

## Eurostar Staramide BST44 PA6, Impact Modified, Injection Molded

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, Impact Grade

### Material Notes:

BST44 is a Low Temperature Impact Modified Polyamide 6 Injection Molding Resin. Information provided by Polymer Technology & Services, the North American exclusive supplier.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Eurostar-Staramide-BST44-PA6-Impact-Modified-Injection-Molded.php](http://www.lookpolymers.com/polymer_Eurostar-Staramide-BST44-PA6-Impact-Modified-Injection-Molded.php)

| Physical Properties | Metric                         | English                        | Comments       |
|---------------------|--------------------------------|--------------------------------|----------------|
| Density             | 1.08 g/cc                      | 0.0390 lb/in <sup>3</sup>      | ISO 1183       |
| Moisture Absorption | 2.00 %<br>@Temperature 23.0 °C | 2.00 %<br>@Temperature 73.4 °F | 50% RH; ISO 62 |

| Mechanical Properties      | Metric                                             | English                                                | Comments                         |
|----------------------------|----------------------------------------------------|--------------------------------------------------------|----------------------------------|
| Hardness, Rockwell R       | 111                                                | 111                                                    | ISO 2039-2                       |
| Tensile Strength, Yield    | 50.0 MPa                                           | 7250 psi                                               | 50 mm/min; ISO 527               |
| Elongation at Break        | >= 100 %                                           | >= 100 %                                               | 50 mm/min; ISO 527               |
| Elongation at Yield        | 4.1 %                                              | 4.1 %                                                  | 50 mm/min; ISO 527               |
| Tensile Modulus            | 1.90 GPa                                           | 276 ksi                                                | 1 mm/min; ISO 527                |
| Flexural Yield Strength    | 60.0 MPa                                           | 8700 psi                                               | 2 mm/min; ISO 178                |
| Flexural Modulus           | 1.60 GPa                                           | 232 ksi                                                | 2 mm/min; ISO 178                |
| Izod Impact, Notched (ISO) | 50.0 kJ/m <sup>2</sup><br>@Temperature -40.0 °C    | 23.8 ft-lb/in <sup>2</sup><br>@Temperature -40.0 °F    | Edgew 80x10x4 sp=62; ISO 180/1A  |
|                            | 65.0 kJ/m <sup>2</sup><br>@Temperature -20.0 °C    | 30.9 ft-lb/in <sup>2</sup><br>@Temperature -4.00 °F    | Edgew 80x10x4 sp=62; ISO 180/1A  |
|                            | 75.0 kJ/m <sup>2</sup><br>@Temperature 23.0 °C     | 35.7 ft-lb/in <sup>2</sup><br>@Temperature 73.4 °F     | Edgew 80x10x4 sp=62; ISO 180/1A  |
| Charpy Impact Unnotched    | >= 10.0 J/cm <sup>2</sup><br>@Temperature 23.0 °C  | >= 47.6 ft-lb/in <sup>2</sup><br>@Temperature 73.4 °F  | Edgew 80x10x4 sp=62; ISO 179/1eU |
|                            | >= 10.0 J/cm <sup>2</sup><br>@Temperature -30.0 °C | >= 47.6 ft-lb/in <sup>2</sup><br>@Temperature -22.0 °F | Edgew 80x10x4 sp=62; ISO 179/1eU |
|                            | 6.00 J/cm <sup>2</sup>                             | 28.6 ft-lb/in <sup>2</sup>                             |                                  |

| Charpy Impact, Notched<br>Mechanical Properties | Metric<br>@ Temperature -30.0 °C | English<br>@ Temperature -22.0 °F | Edgew 80x10x4 sp=62; ISO 179/1eA<br>Comments |
|-------------------------------------------------|----------------------------------|-----------------------------------|----------------------------------------------|
|                                                 | 7.50 J/cm²                       | 35.7 ft-lb/in²                    | Edgew 80x10x4 sp=62; ISO 179/1eA             |
|                                                 | @Temperature 23.0 °C             | @Temperature 73.4 °F              |                                              |

