

# LG ABS SH610A

Acrylonitrile Butadiene Styrene

LG Chem Ltd.

## Message:

LG ABS SH610A 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 or injection molding.

The main features of LG ABS SH610A are:

flame retardant/rated flame

Impact resistance

### General Information

|                   |                                |                |
|-------------------|--------------------------------|----------------|
| UL YellowCard     | E67171-248406                  | E248280-462777 |
| Features          | Impact resistance, good        |                |
| Appearance        | White                          |                |
| Forms             | Particle                       |                |
| Processing Method | Extrusion<br>Injection molding |                |

### Multi-Point Data

Specific Heat vs. Temperature (ISO 11403-2)

| Physical   | Nominal Value | Unit                   | Test Method            |
|--|---------------|------------------------|------------------------|
| <b>Specific Gravity</b>                          |               |                        |                        |
| --   | 1.05          | g/cm <sup>3</sup>      | ASTM D792              |
| --   | 1040          | kg/m <sup>3</sup>      | ISO 1183 <sup>1</sup>  |
| <b>Melt Mass-Flow Rate (MFR) (220°C/10.0 kg)</b> |               |                        |                        |
|  | 5.0           | g/10 min               | ASTM D1238             |
| <b>Melt volume-flow rate (220°C/10.0 kg)</b>     |               |                        |                        |
|  | 1.50          | cm <sup>3</sup> /10min | ISO 1133 <sup>2</sup>  |
| <b>Molding Shrinkage - Flow</b>                  |               |                        |                        |
|  | 0.40 - 0.70   | %                      | ASTM D955              |
| <b>Water Absorption (Saturation)</b>             |               |                        |                        |
|  | 0.19          | %                      | ISO 62 <sup>3</sup>    |
| <b>Hardness</b>                                  |               |                        |                        |
| <b>Rockwell Hardness (R-Scale)</b>               |               |                        |                        |
|  | 98            |                        | ASTM D785              |
| <b>Mechanical</b>                                |               |                        |                        |
| <b>Tensile Modulus</b>                           |               |                        |                        |
|  | 2000          | MPa                    | ISO 527-2 <sup>4</sup> |
| <b>Tensile Strength</b>                          |               |                        |                        |
| <b>Yield</b>                                     | 41.4          | MPa                    | ASTM D638              |
| <b>Yield</b>                                     | 41.0          | MPa                    | ISO 527-2 <sup>5</sup> |
| <b>Tensile Strain</b>                            |               |                        |                        |
| <b>Yield</b>                                     | 5.0           | %                      | ISO 527-2 <sup>6</sup> |
| <b>Fracture</b>                                  | 30            | %                      | ASTM D638              |
| <b>Tensile Elongation at Break</b>               |               |                        |                        |
|  | 20            | %                      | ISO 527-2 <sup>7</sup> |
| <b>Flexural Modulus</b>                          |               |                        |                        |
|  | 2060          | MPa                    | ASTM D790              |
| <b>Flexural Strength</b>                         |               |                        |                        |
|  | 65.5          | MPa                    | ASTM D790              |
| <b>Impact</b>                                    |               |                        |                        |

|   |   |                   |                           |
|---|---|-------------------|---------------------------|
| Charpy Notched Impact Strength  |   |                   | ISO 179/1eA <sup>8</sup>  |
| -30°C   | 28.6  | kJ/m <sup>2</sup> | ISO 179/1eA               |
| 23°C  | 48.8  | kJ/m <sup>2</sup> | ISO 179/1eA               |
| Charpy impact strength  |   |                   | ISO 179/1eU <sup>9</sup>  |
| -30°C   | No Break                                    |                   | ISO 179/1eU               |
| 23°C  | No Break                                    |                   | ISO 179/1eU               |
| Notched Izod Impact   |   |                   | ASTM D256                 |
| 23°C, 3.18 mm   | 490   | J/m               | ASTM D256                 |
| 23°C, 6.35 mm   | 400   | J/m               | ASTM D256                 |
| Thermal   | Nominal Value                               | Unit              | Test Method               |
| Deflection Temperature Under Load (1.8 MPa, Unannealed)   | 92.2  | °C                | ASTM D648                 |
| Glass Transition Temperature <sup>10</sup>  | 110   | °C                | ISO 11357-2 <sup>11</sup> |
| Vicat Softening Temperature   |   |                   |                           |
| --  | 103   | °C                | ASTM D1525                |
| 50°C/h, B (50N)   | 94.8  | °C                | ISO 306 <sup>12</sup>     |
| Linear expansion coefficient  |   |                   | ISO 11359-2 <sup>13</sup> |
| Flow  | 1.1E-4                                      | cm/cm/°C          | ISO 11359-2               |
| Lateral   | 7.0E-5                                      | cm/cm/°C          | ISO 11359-2               |
| Electrical  | Nominal Value                               | Unit              | Test Method               |
| Surface Resistivity   | > 1.0E+15                                   | ohms              | IEC 60093 <sup>14</sup>   |
| Volume Resistivity  | > 1.0E+13                                   | ohms·m            | IEC 60093 <sup>15</sup>   |
| Relative Permittivity (1 MHz)   | 2.80  |                   | IEC 60250 <sup>16</sup>   |
| Dissipation Factor (1 MHz)  | 9.5E-3                                      |                   | IEC 60250 <sup>17</sup>   |
| Flammability  | Nominal Value                               | Unit              | Test Method               |
| Flame Rating  |   |                   | UL 94                     |
| 1.59 mm   | HB  |                   | UL 94                     |
| 3.18 mm   | HB  |                   | UL 94                     |
| Burning Behav. at thickness h (3.20 mm, UL)   | HB  |                   | ISO 1210 <sup>18</sup>    |
| Additional Information  |   |                   |                           |
| Melt Flow Rate, ASTM D1238, 200°C/5kg: 0.5 g/10min Melt Flow Rate, ASTM D1238, 230°C/3.8kg: 1.5 g/10min |   |                   |                           |
| NOTE  |   |                   |                           |
| 1.  | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |                   |                           |
| 2.  | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |                   |                           |
| 3.  | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |                   |                           |
| 4.  | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |                   |                           |
| 5.  | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |                   |                           |
| 6.  | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |                   |                           |

|     |   |
|-----|---|
| 7.  | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 8.  | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 9.  | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 10. | 10 °C/min                                   |
| 11. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 12. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 13. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 14. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 15. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 16. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 17. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |
| 18. | ??????,?? ISO 10350 ???<br>23°C/50%r.h. ??? |

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