

## DSM Biomedical Elasthane™ 75D Thermoplastic Polyether Polyurethane (TPU)

Category : Polymer , Thermoplastic , Polyurethane, TP , Thermoplastic Polyurethane (TPUR), Polyether Grade

### Material Notes:

A high tensile strength, aromatic biomedical polymer with an exceptional combination of mechanical properties plus biological compatibility Elasthane™ TPU exhibits outstanding hydrolytic stability. Widely Used This polyether-based polymer is designed to support long-term implantation and has been used in many commercially available medical devices including cardiovascular, neurostimulation and orthopedic implants. Tailor Made Elasthane™ TPU can be enhanced with SME® technology to incorporate end groups that can address the needs of specific device applications. This eliminates the need for additional surface processing steps after the device component is fabricated. Summary of Product Benefits Excellent mechanical properties and abrasion resistance Hydrolytically stable Biocompatible Adaptable with SME® technology Established FDA Master File Information provided by DSM Biomedical.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DSM-Biomedical-Elasthane-75D-Thermoplastic-Polyether-Polyurethane-TPU.php](http://www.lookpolymers.com/polymer_DSM-Biomedical-Elasthane-75D-Thermoplastic-Polyether-Polyurethane-TPU.php)

| Physical Properties               | Metric  | English   | Comments               |
|-----------------------------------|---|---|------------------------|
| Specific Gravity                  | 1.19 g/cc   | 1.19 g/cc   | ASTM D792              |
| Linear Mold Shrinkage             | 0.016 cm/cm   | 0.016 in/in   | 4 inch disk; ASTM D955 |
| Linear Mold Shrinkage, Transverse | 0.0050 - 0.0080 cm/cm                               | 0.0050 - 0.0080 in/in                               | Flame Bar; ASTM D955   |
| Melt Flow                         | 37 g/10 min<br>@Load 5.00 kg,<br>Temperature 224 °C | 37 g/10 min<br>@Load 11.0 lb,<br>Temperature 435 °F | ASTM D1238             |

| Mechanical Properties      | Metric    | English   | Comments                     |
|----------------------------|-----------|-----------|------------------------------|
| Hardness, Shore D          | 75        | 75        | ASTM D2240                   |
| Tensile Strength, Ultimate | 60.22 MPa | 8734 psi  | ASTM D1708                   |
| Elongation at Break        | 292 %     | 292 %     | ASTM D1708                   |
| Flexural Strength          | 75.2 MPa  | 10900 psi | at 5% deflection; ASTM D790  |
| Flexural Modulus           | 1.99 GPa  | 289 ksi   | 1% Secant Modulus; ASTM D790 |

| Thermal Properties    | Metric                               | English                                | Comments   |
|-----------------------|--------------------------------------|--|------------|
| CTE, linear           | 86.4 µm/m-°C<br>@Temperature 20.0 °C | 48.0 µin/in-°F<br>@Temperature 68.0 °F | ASTM E-831 |
| Vicat Softening Point | 61.0 °C                              | 142 °F                                 | ASTM D1525 |

| Electrical Properties | Metric | English | Comments |
|-----------------------|--------|---------|----------|
|-----------------------|--------|---------|----------|

| Electrical Properties | Metric           | English          | Comments  |
|-----------------------|------------------|------------------|-----------|
|                       | @Frequency 60 Hz | @Frequency 60 Hz |           |
| Dielectric Strength   | 15.4 kV/mm       | 392 kV/in        | ASTM D149 |

| Processing Properties  | Metric       | English      | Comments                     |
|------------------------|--------------|--------------|------------------------------|
| Processing Temperature | 194 - 221 °C | 381 - 430 °F | Optimum Extrusion Conditions |

| Descriptive Properties | Value                  | Comments |
|------------------------|------------------------|----------|
| Color                  | Clear to Amber Pellets |          |
| Cytotoxicity           | Non-cytotoxic          |          |
| Hemocompatibility      | Non-hemolytic          |          |

## Contact Songhan Plastic Technology Co.,Ltd.

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