

## LG Chemical XR409E ABS, Heat Resistance

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

### Material Notes:

Feature: Injection Molding, Heat Resistance  
 Application: Automotives Interior Housing (Switch Panel Housing etc)  
 CAS No. 25120-20-1, 9003-56-9, 25747-74-7, and 31621-07-5  
 Information provided by LG Chemical

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_LG-Chemical-XR409E-ABS-Heat-Resistance.php](http://www.lookpolymers.com/polymer_LG-Chemical-XR409E-ABS-Heat-Resistance.php)

Physical Properties	Metric	English	Comments
Specific Gravity	1.07 g/cc	1.07 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	5.0 g/10 min @Load 10.0 kg, Temperature 220 Å°C	5.0 g/10 min @Load 22.0 lb, Temperature 428 Å°F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	111	111	ASTM D785
Tensile Strength, Yield	48.1 MPa @Thickness 3.20 mm	6970 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
Flexural Yield Strength	76.5 MPa @Thickness 3.20 mm	11100 psi @Thickness 0.126 in	15 mm/min; ASTM D790
Flexural Modulus	2.45 GPa @Thickness 3.20 mm	356 ksi @Thickness 0.126 in	15 mm/min; ASTM D790
Izod Impact, Notched	1.57 J/cm @Thickness 6.40 mm, Temperature 23.0 Å°C	2.94 ft-lb/in @Thickness 0.252 in, Temperature 73.4 Å°F	ASTM D256
	1.67 J/cm @Thickness 3.20 mm, Temperature 23.0 Å°C	3.12 ft-lb/in @Thickness 0.126 in, Temperature 73.4 Å°F	ASTM D256
	0.785 J/cm	1.47 ft-lb/in	

<b>Izod Impact, Unnotched</b> Mechanical Properties	<b>Metric</b>	<b>English</b>	<b>ASTM D256</b> Comments
	@Thickness 6.40 mm, Temperature -30.0 Å°C	@Thickness 0.252 in, Temperature -22.0 Å°F	
	0.785 J/cm	1.47 ft-lb/in	
	@Thickness 3.20 mm, Temperature -30.0 Å°C	@Thickness 0.126 in, Temperature -22.0 Å°F	ASTM D256

<b>Thermal Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
<b>Deflection Temperature at 0.46 MPa</b> (66 psi)	112 Å°C @Thickness 6.40 mm	234 Å°F @Thickness 0.252 in	Unannealed; ASTM D648
<b>Deflection Temperature at 1.8 MPa</b> (264 psi)	104 Å°C @Thickness 6.40 mm	219 Å°F @Thickness 0.252 in	Unannealed; ASTM D648
<b>Vicat Softening Point</b>	114 Å°C @Load 5.00 kg	237 Å°F @Load 11.0 lb	50Å°C/h; ASTM D1525
<b>UL RTI, Electrical</b>	60.0 Å°C @Thickness >=1.50 mm	140 Å°F @Thickness >=0.0591 in	UL 746B
	60.0 Å°C @Thickness >=3.00 mm	140 Å°F @Thickness >=0.118 in	UL 746B
<b>UL RTI, Mechanical with Impact</b>	60.0 Å°C @Thickness >=1.50 mm	140 Å°F @Thickness >=0.0591 in	UL 746B
	60.0 Å°C @Thickness >=3.00 mm	140 Å°F @Thickness >=0.118 in	UL 746B
<b>UL RTI, Mechanical without Impact</b>	60.0 Å°C @Thickness >=1.50 mm	140 Å°F @Thickness >=0.0591 in	UL 746B
	60.0 Å°C @Thickness >=3.00 mm	140 Å°F @Thickness >=0.118 in	UL 746B
<b>Flammability, UL94</b>	HB @Thickness >=1.50 mm	HB @Thickness >=0.0591 in	
	HB @Thickness >=3.00 mm	HB @Thickness >=0.118 in	

<b>Electrical Properties</b>	<b>Metric</b>	<b>English</b>	<b>Comments</b>
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Electrical Properties	Metric <sup>15 ohm-cm</sup>	English <sup>15 ohm-cm</sup>	Comments
Dielectric Strength	33.0 kV/mm @Thickness 1.00 mm	838 kV/in @Thickness 0.0394 in	ASTM D149
Arc Resistance	60 - 120 sec	60 - 120 sec	ASTM D495
Comparative Tracking Index	>= 600 V	>= 600 V	Solution A; IEC 60112
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	180 - 220 Â°C	356 - 428 Â°F	Injection Molding
Middle Barrel Temperature	220 - 240 Â°C	428 - 464 Â°F	Injection Molding
Front Barrel Temperature	230 - 250 Â°C	446 - 482 Â°F	Injection Molding
Nozzle Temperature	240 - 250 Â°C	464 - 482 Â°F	Injection Molding
Melt Temperature	230 - 250 Â°C	446 - 482 Â°F	Injection Molding
Mold Temperature	60.0 - 80.0 Â°C	140 - 176 Â°F	Injection Molding
Drying Temperature	80.0 - 90.0 Â°C	176 - 194 Â°F	Injection Molding
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	Injection Molding
Back Pressure	1.96 - 3.92 MPa	284 - 569 psi	Injection Molding
Screw Speed	50 - 100 rpm	50 - 100 rpm	Injection Molding

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