| Thermal Properties                          | Metric                                      | English                                      | Comments                             |
|---------------------------------------------|---------------------------------------------|----------------------------------------------|--------------------------------------|
| CTE, linear, Parallel to Flow               | 95.0 µm/m-°C<br>@Temperature 23.0 - 60.0 °C | 52.8 µin/in-°F<br>@Temperature 73.4 - 140 °F | ISO 11359-2                          |
| CTE, linear, Transverse to Flow             | 120 µm/m-°C<br>@Temperature 23.0 - 60.0 °C  | 66.7 µin/in-°F<br>@Temperature 73.4 - 140 °F | ISO 11359-2                          |
| Deflection Temperature at 0.46 MPa (66 psi) | 140 °C                                      | 284 °F                                       | Edgew 120x10x4, sp=100 mm; ISO 75/Bf |
| Deflection Temperature at 1.8 MPa (264 psi) | 60.0 °C                                     | 140 °F                                       | Edgew 120x10x4, sp=100 mm; ISO 75/Af |
| Vicat Softening Point                       | 160 °C                                      | 320 °F                                       | B/120; ISO 306                       |
|                                             | 165 °C                                      | 329 °F                                       | B/50; ISO 306                        |

| Electrical Properties      | Metric                             | English                            | Comments            |
|----------------------------|------------------------------------|------------------------------------|---------------------|
| Volume Resistivity         | >= 1.00e+16 ohm-cm                 | >= 1.00e+16 ohm-cm                 | IEC 60093           |
| Surface Resistance         | >= 1.00e+16 ohm                    | >= 1.00e+16 ohm                    | ROA; IEC 60093      |
| Dielectric Constant        | 2.8<br>@Frequency 1.00e+6 Hz       | 2.8<br>@Frequency 1.00e+6 Hz       | IEC 60250           |
|                            | 3.0<br>@Frequency 50.0 - 60.0 Hz   | 3.0<br>@Frequency 50.0 - 60.0 Hz   | IEC 60250           |
| Dielectric Strength        | 16.0 kV/mm<br>@Thickness 3.20 mm   | 406 kV/in<br>@Thickness 0.126 in   | in oil; IEC 60243-1 |
| Dissipation Factor         | 0.017<br>@Frequency 1.00e+6 Hz     | 0.017<br>@Frequency 1.00e+6 Hz     | IEC 60250           |
|                            | 0.084<br>@Frequency 50.0 - 60.0 Hz | 0.084<br>@Frequency 50.0 - 60.0 Hz | IEC 60250           |
| Comparative Tracking Index | 575 V                              | 575 V                              | IEC 60112           |

| Electrical Properties | Metric | English | Comments     |
|-----------------------|--------|---------|--------------|
|                       | 600 V  | 600 V   | M, IEC 60112 |

| Processing Properties     | Metric           | English          | Comments |
|---------------------------|------------------|------------------|----------|
| Rear Barrel Temperature   | 220 - 230 °C     | 428 - 446 °F     | Zone 1   |
| Middle Barrel Temperature | 230 - 240 °C     | 446 - 464 °F     | Zone 2   |
| Front Barrel Temperature  | 240 - 250 °C     | 464 - 482 °F     | Zone 3   |
| Melt Temperature          | 240 - 250 °C     | 464 - 482 °F     |          |
| Mold Temperature          | 60.0 - 90.0 °C   | 140 - 194 °F     |          |
| Drying Temperature        | 75.0 - 85.0 °C   | 167 - 185 °F     |          |
| Dry Time                  | 4.00 - 6.00 hour | 4.00 - 6.00 hour |          |
| Moisture Content          | 0.20 %           | 0.20 %           |          |

## Contact Songhan Plastic Technology Co.,Ltd.

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