

LG ABS RS670

LG Chem Ltd. - Acrylonitrile Butadiene Styrene

Saturday, July 20, 2019

General Information

Product Description

Description

- Chemical Resistance to Cyclopentane, Low Specific Gravity

Application

- Refrigerator Inner Liner

General

Material Status	• Commercial: Active
Availability	• Asia Pacific • Europe • Latin America • North America
Features	• Chemical Resistant • Low Specific Gravity
Uses	• Appliance Components
RoHS Compliance	• RoHS Compliant
Processing Method	• Extrusion

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity ²	1.04	g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	4.5	g/10 min	ASTM D1238
Molding Shrinkage - Flow (23°C, 3.20 mm, Injection Molded)	0.40 to 0.70	%	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ³ (23°C, 3.20 mm, Injection Molded)	2300	MPa	ASTM D638
Tensile Strength ³			ASTM D638
Yield, 23°C, 3.20 mm, Injection Molded	49.0	MPa	
Tensile Elongation ³			ASTM D638
Yield, 23°C, 3.20 mm, Injection Molded	> 5.0	%	
Tensile Elongation ³			ASTM D638
Break, 23°C, 3.20 mm, Injection Molded	> 15	%	
Flexural Modulus ⁴ (23°C, 3.20 mm, Injection Molded)	2500	MPa	ASTM D790
Flexural Strength ⁴ (23°C, 3.20 mm, Injection Molded)	78.0	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-30°C, 3.20 mm, Injection Molded	110	J/m	
-30°C, 6.40 mm, Injection Molded	100	J/m	
23°C, 3.20 mm, Injection Molded	310	J/m	
23°C, 6.40 mm, Injection Molded	290	J/m	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C, Injection Molded)	106		ASTM D785
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, Unannealed, 6.40 mm, Injection Molded	89.0	°C	
Vicat Softening Temperature	96.0	°C	ASTM D1525 ⁵

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Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.5 mm		HB	
3.0 mm		HB	

Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	70 to 80	°C
Drying Time	3.0 to 4.0	hr
Cylinder Zone 1 Temp.	180 to 210	°C
Cylinder Zone 2 Temp.	190 to 230	°C
Cylinder Zone 3 Temp.	200 to 250	°C
Cylinder Zone 4 Temp.	200 to 250	°C
Adapter Temperature	200 to 250	°C
Melt Temperature	200 to 250	°C
Die Temperature	200 to 250	°C

Extrusion Notes

Minimum Moisture Content: 0.01%

Roll Stack Temperature, Top: 70 to 100°C

Roll Stack Temperature, Middle: 70 to 90°C

Roll Stack Temperature, Bottom: 60 to 90°C

Notes

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

² 23°C

³ 50 mm/min

⁴ 15 mm/min

⁵ Rate A (50°C/h), Loading 2 (50 N)