

LG ABS AF312B

Acrylonitrile Butadiene Styrene

LG Chem Ltd.

PROSPECTOR[®]

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Technical Data

Product Description

Description

- Flame Retardant

Application

- Electric parts, IT/OA device
- TV, monitor housing

General

Material Status	• Commercial: Active
Literature ¹	• Technical Datasheet (English)
UL Yellow Card ²	• E67171-248342 • E248280-462779
Search for UL Yellow Card	• LG Chem Ltd. • LG ABS
Availability	• Asia Pacific • Europe • Latin America • North America
Features	• Flame Retardant
Uses	• Electrical Parts • Television Housings
RoHS Compliance	• RoHS Compliant
Processing Method	• Injection Molding

Physical	Nominal Value Unit	Test Method
Specific Gravity	1.19 g/cm ³	ASTM D792
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	60 g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.20 mm)	0.40 to 0.70 %	ASTM D955

Mechanical	Nominal Value Unit	Test Method
Tensile Modulus ⁴ (3.20 mm)	2160 MPa	ASTM D638
Tensile Strength ⁵ (Yield, 3.20 mm)	43.1 MPa	ASTM D638
Tensile Elongation ⁵		ASTM D638
Yield, 3.20 mm	5.0 %	
Break, 3.20 mm	> 20 %	
Flexural Modulus ⁶ (6.40 mm)	2650 MPa	ASTM D790
Flexural Strength ⁶ (6.40 mm)	70.6 MPa	ASTM D790

Impact	Nominal Value Unit	Test Method
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	260 J/m	
23°C, 6.40 mm	220 J/m	

Hardness	Nominal Value Unit	Test Method
Rockwell Hardness (R-Scale)	105	ASTM D785

Thermal	Nominal Value Unit	Test Method
Deflection Temperature Under Load		ASTM D648
0.45 MPa, Unannealed, 6.40 mm	84.0 °C	
1.8 MPa, Unannealed, 6.40 mm	77.0 °C	
Vicat Softening Temperature	84.0 °C	ASTM D1525 ⁷
RTI Elec	75.0 °C	UL 746
RTI Imp	70.0 °C	UL 746
RTI Str	75.0 °C	UL 746



Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
1.0 mm		V-2	
2.1 mm	•	V-0	
	•	5VB	
2.5 mm	•	V-0	
	•	5VA	
3.0 mm	•	V-0	
	•	5VA	

Injection	Nominal Value	Unit
Drying Temperature	80 to 90	°C
Drying Time	3.0 to 4.0	hr
Rear Temperature	170 to 190	°C
Middle Temperature	180 to 200	°C
Front Temperature	190 to 210	°C
Nozzle Temperature	200 to 230	°C
Processing (Melt) Temp	200 to 230	°C
Mold Temperature	40 to 60	°C
Back Pressure	0.490 to 0.981	MPa
Screw Speed	30 to 60	rpm

Injection Notes
 Minimum Moisture Content: 0.01%

Notes

¹ These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

² A UL Yellow Card contains UL-verified flammability and electrical characteristics. UL Prospector continually works to link Yellow Cards to individual plastic materials in Prospector, however this list may not include all of the appropriate links. It is important that you verify the association between these Yellow Cards and the plastic material found in Prospector. For a complete listing of Yellow Cards, visit the UL Yellow Card Search.

³ Typical properties: these are not to be construed as specifications.

⁴ 1.0 mm/min

⁵ 50 mm/min

⁶ 15 mm/min

⁷ Rate A (50°C/h), Loading 2 (50 N)

