

## Styrolution Novodur® M203FC ABS

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

### Material Notes:

Novodur HD M203FC is an injection molding grade especially suitable for medical applications providing high flowability. Information provided by Styrolution

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Styrolution-Novodur-M203FC-ABS.php](http://www.lookpolymers.com/polymer_Styrolution-Novodur-M203FC-ABS.php)

| Physical Properties   | Metric                                              | English                                             | Comments  |
|-----------------------|-----------------------------------------------------|-----------------------------------------------------|-----------|
| Density               | 1.05 g/cc                                           | 0.0379 lb/in <sup>3</sup>                           | ISO 1183  |
| Linear Mold Shrinkage | 0.0040 - 0.0070 cm/cm                               | 0.0040 - 0.0070 in/in                               | ISO 294-4 |
| Melt Flow             | 31 g/10 min<br>@Load 10.0 kg,<br>Temperature 220 °C | 31 g/10 min<br>@Load 22.0 lb,<br>Temperature 428 °F | ISO 1133  |

| Mechanical Properties      | Metric                                             | English                                                | Comments   |
|----------------------------|----------------------------------------------------|--------------------------------------------------------|------------|
| Ball Indentation Hardness  | 105 MPa                                            | 15200 psi                                              | ISO 2039-1 |
| Tensile Strength, Yield    | 46.0 MPa                                           | 6670 psi                                               | ISO 527    |
| Elongation at Yield        | 2.6 %                                              | 2.6 %                                                  | ISO 527    |
| Tensile Modulus            | 2.40 GPa                                           | 348 ksi                                                | ISO 527    |
| Flexural Strength          | 70.0 MPa                                           | 10200 psi                                              | ISO 178    |
| Flexural Modulus           | 2.40 GPa                                           | 348 ksi                                                | ISO 178    |
| Izod Impact, Notched (ISO) | 7.00 kJ/m <sup>2</sup><br>@Temperature -30.0<br>°C | 3.33 ft-lb/in <sup>2</sup><br>@Temperature -22.0<br>°F | ISO 180/A  |
|                            | 15.0 kJ/m <sup>2</sup><br>@Temperature 23.0<br>°C  | 7.14 ft-lb/in <sup>2</sup><br>@Temperature 73.4 °F     | ISO 180/A  |
| Charpy Impact Unnotched    | 9.00 J/cm <sup>2</sup><br>@Temperature -30.0<br>°C | 42.8 ft-lb/in <sup>2</sup><br>@Temperature -22.0<br>°F | ISO 179    |
|                            | 11.0 J/cm <sup>2</sup><br>@Temperature 23.0<br>°C  | 52.3 ft-lb/in <sup>2</sup><br>@Temperature 73.4 °F     | ISO 179    |
|                            | 0.700 J/cm <sup>2</sup>                            | 3.33 ft-lb/in <sup>2</sup>                             |            |

| Mechanical Properties | Metric                  | English                 | Comments |
|-----------------------|-------------------------|-------------------------|----------|
|                       | @ Temperature -30.0 Â°C | @ Temperature -22.0 Â°F |          |
|                       | 1.50 J/cmÂ²             | 7.14 ft-lb/inÂ²         | ISO 179  |
|                       | @Temperature 23.0 Â°C   | @Temperature 73.4 Â°F   |          |

| Thermal Properties                          | Metric         | English          | Comments         |
|---------------------------------------------|----------------|------------------|------------------|
| CTE, linear                                 | 90.0 Âµm/m-Â°C | 50.0 Âµin/in-Â°F | ISO 11359        |
| Deflection Temperature at 0.46 MPa (66 psi) | 98.0 Â°C       | 208 Â°F          | ISO 75           |
| Deflection Temperature at 1.8 MPa (264 psi) | 94.0 Â°C       | 201 Â°F          | ISO 75           |
| Vicat Softening Point                       | 99.0 Â°C       | 210 Â°F          | 50Â°C/h; ISO 306 |
|                                             | @Load 5.10 kg  | @Load 11.2 lb    |                  |

| Electrical Properties      | Metric                | English               | Comments                |
|----------------------------|-----------------------|-----------------------|-------------------------|
| Volume Resistivity         | >= 1.00e+15 ohm-cm    | >= 1.00e+15 ohm-cm    | IEC 60093               |
| Surface Resistance         | >= 1.00e+15 ohm       | >= 1.00e+15 ohm       | IEC 60093               |
| Dielectric Constant        | 3.0                   | 3.0                   | IEC 60250               |
|                            | @Frequency 100 Hz     | @Frequency 100 Hz     |                         |
| Dielectric Strength        | 35.0 kV/mm            | 889 kV/in             | Short Time; IEC 60243-1 |
|                            | @Thickness 1.50 mm    | @Thickness 0.0591 in  |                         |
| Dissipation Factor         | 0.0050                | 0.0050                | IEC 60250               |
|                            | @Frequency 100 Hz     | @Frequency 100 Hz     |                         |
|                            | 0.0090                | 0.0090                | IEC 60250               |
|                            | @Frequency 1.00e+6 Hz | @Frequency 1.00e+6 Hz |                         |
| Comparative Tracking Index | 600 V                 | 600 V                 | IEC 60112               |

| Processing Properties | Metric        | English       | Comments |
|-----------------------|---------------|---------------|----------|
| Melt Temperature      | 220 - 260 Â°C | 428 - 500 Â°F | ISO 294  |
| Mold Temperature      | 70.0 Â°C      | 158 Â°F       | ISO 294  |
| Injection Velocity    | 240 mm/sec    | 9.45 in/sec   | ISO 294  |
|                       | 80.0 Â°C      | 176 Â°F       |          |

| Processing Properties | Metric                     | English                 | Comments |
|-----------------------|----------------------------|-------------------------|----------|
|                       | @ Time 7200 - 14400<br>sec | @ Time 2.00 - 4.00 hour |          |

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