

## Iupilon™ CGH1020KR

Mitsubishi Engineering-Plastics Corp - Polycarbonate

| General Information                                            |                                      |                                     |                  |
|----------------------------------------------------------------|--------------------------------------|-------------------------------------|------------------|
| <b>Product Description</b>                                     |                                      |                                     |                  |
| Carbon/Glass Fiber Reinforced, High Flowability, CF10% + GF20% |                                      |                                     |                  |
| <b>General</b>                                                 |                                      |                                     |                  |
| Filler / Reinforcement                                         | • Carbon Fiber, 10% Filler by Weight | • Glass Fiber, 20% Filler by Weight |                  |
| Features                                                       | • High Flow                          | • High Rigidity                     | • High Stiffness |
| Uses                                                           | • General Purpose                    |                                     |                  |
| ASTM & ISO Properties <sup>1</sup>                             |                                      |                                     |                  |
| Physical                                                       | Nominal Value                        | Unit                                | Test Method      |
| Density                                                        | 1.38                                 | g/cm <sup>3</sup>                   | ISO 1183         |
| Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)                       | 6.2                                  | g/10 min                            | ISO 1133         |
| Melt Volume-Flow Rate (MVR) (300°C/1.2 kg)                     | 4.6                                  | cm <sup>3</sup> /10min              | ISO 1133         |
| Molding Shrinkage                                              |                                      |                                     | Internal Method  |
| Across Flow                                                    | 0.20 to 0.40                         | %                                   |                  |
| Flow                                                           | 0.050 to 0.20                        | %                                   |                  |
| Water Absorption (Saturation, 23°C)                            | 0.090                                | %                                   | ISO 62           |
| Mechanical                                                     | Nominal Value                        | Unit                                | Test Method      |
| Tensile Modulus                                                | 13000                                | MPa                                 | ISO 527-1/1      |
| Tensile Stress (Break)                                         | 127                                  | MPa                                 | ISO 527-2/5      |
| Tensile Strain (Break)                                         | 1.7                                  | %                                   | ISO 527-2/5      |
| Flexural Modulus <sup>2</sup>                                  | 12500                                | MPa                                 | ISO 178          |
| Flexural Stress <sup>2</sup>                                   | 195                                  | 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)                        | 45                                   | kJ/m <sup>2</sup>                   | ISO 179          |
| Thermal                                                        | Nominal Value                        | Unit                                | Test Method      |
| Deflection Temperature Under Load                              |                                      |                                     |                  |
| 0.45 MPa, Unannealed                                           | 145                                  | °C                                  | ISO 75-2/B       |
| 1.8 MPa, Unannealed                                            | 141                                  | °C                                  | ISO 75-2/A       |
| CLTE                                                           |                                      |                                     | ISO 11359-2      |
| Flow                                                           | 1.3E-5                               | cm/cm/°C                            |                  |
| Transverse                                                     | 5.4E-5                               | cm/cm/°C                            |                  |
| Flammability                                                   | Nominal Value                        | Unit                                | Test Method      |
| Flame Rating (0.40 mm)                                         | HB                                   |                                     | UL 94            |



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| Processing Information             |               |      |
|------------------------------------|---------------|------|
| Injection                          | Nominal Value | Unit |
| Drying Temperature - Hot Air Dryer | 120           | °C   |
| Drying Time - Hot Air Dryer        | 4.0 to 8.0    | hr   |
| Rear Temperature                   | 290 to 310    | °C   |
| Middle Temperature                 | 290 to 310    | °C   |
| Front Temperature                  | 290 to 310    | °C   |
| Nozzle Temperature                 | 290 to 310    | °C   |
| Mold Temperature                   | 80 to 120     | °C   |

