LG ABS XR409H

Acrylonitrile Butadiene Styrene

LG Chem Ltd.

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Technical Data

Product Description

Description
- Heat Resistance

Applications
- Automotives Interior & Exterior Housing, (Glove Box, Rear Lamp Housing Etc)

General

Material Status	• Commercial: Active		
Literature [1]	• Technical Datasheet - ASTM (English) • Technical Datasheet - ISO (English)		
UL Yellow Card [2]	• E248280-462770		
Search for UL Yellow Card	• LG Chem Ltd. • LG ABS		
Availability	• Asia Pacific • Europe	• Latin America • North America	
Features	• Good Heat Resistance		
Uses	• Automotive Exterior Parts	• Automotive Interior Parts	• Housings
Processing Method	• Injection Molding		
Multi-Point Data	• Specific Heat vs. Temperature (ISO 11403-2)		

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity			
-- [4]	1.06	1.06 g/cm³	ASTM D792
73°F (23°C)	1.06 g/cm³	1.06 g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	3.0 g/10 min	3.0 g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	3.0 cm³/10min	3.0 cm³/10min	ISO 1133
Molding Shrinkage - Flow			
73°F (23°C), 0.126 in (3.20 mm), Injection Molded	4.0E-3 to 7.0E-3 in/in	0.40 to 0.70 %	ASTM D955
73°F (23°C), 0.126 in (3.20 mm) [5]	0.40 to 0.70 %	0.40 to 0.70 %	ISO 294-4

Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Tensile Modulus			
73°F (23°C), 0.126 in (3.20 mm), Injection Molded [6]	348000 psi	2400 MPa	ASTM D638
73°F (23°C), 0.157 in (4.00 mm), Injection Molded	341000 psi	2350 MPa	ISO 527-2/50
Tensile Strength			
Yield, 73°F (23°C), 0.126 in (3.20 mm), Injection Molded [6]	7110 psi	49.0 MPa	ASTM D638
Yield, 73°F (23°C), 0.157 in (4.00 mm), Injection Molded	7110 psi	49.0 MPa	ISO 527-2/50
Tensile Elongation			
Break, 73°F (23°C), 0.126 in (3.20 mm), Injection Molded [6]	> 15 %	> 15 %	ASTM D638
Break, 73°F (23°C), 0.157 in (4.00 mm), Injection Molded	> 15 %	> 15 %	ISO 527-2/50
Flexural Modulus			
73°F (23°C), 0.126 in (3.20 mm), Injection Molded [7]	370000 psi	2550 MPa	ASTM D790
73°F (23°C), 0.157 in (4.00 mm), Injection Molded [8]	348000 psi	2400 MPa	ISO 178

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Mechanical	Nominal Value (English)	Nominal Value (SI)	Test Method
Flexural Strength			
73°F (23°C), 0.126 in (3.20 mm), Injection Molded [7]	11400 psi	78.5 MPa	ASTM D790
73°F (23°C), 0.157 in (4.00 mm), Injection Molded [8]	11200 psi	77.0 MPa	ISO 178
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength [9]			ISO 179/1eA
-22°F (-30°C), Injection Molded	3.8 ft·lb/in²	8.0 kJ/m²	
73°F (23°C), Injection Molded	7.1 ft·lb/in²	15 kJ/m²	
Notched Izod Impact			
-22°F (-30°C), 0.126 in (3.20 mm), Injection Molded	1.3 ft·lb/in	70 J/m	ASTM D256
-22°F (-30°C), 0.252 in (6.40 mm), Injection Molded	1.1 ft·lb/in	60 J/m	ASTM D256
73°F (23°C), 0.126 in (3.20 mm), Injection Molded	3.3 ft·lb/in	180 J/m	ASTM D256
73°F (23°C), 0.252 in (6.40 mm), Injection Molded	3.1 ft·lb/in	170 J/m	ASTM D256
-22°F (-30°C), Injection Molded [9]	3.8 ft·lb/in²	8.0 kJ/m²	ISO 180/1A
73°F (23°C), Injection Molded [9]	7.6 ft·lb/in²	16 kJ/m²	ISO 180/1A
Hardness	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Rockwell Hardness			
R-Scale, 73°F (23°C), Injection Molded	111	111	ASTM D785
R-Scale	114	114	ISO 2039-2
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			
264 psi (1.8 MPa), Unannealed, 0.252 in (6.40 mm), Injection Molded [10]	223 °F	106 °C	ASTM D648
264 psi (1.8 MPa), Unannealed, 0.157 in (4.00 mm) [11]	210 °F	99.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	241 °F	116 °C	ASTM D1525 [12]
--	243 °F	117 °C	ISO 306/B50
CLTE			ISO 11359-2
Flow : 73 to 140°F (23 to 60°C)	4.4E-5 to 5.0E-5 in/in/°F	8.0E-5 to 9.0E-5 cm/cm/°C	
Transverse : 73 to 140°F (23 to 60°C)	4.4E-5 to 5.0E-5 in/in/°F	8.0E-5 to 9.0E-5 cm/cm/°C	
RTI Elec	140 °F	60.0 °C	UL 746
RTI Imp	140 °F	60.0 °C	UL 746
RTI Str	140 °F	60.0 °C	UL 746
Flammability	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Flame Rating			UL 94
0.06 in (1.5 mm)	HB	HB	
0.12 in (3.0 mm)	HB	HB	

