

## Mitsubishi Xantar® G4F 22 UR Polycarbonate-20% Glass Reinforced

Category : Polymer , Thermoplastic , Polycarbonate (PC) , Polycarbonate, 20% Glass Filled

### Material Notes:

Xantar® materials are engineered for performance, consistency and reliability. This makes Xantar® resins ideal for interior automotive components, electrical equipment and consumer appliances where quality is a key requirement. The Xantar® 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® product line from DSM in 2010.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Mitsubishi-Xantar-G4F-22-UR-Polycarbonate-20-Glass-Reinforced.php](http://www.lookpolymers.com/polymer_Mitsubishi-Xantar-G4F-22-UR-Polycarbonate-20-Glass-Reinforced.php)

| Physical Properties               | Metric                                                | English                                               | Comments                                                                |
|-----------------------------------|-------------------------------------------------------|-------------------------------------------------------|-------------------------------------------------------------------------|
| Density                           | 1.35 g/cc                                             | 0.0488 lb/in <sup>3</sup>                             | ISO 1183                                                                |
| Water Absorption                  | 0.29 %                                                | 0.29 %                                                | Sim. to ISO 62                                                          |
| Viscosity Test                    | 45 cm <sup>3</sup> /g                                 | 45 cm <sup>3</sup> /g                                 | Limiting Viscosity Number; ISO 1628-4                                   |
| Linear Mold Shrinkage, Flow       | 0.0020 cm/cm                                          | 0.0020 in/in                                          | ISO 294-4                                                               |
| Linear Mold Shrinkage, Transverse | 0.0050 cm/cm                                          | 0.0050 in/in                                          | ISO 294-4                                                               |
| Melt Flow                         | 10.8 g/10 min<br>@Load 1.20 kg,<br>Temperature 300 °C | 10.8 g/10 min<br>@Load 2.65 lb,<br>Temperature 572 °F | Calculated from Volume Flow Rate of 8 cm <sup>3</sup> /10min.; ISO 1133 |

| Mechanical Properties      | Metric                                         | English                                            | Comments     |
|----------------------------|------------------------------------------------|----------------------------------------------------|--------------|
| Hardness, Rockwell M       | 91                                             | 91                                                 | ISO 2039-2   |
| Tensile Strength at Break  | 90.0 MPa                                       | 13100 psi                                          | ISO 527-1/-2 |
| Elongation at Break        | 4.0 %                                          | 4.0 %                                              | ISO 527-1/-2 |
| Tensile Modulus            | 6.00 GPa                                       | 870 ksi                                            | ISO 527-1/-2 |
| Flexural Strength          | 145 MPa                                        | 21000 psi                                          | ISO 178      |
| Flexural Modulus           | 5.50 GPa                                       | 798 ksi                                            | ISO 178      |
| Izod Impact, Notched (ISO) | 10.0 kJ/m <sup>2</sup><br>@Temperature 23.0 °C | 4.76 ft-lb/in <sup>2</sup><br>@Temperature 73.4 °F | ISO 180/4A   |

| Thermal Properties            | Metric       | English        | Comments       |
|-------------------------------|--------------|----------------|----------------|
| CTE, linear, Parallel to Flow | 25.0 µm/m-°C | 13.9 µin/in-°F | ISO 11359-1/-2 |

