

LG ABS XR401B

LG Chem Ltd. - Acrylonitrile Butadiene Styrene

Friday, May 24, 2019

General Information

Product Description

High Flow, High Heat, High Impact

Applications

Electric & Electronic Housing

Automotives Interior & Exterior Housing (Side Mirror Housing, Garnish etc)

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific • Europe	• Latin America • North America	
Features	• High Flow	• High Heat Resistance	• High Impact Resistance
Uses	• Automotive Applications • Automotive Exterior Parts	• Automotive Interior Parts • Housings	
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.05	g/cm ³	ASTM D792
Density	1.05	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	11	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	11	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (3.20 mm)	0.40 to 0.70	%	ASTM D955
Molding Shrinkage - Flow (3.20 mm)	0.40 to 0.70	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	2350	MPa	ISO 527-2/1
Tensile Strength ² (Yield, 3.20 mm)	51.0	MPa	ASTM D638
Tensile Stress (Yield)	50.0	MPa	ISO 527-2/50
Tensile Elongation ² (Break, 3.20 mm)	20	%	ASTM D638
Flexural Modulus ³ (3.20 mm)	2550	MPa	ASTM D790
Flexural Modulus ⁴	2450	MPa	ISO 178
Flexural Stress ⁴	79.0	MPa	ISO 178
Flexural Strength ³ (Yield, 3.20 mm)	80.4	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	7.0	kJ/m ²	
23°C	14	kJ/m ²	
Notched Izod Impact			ASTM D256
-30°C, 3.20 mm	78	J/m	
-30°C, 6.40 mm	69	J/m	
23°C, 3.20 mm	210	J/m	
23°C, 6.40 mm	190	J/m	

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Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength			ISO 180/1A
-30°C	7.0	kJ/m ²	
23°C	15	kJ/m ²	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	111		ASTM D785
Rockwell Hardness	113		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm	105	°C	
Heat Deflection Temperature			ISO 75-2/Be
0.45 MPa, Unannealed, 4.00 mm	97.0	°C	
Deflection Temperature Under Load			ASTM D648
1.8 MPa, Unannealed, 6.40 mm	97.0	°C	
Heat Deflection Temperature			ISO 75-2/Ae
1.8 MPa, Unannealed, 4.00 mm	90.0	°C	
Vicat Softening Temperature	106	°C	ASTM D1525 ⁵
Vicat Softening Temperature	107	°C	ISO 306/B50
CLTE - Flow (23 to 60°C)	8.0E-5 to 9.0E-5	cm/cm/°C	ISO 11359-2
CLTE - Transverse (23 to 60°C)	8.0E-5 to 9.0E-5	cm/cm/°C	ISO 11359-2
RTI Elec	60.0	°C	UL 746
RTI Imp	60.0	°C	UL 746
RTI Str	60.0	°C	UL 746
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.5E+3	ohms-cm	ASTM D257
Dielectric Strength (1.00 mm)	33	kV/mm	ASTM D149
Arc Resistance	PLC 6		ASTM D495
Comparative Tracking Index (CTI) ⁶	PLC 0		UL 746
Flammability	Nominal Value	Unit	Test Method
Flame Rating (WH, BK)	HB		UL 94

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 200	°C
Middle Temperature	200 to 220	°C
Front Temperature	220 to 230	°C
Nozzle Temperature	220 to 230	°C
Processing (Melt) Temp	220 to 250	°C
Mold Temperature	40 to 60	°C
Back Pressure	0.981 to 2.94	MPa

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Notes

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

² 50 mm/min

³ 15 mm/min

⁴ 2.0 mm/min

⁵ Rate A (50°C/h), Loading 2 (50 N)

⁶ Solution A