical	60.0 Å°C	140 Å°F	UL 746B
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	60.0 Å°C	140 Å°F	
	@Thickness >=2.50 mm	@Thickness >=0.0984 in	
	60.0 Å°C	140 Å°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
UL RTI, Mechanical with Impact	60.0 Å°C	140 Å°F	UL 746B
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	60.0 Å°C	140 Å°F	
	@Thickness >=2.50 mm	@Thickness >=0.0984 in	
	60.0 Å°C	140 Å°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
UL RTI, Mechanical without Impact	60.0 Å°C	140 Å°F	UL 746B

Thermal Properties	@Thickness >=1.50 mm Metric	@Thickness >=0.0591 English	Comments
	60.0 Å°C	140 Å°F	
	@Thickness >=2.50 mm	@Thickness >=0.0984 in	
	60.0 Å°C	140 Å°F	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
Flammability, UL94	V-0	V-0	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	V-0	V-0	
	@Thickness >=3.00 mm	@Thickness >=0.118 in	
	5VB	5VB	
	@Thickness >=2.50 mm	@Thickness >=0.0984 in	

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+12 ohm-cm	1.00e+12 ohm-cm	
Dielectric Strength	36.0 kV/mm	914 kV/in	
Arc Resistance	0.00 - 60 sec	0.00 - 60 sec	ASTM D495
Comparative Tracking Index	250 - 400 V	250 - 400 V	
Hot Wire Ignition, HWI	15 - 30 sec	15 - 30 sec	
	@Thickness >=1.50 mm	@Thickness >=0.0591 in	
	15 - 30 sec	15 - 30 sec	
	@Thickness >=2.50 mm	@Thickness >=0.0984 in	
	30 - 60 sec	30 - 60 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 2.50 mm	@Thickness 0.0984 in	
	>= 120 arcs	>= 120 arcs	

Electrical Properties	@Thickness 3.00 mm Metric	@Thickness 0.118 in English	Comments
High Voltage Arc-Tracking Rate, HVTR	>= 150 mm/min	>= 5.91 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	200 - 230 Â°C	392 - 446 Â°F	Injection Molding
Melt Temperature	200 - 230 Â°C	392 - 446 Â°F	Injection Molding
Mold Temperature	40.0 - 60.0 Â°C	104 - 140 Â°F	Injection Molding
Drying Temperature	70.0 - 80.0 Â°C	158 - 176 Â°F	Injection Molding
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	Injection Molding
Back Pressure	0.490 - 0.981 MPa	71.1 - 142 psi	Injection Molding
Screw Speed	30 - 60 rpm	30 - 60 rpm	Injection Molding

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