| Thermal Properties                          | @Temperature 20.0<br>Metric<br>°C | @Temperature 68.0 °F<br>English<br>°F | Comments                                       |
|---------------------------------------------|-----------------------------------|---------------------------------------|------------------------------------------------|
| Maximum Service Temperature, Air            | 125 Â°C                           | 257 Â°F                               | Ball Pressure Temperature; IEC 60695-10-2      |
| Deflection Temperature at 1.8 MPa (264 psi) | 145 Â°C                           | 293 Â°F                               | ISO 75-1/-2                                    |
| Vicat Softening Point                       | 152 Â°C                           | 306 Â°F                               | 50Â°C/h 50N; ISO 306                           |
| UL RTI, Electrical                          | 130 Â°C                           | 266 Â°F                               | UL 746B                                        |
|                                             | @Thickness 1.50 mm                | @Thickness 0.0591 in                  |                                                |
|                                             | 130 Â°C                           | 266 Â°F                               | UL 746B                                        |
|                                             | @Thickness 3.00 mm                | @Thickness 0.118 in                   |                                                |
| UL RTI, Mechanical with Impact              | 125 Â°C                           | 257 Â°F                               | UL 746B                                        |
|                                             | @Thickness 1.50 mm                | @Thickness 0.0591 in                  |                                                |
|                                             | 130 Â°C                           | 266 Â°F                               | UL 746B                                        |
|                                             | @Thickness 3.00 mm                | @Thickness 0.118 in                   |                                                |
| UL RTI, Mechanical without Impact           | 125 Â°C                           | 257 Â°F                               | UL 746B                                        |
|                                             | @Thickness 1.50 mm                | @Thickness 0.0591 in                  |                                                |
|                                             | 130 Â°C                           | 266 Â°F                               | UL 746B                                        |
|                                             | @Thickness 3.00 mm                | @Thickness 0.118 in                   |                                                |
| Flammability, UL94                          | V-0                               | V-0                                   | IEC 60695-11-10                                |
|                                             | @Thickness 1.20 mm                | @Thickness 0.0472 in                  |                                                |
|                                             | V-0                               | V-0                                   | IEC 60695-11-10                                |
|                                             | @Thickness 1.60 mm                | @Thickness 0.0630 in                  |                                                |
| Oxygen Index                                | 35 %                              | 35 %                                  | ISO 4589-1/-2                                  |
| Glow Wire Test                              | 850 Â°C                           | 1560 Â°F                              | Glow Wire Ignition Temperature; IEC 60695-2-13 |
|                                             | @Thickness 1.50 mm                | @Thickness 0.0591 in                  |                                                |
|                                             | 875 Â°C                           | 1610 Â°F                              | Glow Wire Ignition Temperature; IEC 60695-2-13 |
|                                             | @Thickness 3.00 mm                | @Thickness 0.118 in                   |                                                |
|                                             | 960 Â°C                           | 1760 Â°F                              | Glow Wire Flammability Index; IEC 60695-2-12   |
|                                             | @Thickness 1.50 mm                | @Thickness 0.0591 in                  |                                                |
|                                             | 960 Â°C                           | 1760 Â°F                              | Glow Wire Flammability Index; IEC 60695-2-12   |
|                                             | @Thickness 3.00 mm                | @Thickness 0.118 in                   |                                                |

| Electrical Properties      | Metric                            | English                           | Comments       |
|----------------------------|-----------------------------------|-----------------------------------|----------------|
| Volume Resistivity         | $\geq 1.00 \times 10^{15}$ ohm-cm | $\geq 1.00 \times 10^{15}$ ohm-cm | IEC 60093      |
| Surface Resistance         | $\geq 1.00 \times 10^{15}$ ohm    | $\geq 1.00 \times 10^{15}$ ohm    | IEC 60093      |
| Dielectric Constant        | 3.2                               | 3.2                               | IEC 60250      |
|                            | @Frequency 1e+6 Hz                | @Frequency 1e+6 Hz                |                |
|                            | 3.25                              | 3.25                              | IEC 60250      |
|                            | @Frequency 100 Hz                 | @Frequency 100 Hz                 |                |
| Dielectric Strength        | 29.0 kV/mm                        | 737 kV/in                         | IEC 60243-1    |
| Dissipation Factor         | 0.00090                           | 0.00090                           | IEC 60250      |
|                            | @Frequency 100 Hz                 | @Frequency 100 Hz                 |                |
|                            | 0.0090                            | 0.0090                            | IEC 60250      |
|                            | @Frequency 1e+6 Hz                | @Frequency 1e+6 Hz                |                |
| Comparative Tracking Index | 200 V                             | 200 V                             | IEC 60112      |
|                            | 175 - 249 V                       | 175 - 249 V                       |                |
|                            |                                   |                                   | PLC 3; UL 746A |

| Descriptive Properties               | Value | Comments |
|--------------------------------------|-------|----------|
| Flame Retardant                      | Yes   |          |
| Flame Retarding Agent                | Yes   |          |
| Heat stabilized or stable to heat    | Yes   |          |
| Injection molding                    | Yes   |          |
| Light stabilized or stable to light  | Yes   |          |
| Release Agent                        | Yes   |          |
| U.V. stabilized or stable to weather | Yes   |          |
| With Fillers                         | Yes   |          |

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