

LG ABS XR407E

LG Chem Ltd. - Acrylonitrile Butadiene Styrene

Friday, May 24, 2019

General Information

Product Description

Heat Resistance

Application

Electric & Electronic Housing (MWO Frame, DVD inner part etc.)

General

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

ASTM & ISO Properties¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity ²	1.07	g/cm ³	ASTM D792
Density (23°C)	1.06	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	7.0	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	6.50	cm ³ /10min	ISO 1133
Molding Shrinkage - Flow (23°C, 3.20 mm, Injection Molded)	0.40 to 0.70	%	ASTM D955
Molding Shrinkage 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)	2300	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	45.0	MPa	
Tensile Stress			ISO 527-2/50
Yield, 23°C, 4.00 mm, Injection Molded	42.0	MPa	
Tensile Elongation ⁴			ASTM D638
Break, 23°C, 3.20 mm, Injection Molded	10	%	
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)	2450	MPa	ASTM D790
Flexural Modulus ⁶ (23°C, 4.00 mm, Injection Molded)	2350	MPa	ISO 178
Flexural Stress ⁶ (23°C, 4.00 mm, Injection Molded)	67.0	MPa	ISO 178
Flexural Strength ⁵			ASTM D790
Yield, 23°C, 3.20 mm, Injection Molded	75.0	MPa	

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁷			ISO 179/1eA
-30°C, Injection Molded	8.0	kJ/m ²	
23°C, Injection Molded	16	kJ/m ²	
Notched Izod Impact			ASTM D256
-30°C, 3.20 mm, Injection Molded	70	J/m	
-30°C, 6.40 mm, Injection Molded	60	J/m	
23°C, 3.20 mm, Injection Molded	180	J/m	
23°C, 6.40 mm, Injection Molded	170	J/m	
Notched Izod Impact Strength ⁷			ISO 180/1A
-30°C, Injection Molded	8.0	kJ/m ²	
23°C, Injection Molded	17	kJ/m ²	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C, Injection Molded)	112		ASTM D785
Rockwell Hardness (R-Scale)	112		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load ⁸			ASTM D648
1.8 MPa, Unannealed, 6.40 mm, Injection Molded	105	°C	
Heat Deflection Temperature ³			ISO 75-2/Af
1.8 MPa, Unannealed, 4.00 mm	95.0	°C	
Vicat Softening Temperature	114	°C	ASTM D1525 ⁹
Vicat Softening Temperature	112	°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
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	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 ¹⁰	0.981 to 2.94	MPa

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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 4mm

⁸ Edgewise

⁹ Rate A (50°C/h), Loading 2 (50 N)

¹⁰ Hydraulic Type