# LG ABS RS650

Acrylonitrile Butadiene Styrene

LG Chem Ltd.

## Message:

LG ABS RS650 is an acrylonitrile butadiene styrene (ABS) material. This product is available in North America, Latin America, Europe or Asia Pacific. The processing method is extrusion.
The main features of LG ABS RS650 are:
flame retardant/rated flame
ROHS certification

| General Information | | | |
|---|---|---|---|
| UL YellowCard | E67171-248398 | E248280-462764 | |
| Features | General | | |
| Uses | General | | |
| RoHS Compliance | RoHS compliance | | |
| Processing Method | Extrusion | | |
| Multi-Point Data | Specific Heat vs. Temperature (ISO 11403-2) | | |
| **Physical** | **Nominal Value** | **Unit** | **Test Method** |
| Specific Gravity | | | |
| -- | 1.04 | g/cm³ | ASTM D792 |
| -- | 1070 | kg/m³ | ISO 1183 [1] |
| Melt Mass-Flow Rate (MFR) (220°C/10.0 kg) | 6.5 | g/10 min | ASTM D1238 |
| Melt volume-flow rate (220°C/10.0 kg) | 7.00 | cm³/10min | ISO 1133 [2] |
| Molding Shrinkage - Flow (3.20 mm) | 0.40 - 0.70 | % | ASTM D955 |
| Water Absorption (Saturation) | 0.19 | % | ISO 62 [3] |
| **Hardness** | **Nominal Value** | **Unit** | **Test Method** |
| Rockwell Hardness (R-Scale) | 107 | | ASTM D785 |
| **Mechanical** | **Nominal Value** | **Unit** | **Test Method** |
| Tensile Modulus | 2500 | MPa | ISO 527-2 [4] |
| Tensile Strength | | | |
| Yield, 3.20mm [5] | 49.0 | MPa | ASTM D638 |
| Yield | 44.0 | MPa | ISO 527-2 [6] |
| Tensile Elongation | | | |
| Yield, 3.20mm [7] | > 5.0 | % | ASTM D638 |
| Yield | 5.0 | % | ISO 527-2 [8] |
| Fracture, 3.20mm [9] | 35 | % | ASTM D638 |
| Tensile Elongation at Break | 20 | % | ISO 527-2 [10] |
| Flexural Modulus [11] (3.20 mm) | 2550 | MPa | ASTM D790 |
| Flexural Strength [12] (3.20 mm) | 80.4 | MPa | ASTM D790 |
| **Impact** | **Nominal Value** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength | | | ISO 179/1eA [13] |

| | | | |
|---|---|---|---|
| -30°C | 12.4 | kJ/m² | ISO 179/1eA |
| 23°C | 30.0 | kJ/m² | ISO 179/1eA |
| Charpy impact strength | | | ISO 179/1eU [14] |
| -30°C | 56.2 | kJ/m² | ISO 179/1eU |
| 23°C | No Break | | ISO 179/1eU |
| Notched Izod Impact | | | ASTM D256 |
| 23°C, 3.20 mm | 320 | J/m | ASTM D256 |
| 23°C, 6.40 mm | 290 | J/m | ASTM D256 |
| **Thermal** | **Nominal Value** | **Unit** | **Test Method** |
| Deflection Temperature Under Load | | | ASTM D648 |
| 0.45 MPa, unannealed, 6.40mm | 95.0 | °C | ASTM D648 |
| 1.8 MPa, unannealed, 6.40mm | 87.0 | °C | ASTM D648 |
| Glass Transition Temperature [15] | 110 | °C | ISO 11357-2 [16] |
| Vicat Softening Temperature | | | |
| -- | 95.0 | °C | ASTM D1525 [17] |
| 50°C/h, B (50N) | 95.8 | °C | ISO 306 [18] |
| Linear expansion coefficient | | | ISO 11359-2 [19] |
| Flow | 8.0E-5 | cm/cm/°C | ISO 11359-2 |
| Lateral | 9.1E-5 | cm/cm/°C | ISO 11359-2 |
| RTI Elec | | | UL 746 |
| 1.50 mm | 60.0 | °C | UL 746 |
| 3.00 mm | 60.0 | °C | UL 746 |
| RTI Imp | | | UL 746 |
| 1.50 mm | 60.0 | °C | UL 746 |
| 3.00 mm | 60.0 | °C | UL 746 |
| RTI | | | UL 746 |
| 1.50 mm | 60.0 | °C | UL 746 |
| 3.00 mm | 60.0 | °C | UL 746 |
| **Electrical** | **Nominal Value** | **Unit** | **Test Method** |
| Surface Resistivity | > 1.0E+15 | ohms | IEC 60093 [20] |
| Volume Resistivity | | | |
| -- | 1.0E+16 | ohms·cm | IEC 60093 |
| -- | > 1.0E+13 | ohms·m | IEC 60093 [21] |
| Dielectric Strength | | | |
| -- | 37 | kV/mm | IEC 60243-1 |
| -- | 47 | kV/mm | IEC 60243-1 [22] |
| Arc Resistance | PLC 6 | | ASTM D495 |
| Comparative Tracking Index (CTI) | PLC 0 | | UL 746 |
| Comparative Tracking Index | 525 | | IEC 60112 [23] |
| High Amp Arc Ignition (HAI) | | | UL 746 |
| 1.50 mm | PLC 0 | | UL 746 |
| 3.00 mm | PLC 0 | | UL 746 |

