

LG ABS ER460

Acrylonitrile Butadiene Styrene

LG Chem Ltd.

PROSPECTOR®

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Technical Data

Product Description

Description

- Medium Heat Resistance

Application

- Automotive, Electric / Electronic Products

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet - ASTM (English) • Technical Datasheet - ISO (English)
UL Yellow Card ²	• E67171-103338295
Search for UL Yellow Card	• LG Chem Ltd. • LG ABS
Availability	• Asia Pacific • Europe • Latin America • North America
Features	• Medium Heat Resistance
Uses	• Automotive Applications • Electrical/Electronic Applications
Processing Method	• Injection Molding

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity			
--	1.04	1.04 g/cm ³	ASTM D792
73°F (23°C)	1.50 g/cm ³	1.50 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR)			
220°C/10.0 kg	22 g/10 min	22 g/10 min	ASTM D1238
220°C/10.0 kg	23 g/10 min	23 g/10 min	ISO 1133
Molding Shrinkage - Flow			
0.126 in (3.20 mm)	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)	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), 0.157 in (4.00 mm)	319000 psi	2200 MPa	ISO 527-2/50
Tensile Strength			
Yield, 0.126 in (3.20 mm) ⁴	6540 psi	45.1 MPa	ASTM D638
Yield, 73°F (23°C), 0.157 in (4.00 mm)	6530 psi	45.0 MPa	ISO 527-2/50
Tensile Elongation			
Break, 0.126 in (3.20 mm) ⁴	15 %	15 %	ASTM D638
Break, 73°F (23°C), 0.157 in (4.00 mm)	> 10 %	> 10 %	ISO 527-2/50
Flexural Modulus			
0.126 in (3.20 mm) ⁵	370000 psi	2550 MPa	ASTM D790
73°F (23°C), 0.157 in (4.00 mm) ⁶	334000 psi	2300 MPa	ISO 178
Flexural Strength			
0.126 in (3.20 mm) ⁵	11100 psi	76.5 MPa	ASTM D790
73°F (23°C), 0.157 in (4.00 mm) ⁶	9430 psi	65.0 MPa	ISO 178



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Impact	Nominal Value (English)	Nominal Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-22°F (-30°C)	3.8 ft·lb/in ²	8.0 kJ/m ²	
73°F (23°C)	10 ft·lb/in ²	22 kJ/m ²	
Notched Izod Impact			
-22°F (-30°C), 0.126 in (3.20 mm)	1.8 ft·lb/in	98 J/m	ASTM D256
-22°F (-30°C), 0.252 in (6.40 mm)	1.8 ft·lb/in	98 J/m	ASTM D256
73°F (23°C), 0.126 in (3.20 mm)	4.6 ft·lb/in	250 J/m	ASTM D256
73°F (23°C), 0.252 in (6.40 mm)	4.6 ft·lb/in	250 J/m	ASTM D256
-22°F (-30°C)	3.8 ft·lb/in ²	8.0 kJ/m ²	ISO 180/1A
73°F (23°C)	10 ft·lb/in ²	22 kJ/m ²	ISO 180/1A
Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Rockwell Hardness			
R-Scale	110	110	ASTM D785
--	112	112	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)	194 °F	90.0 °C	ASTM D648
264 psi (1.8 MPa), Unannealed, 0.157 in (4.00 mm)	180 °F	82.0 °C	ISO 75-2/Af
Vicat Softening Temperature			
--	207 °F	97.0 °C	ASTM D1525 ⁷
--	212 °F	100 °C	ISO 306/B50
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	158 to 176 °F	70 to 80 °C	
Drying Time	2.0 to 4.0 hr	2.0 to 4.0 hr	
Suggested Max Moisture	0.050 %	0.050 %	
Rear Temperature	356 to 392 °F	180 to 200 °C	
Middle Temperature	374 to 410 °F	190 to 210 °C	
Front Temperature	392 to 428 °F	200 to 220 °C	
Nozzle Temperature	392 to 446 °F	200 to 230 °C	
Processing (Melt) Temp	410 to 464 °F	210 to 240 °C	
Mold Temperature	104 to 158 °F	40 to 70 °C	
Back Pressure	71.1 to 213 psi	0.490 to 1.47 MPa	
Screw Speed	30 to 60 rpm	30 to 60 rpm	



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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 2.0 in/min (50 mm/min)

⁵ 0.59 in/min (15 mm/min)

⁶ 0.079 in/min (2.0 mm/min)

⁷ Rate A (50°C/h), Loading 2 (50 N)

