

LG ABS XR440

LG Chem Ltd. - Acrylonitrile Butadiene Styrene

Friday, May 24, 2019

General Information

Product Description

Description

- Heat Resistance, Low Emission

Applications

- Automotives Interior Housing (Glove Box, etc.)

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • Latin America • North America
Features	• Good Heat Resistance • Low Emissions
Uses	• Automotive Interior Parts • Housings
Processing Method	• Injection Molding

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity ²	1.06	g/cm ³	ASTM D792
Density (23°C)	1.07	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	6.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	5.00	cm ³ /10min	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)	2400	MPa	ASTM D638
Tensile Modulus (23°C, 4.00 mm, Injection Molded)	2300	MPa	ISO 527-2/50
Tensile Strength ⁴			ASTM D638
Yield, 23°C, 3.20 mm, Injection Molded	49.0	MPa	
Tensile Stress			ISO 527-2/50
Yield, 23°C, 4.00 mm, Injection Molded	50.0	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	> 15	%	
Flexural Modulus ⁵ (23°C, 3.20 mm, Injection Molded)	2550	MPa	ASTM D790
Flexural Modulus ⁶ (23°C, 4.00 mm, Injection Molded)	2400	MPa	ISO 178
Flexural Strength ⁵ (23°C, 3.20 mm, Injection Molded)	78.0	MPa	ASTM D790
Flexural Stress ⁶ (23°C, 4.00 mm, Injection Molded)	75.0	MPa	ISO 178

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁷			ISO 179/1eA
-30°C, Injection Molded	6.0	kJ/m ²	
23°C, Injection Molded	11	kJ/m ²	
Notched Izod Impact			ASTM D256
-30°C, 3.20 mm, Injection Molded	60	J/m	
-30°C, 6.40 mm, Injection Molded	50	J/m	
23°C, 3.20 mm, Injection Molded	130	J/m	
23°C, 6.40 mm, Injection Molded	120	J/m	
Notched Izod Impact Strength ⁷			ISO 180/1A
-30°C, Injection Molded	6.0	kJ/m ²	
23°C, Injection Molded	11	kJ/m ²	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C, Injection Molded)	113		ASTM D785
Rockwell Hardness (R-Scale)	114		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, 6.40 mm, Injection Molded	102	°C	
Vicat Softening Temperature	110	°C	ASTM D1525 ⁸
Vicat Softening Temperature	112	°C	ISO 306/B50

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	80 to 90	°C
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.050	%
Rear Temperature	180 to 210	°C
Middle Temperature	210 to 230	°C
Front Temperature	230 to 240	°C
Nozzle Temperature	230 to 240	°C
Processing (Melt) Temp	230 to 260	°C
Mold Temperature	40 to 60	°C
Back Pressure ⁹	0.981 to 2.94	MPa

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 4mm

⁸ Rate A (50°C/h), Loading 2 (50 N)

⁹ Hydraulic Type