| | | | |
|---|---|---|---|
| High Voltage Arc Tracking Rate (HVTR) | PLC 1 | | UL 746 |
| Hot-wire Ignition (HWI) | | | UL 746 |
| 1.50 mm | PLC 4 | | UL 746 |
| 3.00 mm | PLC 4 | | UL 746 |
| **Flammability** | **Nominal Value** | **Unit** | **Test Method** |
| Flame Rating | | | UL 94 |
| 1.50 mm, NC, WT, BK | HB | | UL 94 |
| 3.00 mm, NC, WT, BK | HB | | UL 94 |
| Burning Behav. at thickness h (3.20 mm, UL) | HB | | ISO 1210 [24] |
| **Extrusion** | **Nominal Value** | **Unit** | |
| Drying Temperature | 70.0 - 80.0 | °C | |
| Drying Time | 3.0 - 4.0 | hr | |
| Cylinder Zone 1 Temp. | 180 - 210 | °C | |
| Cylinder Zone 2 Temp. | 190 - 230 | °C | |
| Cylinder Zone 3 Temp. | 200 - 250 | °C | |
| Cylinder Zone 4 Temp. | 200 - 250 | °C | |
| Adapter Temperature | 200 - 250 | °C | |
| Melt Temperature | 200 - 250 | °C | |
| Die Temperature | 200 - 250 | °C | |

| Extrusion instructions |
|---|
| Minimum Moisture Content: 0.01%Roll Stack Temperature, Top: 70 to 100°CRoll Stack Temperature, Middle: 70 to 90°CRoll Stack Temperature, Bottom: 60 to 90°C |

| NOTE | |
|---|---|
| 1. | ??????,?? ISO 10350 ??? 23°C/50%r.h. ??? |
| 2. | ??????,?? ISO 10350 ??? 23°C/50%r.h. ??? |
| 3. | ??????,?? ISO 10350 ??? 23°C/50%r.h. ??? |
| 4. | ??????,?? ISO 10350 ??? 23°C/50%r.h. ??? |
| 5. | 50 mm/min |
| 6. | ??????,?? ISO 10350 ??? 23°C/50%r.h. ??? |
| 7. | 50 mm/min |
| 8. | ??????,?? ISO 10350 ??? 23°C/50%r.h. ??? |
| 9. | 50 mm/min |
| 10. | ??????,?? ISO 10350 ??? 23°C/50%r.h. ??? |
| 11. | 15 mm/min |
| 12. | 15 mm/min |
| 13. | ??????,?? ISO 10350 ??? 23°C/50%r.h. ??? |

| | |
|---|---|
| 14. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 15. | 10 °C/min |
| 16. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 17. | 速率 A (50°C/h), 载荷2 (50N) |
| 18. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 19. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 20. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 21. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 22. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 23. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 24. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |



## Recommended distributors for this material

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