

## Mitsubishi Xantar<sup>®</sup> FC 25 UR Polycarbonate

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, Molded

### Material Notes:

Xantar<sup>®</sup> materials are engineered for performance, consistency and reliability. This makes Xantar<sup>®</sup> resins ideal for interior automotive components, electrical equipment and consumer appliances where quality is a key requirement. The Xantar<sup>®</sup> range includes: clear and tinted grades for transparent applications reinforced materials Flame retardant and halogen free types lubricated materials for added wear resistance Mitsubishi Engineering Plastics acquired the Xantar<sup>®</sup> product line from DSM in 2010.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Mitsubishi-Xantar-FC-25-UR-Polycarbonate.php](http://www.lookpolymers.com/polymer_Mitsubishi-Xantar-FC-25-UR-Polycarbonate.php)

| Physical Properties         | Metric   | English  | Comments  |
|-----------------------------|--|--|---|
| Density                     | 1.20 g/cc  | 0.0434 lb/in <sup>3</sup>                            | ISO 1183  |
| Water Absorption            | 0.35 %   | 0.35 %   | Sim. to ISO 62  |
| Viscosity Test              | 56 cm <sup>3</sup> /g                                | 56 cm <sup>3</sup> /g                                | Limiting Viscosity Number; ISO 1628-4                                   |
|                             | 63 cm <sup>3</sup> /g                                | 63 cm <sup>3</sup> /g                                | Viscosity Number  |
| Linear Mold Shrinkage, Flow | 0.0060 cm/cm   | 0.0060 in/in   | ISO 294-4   |
| Melt Flow                   | 6.0 g/10 min<br>@Load 1.20 kg,<br>Temperature 300 °C | 6.0 g/10 min<br>@Load 2.65 lb,<br>Temperature 572 °F | Calculated from Volume Flow Rate of 5 cm <sup>3</sup> /10min.; ISO 1133 |

| Mechanical Properties      | Metric  | English  | Comments     |
|----------------------------|---|--|--------------|
| Hardness, Rockwell M       | 70  | 70   | ISO 2039-2   |
| Tensile Strength, Yield    | 60.0 MPa  | 8700 psi   | ISO 527-1/-2 |
| Elongation at Break        | >= 50 %   | >= 50 %  | ISO 527-1/-2 |
| Elongation at Yield        | 6.0 %   | 6.0 %  | ISO 527-1/-2 |
| Tensile Modulus            | 2.30 GPa  | 334 ksi  | ISO 527-1/-2 |
| Flexural Strength          | 90.0 MPa  | 13100 psi  | ISO 178      |
| Flexural Modulus           | 2.40 GPa  | 348 ksi  | ISO 178      |
| Izod Impact, Notched (ISO) | 80.0 kJ/m <sup>2</sup><br>@Temperature 23.0<br>°C | 38.1 ft-lb/in <sup>2</sup><br>@Temperature 73.4 °F | ISO 180/4A   |

| Thermal Properties | Metric | English | Comments |
|--------------------|--------|---------|----------|
|--------------------|--------|---------|----------|

