

# Iupilon® GS2010MN1

Polycarbonate

Mitsubishi Engineering-Plastics Corp

## Message:

Iupilon® GS2010MN1 is a Polycarbonate (PC) material filled with 10% glass fiber. It is available in Asia Pacific, Europe, or North America for injection molding.

Important attributes of Iupilon® GS2010MN1 are:

Flame Rated

Flame Retardant

| General Information                        |                                  |                        |             |
|--------------------------------------------|----------------------------------|------------------------|-------------|
| UL YellowCard                              | E41179-231885                    |                        |             |
| Filler / Reinforcement                     | Glass Fiber,10% Filler by Weight |                        |             |
| Additive                                   | Flame Retardant                  |                        |             |
| Features                                   | Flame Retardant                  |                        |             |
| Forms                                      | Pellets                          |                        |             |
| Processing Method                          | Injection Molding                |                        |             |
| Physical                                   | Nominal Value                    | Unit                   | Test Method |
| Density                                    | 1.29                             | g/cm <sup>3</sup>      | ISO 1183    |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)   | 10                               | g/10 min               | ISO 1133    |
| Melt Volume-Flow Rate (MVR) (300°C/1.2 kg) | 9.00                             | cm <sup>3</sup> /10min | ISO 1133    |
| Molding Shrinkage                          |                                  |                        |             |
| Across Flow : 3.20 mm                      | 0.40 to 0.60                     | %                      |             |
| Flow : 3.20 mm                             | 0.30 to 0.50                     | %                      |             |
| Water Absorption (Saturation, 23°C)        | 0.14                             | %                      | ISO 62      |
| Mechanical                                 | Nominal Value                    | Unit                   | Test Method |
| Tensile Modulus                            | 4500                             | MPa                    | ISO 527-2   |
| Tensile Stress (Break)                     | 78.0                             | MPa                    | ISO 527-2   |
| Tensile Strain (Break)                     | 2.9                              | %                      | ISO 527-2   |
| Flexural Modulus                           | 4000                             | MPa                    | ISO 178     |
| Flexural Stress                            | 135                              | MPa                    | ISO 178     |
| Impact                                     | Nominal Value                    | Unit                   | Test Method |
| Charpy Notched Impact Strength (23°C)      | 10                               | kJ/m <sup>2</sup>      | ISO 179     |
| Charpy Unnotched Impact Strength (23°C)    | 55                               | kJ/m <sup>2</sup>      | ISO 179     |
| Thermal                                    | Nominal Value                    | Unit                   | Test Method |
| Heat Deflection Temperature                |                                  |                        |             |
| 0.45 MPa, Unannealed                       | 145                              | °C                     | ISO 75-2/B  |
| 1.8 MPa, Unannealed                        | 140                              | °C                     | ISO 75-2/A  |
| CLTE                                       |                                  |                        | ISO 11359-2 |
| Flow                                       | 4.0E-5                           | cm/cm/°C               |             |
| Transverse                                 | 6.7E-5                           | cm/cm/°C               |             |

| Electrical                       | Nominal Value | Test Method |
|----------------------------------|---------------|-------------|
| Comparative Tracking Index (CTI) | PLC 4         | UL 746      |
| Flammability                     | Nominal Value | Test Method |
| Flame Rating (0.750 mm)          | V-0           | UL 94       |
| Injection                        | Nominal Value | Unit        |
| Drying Temperature               | 120           | °C          |
| Drying Time                      | 4.0 to 8.0    | hr          |
| Rear Temperature                 | 270 to 290    | °C          |
| Middle Temperature               | 280 to 300    | °C          |
| Front Temperature                | 290 to 310    | °C          |
| Nozzle Temperature               | 290 to 310    | °C          |
| Mold Temperature                 | 80.0 to 120   | °C          |
| Injection Pressure               | 50.0 to 150   | MPa         |
| Screw Speed                      | 50 to 100     | rpm         |

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