

# XANTAR® G4F 22 R

Polycarbonate  
Mitsubishi Engineering-Plastics Corp

Message:  
20% Glass Reinforced, Flame Retardant

| General Information                               |                                  |                        |                |
|---------------------------------------------------|----------------------------------|------------------------|----------------|
| UL YellowCard                                     | E340159-100746633                |                        |                |
| Filler / Reinforcement                            | Glass Fiber,20% Filler by Weight |                        |                |
| Additive                                          | Flame Retardant                  |                        |                |
| Features                                          | Flame Retardant                  |                        |                |
| RoHS Compliance                                   | RoHS Compliant                   |                        |                |
| Forms                                             | Pellets                          |                        |                |
| Physical                                          | Nominal Value                    | Unit                   | Test Method    |
| Density                                           | 1.35                             | g/cm <sup>3</sup>      | ISO 1183       |
| Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)        | 8.00                             | cm <sup>3</sup> /10min | ISO 1133       |
| Molding Shrinkage                                 |                                  |                        | ISO 294-4      |
| Across Flow                                       | 0.50                             | %                      |                |
| Flow                                              | 0.20                             | %                      |                |
| Water Absorption (Saturation, 23°C)               | 0.29                             | %                      | ISO 62         |
| Limiting Viscosity Number                         | 45.0                             | cm <sup>3</sup> /g     | ISO 1628-4     |
| Thermal Conductivity of Melt                      | 0.29                             | W/m/K                  |                |
| Hardness                                          | Nominal Value                    | Unit                   | Test Method    |
| Rockwell Hardness (M-Scale)                       | 91                               |                        | ISO 2039-2     |
| Mechanical                                        | Nominal Value                    | Unit                   | Test Method    |
| Tensile Modulus                                   | 6000                             | MPa                    | ISO 527-2      |
| Tensile Stress (Break)                            | 90.0                             | MPa                    | ISO 527-2      |
| Tensile Strain (Break)                            | 4.0                              | %                      | ISO 527-2      |
| Flexural Modulus                                  | 5500                             | MPa                    | ISO 178        |
| Flexural Stress                                   | 145                              | MPa                    | ISO 178        |
| Impact                                            | Nominal Value                    | Unit                   | Test Method    |
| Notched Izod Impact Strength (23°C)               | 10                               | kJ/m <sup>2</sup>      | ISO 180/4A     |
| Thermal                                           | Nominal Value                    | Unit                   | Test Method    |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 145                              | °C                     | ISO 75-2/A     |
| Vicat Softening Temperature                       | 150                              | °C                     | ISO 306/B50    |
| Ball Pressure Test (125°C)                        | Pass                             |                        | IEC 60695-10-2 |
| CLTE - Flow                                       | 2.5E-5                           | cm/cm/°C               | ISO 11359-2    |
| RTI Elec                                          |                                  |                        | UL 746         |
| 1.50 mm                                           | 130                              | °C                     |                |

| 3.00 mm                          | 130           | °C      |                      |
|----------------------------------|---------------|---------|----------------------|
| RTI Imp                          |               |         | UL 746               |
| 1.50 mm                          | 125           | °C      |                      |
| 3.00 mm                          | 130           | °C      |                      |
| RTI Str                          |               |         | UL 746               |
| 1.50 mm                          | 125           | °C      |                      |
| 3.00 mm                          | 130           | °C      |                      |
| Electrical                       | Nominal Value | Unit    | Test Method          |
| Surface Resistivity              | > 1.0E+15     | ohms    | IEC 60093            |
| Volume Resistivity               | > 1.0E+15     | ohms·cm | IEC 60093            |
| Electric Strength                | 29            | kV/mm   | IEC 60243-1          |
| Relative Permittivity            |               |         | IEC 60250            |
| 100 Hz                           | 3.25          |         |                      |
| 1 MHz                            | 3.20          |         |                      |
| Dissipation Factor               |               |         | IEC 60250            |
| 100 Hz                           | 9.0E-4        |         |                      |
| 1 MHz                            | 9.0E-3        |         |                      |
| Comparative Tracking Index (CTI) | PLC 3         |         | UL 746               |
| Comparative Tracking Index       | 200           | V       | IEC 60112            |
| Flammability                     | Nominal Value | Unit    | Test Method          |
| Flammability Classification      |               |         | IEC 60695-11-10, -20 |
| 1.20 mm                          | V-0           |         |                      |
| 1.50 mm                          | V-0           |         |                      |
| Glow Wire Flammability Index     |               |         | IEC 60695-2-12       |
| 1.50 mm                          | 960           | °C      |                      |
| 3.00 mm                          | 960           | °C      |                      |
| Glow Wire Ignition Temperature   |               |         | IEC 60695-2-13       |
| 1.50 mm                          | 850           | °C      |                      |
| 3.00 mm                          | 875           | °C      |                      |
| Oxygen Index                     | 35            | %       | ISO 4589-2           |

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