| Thermal Properties                          | 65.0 Åum/m-Å°C<br>Metric | English in/in-Å°F     | Comments                                       |
|---|--------------------------|-----------------------|--|
| CTE, linear, Parallel to Flow               | @Temperature 20.0 Å°C    | @Temperature 68.0 Å°F | ISO 11359-1/-2                                 |
| Maximum Service Temperature, Air            | 125 Å°C                  | 257 Å°F               | Ball Pressure Temperature; IEC 60695-10-2      |
| Deflection Temperature at 1.8 MPa (264 psi) | 130 Å°C                  | 266 Å°F               | ISO 75-1/-2                                    |
| Vicat Softening Point                       | 150 Å°C                  | 302 Å°F               | 50Å°C/h 50N; ISO 306                           |
| UL RTI, Electrical                          | 130 Å°C                  | 266 Å°F               | UL746B   |
|   | @Thickness 1.50 mm       | @Thickness 0.0591 in  |  |
|   | 130 Å°C                  | 266 Å°F               | UL746B   |
|   | @Thickness 3.00 mm       | @Thickness 0.118 in   |  |
| UL RTI, Mechanical with Impact              | 125 Å°C                  | 257 Å°F               | UL746B   |
|   | @Thickness 1.50 mm       | @Thickness 0.0591 in  |  |
|   | 125 Å°C                  | 257 Å°F               | UL746B   |
|   | @Thickness 3.00 mm       | @Thickness 0.118 in   |  |
| UL RTI, Mechanical without Impact           | 125 Å°C                  | 257 Å°F               | UL746B   |
|   | @Thickness 1.50 mm       | @Thickness 0.0591 in  |  |
|   | 130 Å°C                  | 266 Å°F               | UL746B   |
|   | @Thickness 3.00 mm       | @Thickness 0.118 in   |  |
| Flammability, UL94                          | V-0                      | V-0                   | IEC 60695-11-10                                |
|   | @Thickness 1.60 mm       | @Thickness 0.0630 in  |  |
|   | V-0                      | V-0                   | IEC 60695-11-10                                |
|   | @Thickness 3.00 mm       | @Thickness 0.118 in   |  |
|   | 5VA                      | 5VA                   | IEC 60695-11-20                                |
|   | @Thickness 3.00 mm       | @Thickness 0.118 in   |  |
| Oxygen Index                                | 35 %                     | 35 %                  | ISO 4589-1/-2                                  |
| Glow Wire Test                              | 825 Å°C                  | 1520 Å°F              | Glow Wire Ignition Temperature; IEC 60695-2-13 |
|   | @Thickness 1.50 mm       | @Thickness 0.0591 in  |  |
|   | 850 Å°C                  | 1560 Å°F              | Glow Wire Ignition Temperature; IEC 60695-2-13 |
|   | @Thickness 3.00 mm       | @Thickness 0.118 in   |  |
|   | 960 Å°C                  | 1760 Å°F              | Glow Wire Flammability Index; IEC 60695-2-12   |

| Thermal Properties | @Thickness 1.50 mm<br>Metric | @Thickness 0.0591 in<br>English | Comments                                     |
|--------------------|------------------------------|---------------------------------|--|
|                    | 960 Å°C                      | 1760 Å°F                        | Glow Wire Flammability Index; IEC 60695-2-12 |
|                    | @Thickness 3.00 mm           | @Thickness 0.118 in             |  |

| 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        | 2.9                | 2.9                | IEC 60250   |
|                            | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |             |
| Dielectric Strength        | 3.0                | 3.0                | IEC 60250   |
|                            | @Frequency 100 Hz  | @Frequency 100 Hz  |             |
| Dielectric Strength        | 29.0 kV/mm         | 737 kV/in          | IEC 60243-1 |
| Dissipation Factor         | 0.00066            | 0.00066            | IEC 60250   |
|                            | @Frequency 100 Hz  | @Frequency 100 Hz  |             |
| Comparative Tracking Index | 0.0092             | 0.0092             | IEC 60250   |
|                            | @Frequency 1e+6 Hz | @Frequency 1e+6 Hz |             |
| Comparative Tracking Index | 225 V              | 225 V              | IEC 60112   |
|                            | 250 - 399 V        | 250 - 399 V        |             |

| Descriptive Properties               | Value | Comments |
|--------------------------------------|-------|----------|
| Blow Molding                         | Yes   |          |
| Flame Retardant                      | Yes   |          |
| Flame Retarding Agent                | Yes   |          |
| Heat stabilized or stable to heat    | Yes   |          |
| High impact or impact modified       | Yes   |          |
| Injection molding                    | Yes   |          |
| Light stabilized or stable to light  | Yes   |          |
| Other Extrusion                      | Yes   |          |
| Release Agent                        | Yes   |          |
| U.V. stabilized or stable to weather | Yes   |          |

| Without Fillers<br>Descriptive Properties | Yes<br>Value | Comments |
|---|--------------|----------|
|---|--------------|----------|

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