

# LG ABS AF312A

Acrylonitrile Butadiene Styrene

## TechnicalData

### Product Description

Description  
Flame Retardant

Application  
Electric/Electronic Applications(TV, Monitor Housing)  
IT/OA device

### General

|                       |                                                                     |                                |
|-----------------------|---------------------------------------------------------------------|--------------------------------|
| MaterialStatus        | •Commercial:Active                                                  |                                |
| Literature1           | • <a href="#">TechnicalDatasheet(English)</a>                       |                                |
| ULYellowCard 2        | • <a href="#">E248280-462772</a><br>• <a href="#">E67171-248341</a> |                                |
| SearchforULYellowCard | • <a href="#">LGChemLtd.</a><br>• <a href="#">LGABS</a>             |                                |
| Availability          | •AsiaPacific<br>•Europe                                             | •LatinAmerica<br>•NorthAmerica |
| Features              | •FlameRetardant                                                     |                                |
| Uses                  | •Electrical/ElectronicApplications                                  |                                |
| ProcessingMethod      | •InjectionMolding                                                   |                                |

| Physical                             | NominalValueUnit | TestMethod |
|--------------------------------------|------------------|------------|
| SpecificGravity                      | 1.19g/cm³        | ASTM D792  |
| MeltMass-FlowRate(MFR)(220°C/10.0kg) | 60g/10min        | ASTM D1238 |
| MoldingShrinkage-Flow(3.20mm)        | 0.40to0.70%      | ASTM D955  |

| Mechanical                       | NominalValueUnit | TestMethod |
|----------------------------------|------------------|------------|
| TensileModulus 4(3.20mm)         | 2260MPa          | ASTM D638  |
| TensileStrength 5(Yield,3.20mm)  | 46.1MPa          | ASTM D638  |
| TensileElongation 5              |                  | ASTM D638  |
| Yield,3.20mm                     | 5.0%             |            |
| Break,3.20mm                     | 20%              |            |
| FlexuralModulus 6(6.40mm)        | 2550MPa          | ASTM D790  |
| FlexuralStrength 6(Yield,6.04mm) | 68.6MPa          | ASTM D790  |

| Impact              | NominalValueUnit | TestMethod |
|---------------------|------------------|------------|
| Notched Izod Impact |                  | ASTM D256  |
| -30°C,3.20mm        | 69J/m            |            |
| -30°C,6.40mm        | 69J/m            |            |
| 23°C,3.20mm         | 250J/m           |            |
| 23°C,6.40mm         | 210J/m           |            |

| Hardness                  | NominalValueUnit | TestMethod |
|---------------------------|------------------|------------|
| RockwellHardness(R-Scale) | 104              | ASTM D785  |

| Thermal                           | NominalValueUnit | TestMethod              |
|-----------------------------------|------------------|-------------------------|
| Deflection Temperature Under Load |                  | ASTM D648               |
| 0.45MPa,Unannealed,6.40mm 7       | 84.0°C           |                         |
| 0.45MPa,Unannealed,6.40mm 8       | 76.0°C           |                         |
| VicatSofteningTemperature         | 83.0°C           | ASTM D1525 <sup>9</sup> |
| RTIElec                           | 85.0°C           | UL 746                  |
| RTIImp                            | 75.0°C           | UL 746                  |
| RTIStr                            | 75.0°C           | UL 746                  |

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| Flammability |   |  | Nominal Value Unit | TestMethod |
|--------------|---|--|--------------------|------------|
| Flame Rating |   |  |                    | UL94       |
| 1.50 mm      |   |  | V-0                |            |
| 2.00 mm      | • |  | V-0                |            |
|              | • |  | 5VB                |            |
| 2.50 mm      | • |  | V-0                |            |
|              | • |  | 5VB                |            |
| 3.00 mm      | • |  | V-0                |            |
|              | • |  | 5VB                |            |

| Injection              |  | Nominal Value Unit |
|------------------------|--|--------------------|
| Drying Temperature     |  | 70.0 to 80.0 °C    |
| Drying Time            |  | 2.0 to 4.0 hr      |
| Suggested Max Moisture |  | < 0.010 %          |
| 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       |  | 40.0 to 60.0 °C    |
| Back Pressure          |  | 0.490 to 0.981 MPa |
| Screw Speed            |  | 30 to 60 rpm       |