

## Styrolution Terluran® HI-12 ABS

Category : Polymer , Thermoplastic , ABS Polymer , Acrylonitrile Butadiene Styrene (ABS), Molded

### Material Notes:

Terluran HI-12 is an injection molding grade of ABS with a very high toughness and easy flow. Very high toughness Easy flowing UL 94 HB (1.6 & 3.2 mm) Information provided by Styrolution

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Styrolution-Terluran-HI-12-ABS.php](http://www.lookpolymers.com/polymer_Styrolution-Terluran-HI-12-ABS.php)

| Physical Properties                | Metric                                              | English                                             | Comments       |
|------------------------------------|-----------------------------------------------------|-----------------------------------------------------|----------------|
| Density                            | 1.02 g/cc                                           | 0.0368 lb/in <sup>3</sup>                           | ISO 1183       |
| Moisture Absorption at Equilibrium | 0.21 %<br>@Temperature 23.0<br>°C                   | 0.21 %<br>@Temperature 73.4 °F                      | 50% RH; ISO 62 |
| Water Absorption at Saturation     | 1.03 %<br>@Temperature 23.0<br>°C                   | 1.03 %<br>@Temperature 73.4 °F                      | ISO 62         |
| Linear Mold Shrinkage              | 0.0040 - 0.0070 cm/cm                               | 0.0040 - 0.0070 in/in                               | ISO 294-4      |
| Melt Flow                          | 14 g/10 min<br>@Load 10.0 kg,<br>Temperature 220 °C | 14 g/10 min<br>@Load 22.0 lb,<br>Temperature 428 °F | ISO 1133       |

| Mechanical Properties      | Metric                                             | English                                                | Comments   |
|----------------------------|----------------------------------------------------|--------------------------------------------------------|------------|
| Hardness, Rockwell R       | 101                                                | 101                                                    | IEC 2039-2 |
| Ball Indentation Hardness  | 80.0 MPa                                           | 11600 psi                                              | ISO 2039-1 |
| Tensile Strength, Yield    | 40.0 MPa                                           | 5800 psi                                               | ISO 527    |
| Elongation at Yield        | 2.7 %                                              | 2.7 %                                                  | ISO 527    |
| Tensile Modulus            | 1.90 GPa                                           | 276 ksi                                                | ISO 527    |
| Flexural Strength          | 58.0 MPa                                           | 8410 psi                                               | ISO 178    |
| Izod Impact, Notched (ISO) | 11.0 kJ/m <sup>2</sup><br>@Temperature -30.0<br>°C | 5.23 ft-lb/in <sup>2</sup><br>@Temperature -22.0<br>°F | ISO 180/A  |
|                            | 31.0 kJ/m <sup>2</sup><br>@Temperature 23.0<br>°C  | 14.8 ft-lb/in <sup>2</sup><br>@Temperature 73.4 °F     | ISO 180/A  |
|                            | 35.0 kJ/m <sup>2</sup>                             | 16.7 ft-lb/in <sup>2</sup>                             |            |

| Mechanical Properties   | Metric                                                 | English                                                    | Comments |
|-------------------------|--------------------------------------------------------|------------------------------------------------------------|----------|
|                         | @Temperature 23.0<br>°C                                | @Temperature 73.4 °F                                       |          |
| Charpy Impact Unnotched | 16.0 J/cm <sup>2</sup><br><br>@Temperature -30.0<br>°C | 76.1 ft-lb/in <sup>2</sup><br><br>@Temperature -22.0<br>°F | ISO 179  |
|                         | NB<br><br>@Temperature 23.0<br>°C                      | NB<br><br>@Temperature 73.4 °F                             | ISO 179  |
| Charpy Impact, Notched  | 1.10 J/cm <sup>2</sup><br><br>@Temperature -30.0<br>°C | 5.23 ft-lb/in <sup>2</sup><br><br>@Temperature -22.0<br>°F | ISO 179  |
|                         | 3.00 J/cm <sup>2</sup><br><br>@Temperature 23.0<br>°C  | 14.3 ft-lb/in <sup>2</sup><br><br>@Temperature 73.4 °F     | ISO 179  |

| Thermal Properties                             | Metric                       | English                                | Comments        |
|------------------------------------------------|------------------------------|----------------------------------------|-----------------|
| CTE, linear                                    | 80.0 - 110 µm/m-°C           | 44.4 - 61.1 µin/in-°F                  | ISO 11359       |
| Thermal Conductivity                           | 0.170 W/m-K                  | 1.18 BTU-in/hr-ft <sup>2</sup> -<br>°F | DIN 52612-1     |
| Maximum Service Temperature, Air               | 80.0 °C                      | 176 °F                                 |                 |
| Deflection Temperature at 0.46 MPa<br>(66 psi) | 102 °C                       | 216 °F                                 | ISO 75          |
| Deflection Temperature at 1.8 MPa<br>(264 psi) | 97.0 °C                      | 207 °F                                 | ISO 75          |
| Vicat Softening Point                          | 96.0 °C<br><br>@Load 5.10 kg | 205 °F<br><br>@Load 11.2 lb            | 50°C/h; ISO 306 |
|                                                | 104 °C<br><br>@Load 1.02 kg  | 219 °F<br><br>@Load 2.25 lb            | 50°C/h; ISO 306 |
| Flammability, UL94                             | HB                           | HB                                     |                 |

| Electrical Properties | Metric                       | English                      | Comments  |
|-----------------------|------------------------------|------------------------------|-----------|
| Volume Resistivity    | >= 1.00e+15 ohm-cm           | >= 1.00e+15 ohm-cm           | IEC 60093 |
| Dielectric Constant   | 2.9<br><br>@Frequency 100 Hz | 2.9<br><br>@Frequency 100 Hz | IEC 60250 |
| Dissipation Factor    | 0.0054                       | 0.0054                       | IEC 60250 |

| Electrical Properties      | @Frequency 100 Hz<br>Metric | @Frequency 100 Hz<br>English | Comments  |
|----------------------------|-----------------------------|------------------------------|-----------|
|                            | 0.0082                      | 0.0082                       |           |
|                            | @Frequency 1.00e+6<br>Hz    | @Frequency 1.00e+6<br>Hz     | IEC 60250 |
| Comparative Tracking Index | 600 V                       | 600 V                        | IEC 60112 |

| Processing Properties | Metric          | English       | Comments |
|-----------------------|-----------------|---------------|----------|
| Melt Temperature      | 230 - 260 Â°C   | 446 - 500 Â°F | ISO 294  |
| Mold Temperature      | 40.0 - 60.0 Â°C | 104 - 140 Â°F | ISO 294  |

## Contact Songhan Plastic Technology Co.,Ltd.

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