

# XANTAR® F 22 UR

Polycarbonate  
Mitsubishi Engineering-Plastics Corp

Message:  
Low Viscosity, Flame Retardant, Molding Release, UV Stabilized

| General Information |                                            |
|---------------------|--------------------------------------------|
| UL YellowCard       | E340159-100746629                          |
| Additive            | Flame Retardant                            |
|                     | Mold Release                               |
|                     | UV Stabilizer                              |
| Features            | Flame Retardant                            |
|                     | Good Mold Release                          |
|                     | Good UV Resistance                         |
|                     | Low Viscosity                              |
| RoHS Compliance     | RoHS Compliant                             |
| Forms               | Pellets                                    |
| Multi-Point Data    | Isothermal Stress vs. Strain (ISO 11403-1) |
|                     | Secant Modulus vs. Strain (ISO 11403-1)    |

| Physical                                   | Nominal Value | Unit                   | Test Method |
|--------------------------------------------|---------------|------------------------|-------------|
| Density                                    | 1.20          | g/cm <sup>3</sup>      | ISO 1183    |
| Melt Volume-Flow Rate (MVR) (300°C/1.2 kg) | 10.0          | cm <sup>3</sup> /10min | ISO 1133    |
| Molding Shrinkage - Flow                   | 0.60          | %                      | ISO 294-4   |
| Water Absorption (Saturation, 23°C)        | 0.35          | %                      | ISO 62      |
| Limiting Viscosity Number                  | 50.0          | cm <sup>3</sup> /g     | ISO 1628-4  |
| Thermal Conductivity of Melt               | 0.24          | W/m/K                  |             |
| Hardness                                   | Nominal Value | Unit                   | Test Method |
| Rockwell Hardness (M-Scale)                | 70            |                        | ISO 2039-2  |
| Mechanical                                 | Nominal Value | Unit                   | Test Method |
| Tensile Modulus                            | 2300          | MPa                    | ISO 527-2   |
| Tensile Stress (Yield)                     | 60.0          | MPa                    | ISO 527-2   |
| Tensile Strain (Yield)                     | 6.0           | %                      | ISO 527-2   |
| Nominal Tensile Strain at Break            | > 50          | %                      | ISO 527-2   |
| Flexural Modulus                           | 2400          | MPa                    | ISO 178     |
| Flexural Stress                            | 90.0          | MPa                    | ISO 178     |
| Impact                                     | Nominal Value | Unit                   | Test Method |

| Notched Izod Impact Strength (23°C)               | 80            | kJ/m <sup>2</sup> | ISO 180/4A           |
|---------------------------------------------------|---------------|-------------------|----------------------|
| Thermal                                           | Nominal Value | Unit              | Test Method          |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 130           | °C                | ISO 75-2/A           |
| Vicat Softening Temperature                       | 148           | °C                | ISO 306/B50          |
| Ball Pressure Test (125°C)                        | Pass          |                   | IEC 60695-10-2       |
| CLTE - Flow                                       | 6.5E-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                                           | 125           | °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                                            | 3.00          |                   |                      |
| 1 MHz                                             | 2.90          |                   |                      |
| Dissipation Factor                                |               |                   | IEC 60250            |
| 100 Hz                                            | 6.6E-4        |                   |                      |
| 1 MHz                                             | 9.2E-3        |                   |                      |
| Comparative Tracking Index (CTI)                  | PLC 2         |                   | UL 746               |
| Comparative Tracking Index                        | 225           | V                 | IEC 60112            |
| Flammability                                      | Nominal Value | Unit              | Test Method          |
| Flammability Classification                       |               |                   | IEC 60695-11-10, -20 |
| 3.00 mm                                           | V-0           |                   |                      |
| 1.50 mm                                           | V-2           |                   |                      |
| 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                                           | 850           | °C                |                      |
| Oxygen Index                                      | 35            | %                 | ISO 4589-2           |
| Optical                                           | Nominal Value | Unit              | Test Method          |
| Transmittance                                     | 89.0          | %                 | ASTM D1003           |

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