

LG ABS ER460

LG Chem Ltd. - Acrylonitrile Butadiene Styrene

Friday, May 24, 2019

General Information

Product Description

Description

- Medium Heat Resistance

Application

- Automotive, Electric / Electronic Products

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific • Europe	• Latin America • North America	
Features	• Medium Heat Resistance		
Uses	• Automotive Applications	• Electrical/Electronic Applications	
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity ²	1.04	g/cm ³	ASTM D792
Density (23°C)	1.05	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	22	g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	23	g/10 min	ISO 1133
Molding Shrinkage - Flow (23°C, 3.20 mm, Injection Molded)	0.40 to 0.70	%	ASTM D955
Molding Shrinkage - Flow ³ (23°C, 3.20 mm)	0.40 to 0.70	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ⁴ (23°C, 3.20 mm, Injection Molded)	2450	MPa	ASTM D638
Tensile Modulus (23°C, 4.00 mm, Injection Molded)	2200	MPa	ISO 527-2/50
Tensile Strength ⁴			ASTM D638
Yield, 23°C, 3.20 mm, Injection Molded	45.0	MPa	
Tensile Stress			ISO 527-2/50
Yield, 23°C, 4.00 mm, Injection Molded	45.0	MPa	
Tensile Elongation ⁴			ASTM D638
Break, 23°C, 3.20 mm, Injection Molded	> 15	%	
Tensile Strain			ISO 527-2/50
Break, 23°C, 4.00 mm, Injection Molded	> 10	%	
Flexural Modulus ⁵ (23°C, 3.20 mm, Injection Molded)	2550	MPa	ASTM D790
Flexural Modulus ⁶ (23°C, 4.00 mm, Injection Molded)	2300	MPa	ISO 178
Flexural Strength ⁵ (23°C, 3.20 mm, Injection Molded)	80.0	MPa	ASTM D790
Flexural Stress ⁶ (23°C, 4.00 mm, Injection Molded)	65.0	MPa	ISO 178

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Injection Molded	8.0	kJ/m ²	
23°C, Injection Molded	22	kJ/m ²	
Notched Izod Impact			ASTM D256
-30°C, 3.20 mm, Injection Molded	100	J/m	
-30°C, 6.40 mm, Injection Molded	110	J/m	
23°C, 3.20 mm, Injection Molded	240	J/m	
23°C, 6.40 mm, Injection Molded	240	J/m	
Notched Izod Impact Strength			ISO 180/1A
-30°C, Injection Molded	8.0	kJ/m ²	
23°C, Injection Molded	22	kJ/m ²	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C, Injection Molded)	110		ASTM D785
Rockwell Hardness	112		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, 6.40 mm, Injection Molded	92.0	°C	
Heat Deflection Temperature ³			ISO 75-2/Af
1.8 MPa, Unannealed, 4.00 mm	82.0	°C	
Vicat Softening Temperature	99.0	°C	ASTM D1525 ⁷
Vicat Softening Temperature	100	°C	ISO 306/B50
RTI Elec	60.0	°C	UL 746
RTI Imp	60.0	°C	UL 746
RTI Str	60.0	°C	UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.5 mm		HB	
3.0 mm		HB	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	70 to 80	°C
Drying Time	2.0 to 4.0	hr
Rear Temperature	180 to 200	°C
Middle Temperature	190 to 210	°C
Front Temperature	200 to 220	°C
Nozzle Temperature	200 to 230	°C
Processing (Melt) Temp	210 to 240	°C
Mold Temperature	40 to 70	°C
Back Pressure	0.490 to 1.47	MPa
Screw Speed	30 to 60	rpm

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Notes

¹ Typical properties: these are not to be construed as specifications.

² 23°C

³ Injection Molded

⁴ 50 mm/min

⁵ 15 mm/min

⁶ 2.0 mm/min

⁷ Rate A (50°C/h), Loading 2 (50 N)