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 to 194 °F	80 to 90 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	0.050 %	0.050 %
Rear Temperature	356 to 410 °F	180 to 210 °C
Middle Temperature	410 to 446 °F	210 to 230 °C
Front Temperature	446 to 464 °F	230 to 240 °C
Nozzle Temperature	446 to 464 °F	230 to 240 °C
Processing (Melt) Temp	446 to 500 °F	230 to 260 °C
Mold Temperature	104 to 140 °F	40 to 60 °C

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Injection	Nominal Value (English)	Nominal Value (SI)
Back Pressure [13]	142 to 427 psi	0.981 to 2.94 MPa

Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

[2] A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

[3] Typical properties: these are not to be construed as specifications.

[4] 23°C

[5] Injection Molded

[6] 2.0 in/min (50 mm/min)

[7] 0.59 in/min (15 mm/min)

[8] 0.079 in/min (2.0 mm/min)

[9] 4mm

[10] Edgewise

[11] Injection Molded)

[12] Rate A (50°C/h), Loading 2 (50 N)

[13] Hydraulic Type

Form No. TDS-15183-en

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Where to Buy

Supplier

LG Chem Ltd.
Englewood Cliffs, NJ USA
Telephone: 201-816-2302
Web: http://www.chemwide.com/

Distributor

Biesterfeld
Biesterfeld is a Pan European distribution company. Contact Biesterfeld for availability of individual products by country.
Telephone: +49-40-32008-0
Web: http://www.biesterfeld-plastic.com/
Availability: Algeria, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Cyprus, Czech Republic, Egypt, France, Germany, Greece, Hungary, Ireland, Italy, Libyan Arab Jamahiriya, Luxembourg, Mauritania, Morocco, Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Switzerland, Turkey, United Kingdom

CCC Plastics
Telephone: 800-465-6917
Web: https://www.ccc-group.com/
Availability: Canada

Channel Prime Alliance
Telephone: 800-247-8038
Web: http://www.channelpa.com/
Availability: North America

Chase Plastic Services, Inc.
Chase Plastics Services is a North American distributor with representatives throughout the region. Please find your rep here: http://www.chaseplastics.com/contact/locations
Telephone: 800-232-4273
Web: http://www.chaseplastics.com/
Availability: North America

Distrupol Ltd
Distrupol Ltd is a Pan European distribution company. Contact Distrupol Ltd for availability of individual products by country.
Telephone: 08452003040
Web: http://www.distrupol.com/
Availability: Belgium, Denmark, Finland, Luxembourg, Netherlands, Norway, Sweden

POLYMIX
POLYMIX is a Pan European distribution company. Contact POLYMIX for availability of individual products by country.
Telephone: +33-3-8920-1380
Web: http://www.polymix.eu/
Availability: Belgium, Croatia, France, Luxembourg, Netherlands, Romania, Serbia, Slovenia, Spain, Tunisia

Resin Resource, Inc.
Telephone: 877-652-3431
Web: http://www.resinresourceinc.com/
Availability: North America

RESINEX Group
RESINEX is a Pan European distribution company. Contact RESINEX for availability of individual products by country.
Telephone: +32-14-672511
Web: http://www.resinex.com/
Availability: Europe

SNETOR Distribution
SNETOR Distribution is a Pan European distribution company. Contact SNETOR for availability of individual products by country.
Telephone: +33-1-4904-8888
Web: http://www.snetor.com/
Availability: France

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