

# LG ABS ER461

LG Chem Ltd. - Acrylonitrile Butadiene Styrene

Saturday, July 20, 2019

## General Information

### Product Description

Description

- Heat Resistance

Application

- Automotives Interior & Exterior Housing (Garnsih etc)

### General

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

## ASTM & ISO Properties <sup>1</sup>

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity <sup>2</sup>	1.05	g/cm <sup>3</sup>	ASTM D792
Density (23°C)	1.05	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	14	g/10 min	ASTM D1238
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	14	cm <sup>3</sup> /10min	ISO 1133
Molding Shrinkage - Flow (23°C, 3.20 mm, Injection Molded)	0.40 to 0.70	%	ASTM D955
Molding Shrinkage - Flow <sup>3</sup> (23°C, 3.20 mm)	0.40 to 0.70	%	ISO 294-4
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus <sup>4</sup> (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 <sup>4</sup>			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	49.0	MPa	
Tensile Elongation <sup>4</sup>			ASTM D638
Break, 23°C, 3.20 mm, Injection Molded	20	%	
Tensile Strain			ISO 527-2/50
Break, 23°C, 4.00 mm, Injection Molded	> 20	%	
Flexural Modulus <sup>5</sup> (23°C, 3.20 mm, Injection Molded)	2550	MPa	ASTM D790
Flexural Modulus <sup>6</sup> (23°C, 2.00 mm, Injection Molded)	2350	MPa	ISO 178
Flexural Strength <sup>5</sup> (23°C, 3.20 mm, Injection Molded)	78.0	MPa	ASTM D790
Flexural Stress <sup>6</sup> (23°C, 4.00 mm, Injection Molded)	73.0	MPa	ISO 178

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength <sup>7</sup>			ISO 179/1eA
-30°C, Injection Molded	9.0	kJ/m <sup>2</sup>	
23°C, Injection Molded	25	kJ/m <sup>2</sup>	
Notched Izod Impact			ASTM D256
-30°C, 3.20 mm, Injection Molded	100	J/m	
-30°C, 6.40 mm, Injection Molded	100	J/m	
23°C, 3.20 mm, Injection Molded	290	J/m	
23°C, 6.40 mm, Injection Molded	270	J/m	
Notched Izod Impact Strength <sup>7</sup>			ISO 180/1A
-30°C, Injection Molded	8.0	kJ/m <sup>2</sup>	
23°C, Injection Molded	23	kJ/m <sup>2</sup>	
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale, 23°C, Injection Molded)	110		ASTM D785
Rockwell Hardness (R-Scale)	112		ISO 2039-2
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load <sup>8</sup>			ASTM D648
1.8 MPa, Unannealed, 6.40 mm, Injection Molded	93.0	°C	
Heat Deflection Temperature <sup>9</sup>			ISO 75-2/Af
1.8 MPa, Unannealed, 4.00 mm	85.0	°C	
Vicat Softening Temperature	100	°C	ASTM D1525 <sup>10</sup>
Vicat Softening Temperature	101	°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	220 to 260	°C
Mold Temperature	40 to 60	°C
Back Pressure <sup>11</sup>	0.981 to 2.94	MPa

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### Notes

<sup>1</sup> Typical properties: these are not to be construed as specifications.

<sup>2</sup> 23°C

<sup>3</sup> Injection molded

<sup>4</sup> 50 mm/min

<sup>5</sup> 15 mm/min

<sup>6</sup> 2.0 mm/min

<sup>7</sup> 4mm

<sup>8</sup> Edgewise

<sup>9</sup> Injection Molded

<sup>10</sup> Rate A (50°C/h), Loading 2 (50 N)

<sup>11</sup> Hydraulic Type