LG ABS AF312C

Acrylonitrile Butadiene Styrene

LG Chem Ltd.

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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]	• E248280-462775 • E67171-248339	
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 (English)	Nominal Value (SI)	Test Method
Density / Specific Gravity	1.18	1.18 g/cm³	ASTM D792
Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)	60 g/10 min	60 g/10 min	ASTM D1238
Molding Shrinkage - Flow (0.126 in (3.20 mm))	4.0E-3 to 7.0E-3 in/in	0.40 to 0.70 %	ASTM D955
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus [4] (0.126 in (3.20 mm))	313000 psi	2160 MPa	ASTM D638
Tensile Strength [5] (Yield, 0.126 in (3.20 mm))	6260 psi	43.1 MPa	ASTM D638
Tensile Elongation [5]			ASTM D638
Yield, 0.126 in (3.20 mm)	5.0 %	5.0 %	
Break, 0.126 in (3.20 mm)	> 20 %	> 20 %	
Flexural Modulus [6] (0.252 in (6.40 mm))	370000 psi	2550 MPa	ASTM D790
Flexural Strength [6] (0.252 in (6.40 mm))	9960 psi	68.6 MPa	ASTM D790
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Notched Izod Impact			ASTM D256
-22°F (-30°C), 0.126 in (3.20 mm)	1.5 ft·lb/in	78 J/m	
-22°F (-30°C), 0.252 in (6.40 mm)	1.5 ft·lb/in	78 J/m	
73°F (23°C), 0.126 in (3.20 mm)	5.0 ft·lb/in	260 J/m	
73°F (23°C), 0.252 in (6.40 mm)	4.2 ft·lb/in	230 J/m	
Hardness	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Rockwell Hardness (R-Scale)	104	104	ASTM D785
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Deflection Temperature Under Load			ASTM D648
66 psi (0.45 MPa), Unannealed, 0.252 in (6.40 mm)	183 °F	84.0 °C	
264 psi (1.8 MPa), Unannealed, 0.252 in (6.40 mm)	171 °F	77.0 °C	
Vicat Softening Temperature	183 °F	84.0 °C	ASTM D1525 [7]
RTI Elec	176 °F	80.0 °C	UL 746
RTI Imp	158 °F	70.0 °C	UL 746
RTI Str	176 °F	80.0 °C	UL 746

Form No. TDS-137296-en

Document Created: Monday, August 6, 2018
Added to Prospector: February 2010
Last Updated: 5/8/2017

Flammability	Nominal Value (English)	Nominal Value (SI)	Test Method
Flame Rating			UL 94
0.10 in (2.5 mm)	V-0	V-0	
0.12 in (3.0 mm)	V-0	V-0	

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	176 to 194 °F	80 to 90 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Rear Temperature	338 to 374 °F	170 to 190 °C
Middle Temperature	356 to 392 °F	180 to 200 °C
Front Temperature	374 to 410 °F	190 to 210 °C
Nozzle Temperature	392 to 446 °F	200 to 230 °C
Processing (Melt) Temp	392 to 446 °F	200 to 230 °C
Mold Temperature	104 to 140 °F	40 to 60 °C
Back Pressure	71.1 to 142 psi	0.490 to 0.981 MPa
Screw Speed	30 to 60 rpm	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] 0.039 in/min (1.0 mm/min)

[5] 2.0 in/min (50 mm/min)

[6] 0.59 in/min (15 mm/min)

[7] Rate A (50°C/h), Loading 2 (50 N)

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