

## Iuplace™ AP6GM4

Mitsubishi Engineering-Plastics Corp - Polyphenylene Ether + PS

| General Information                                |                                                       |                                                           |                 |
|----------------------------------------------------|-------------------------------------------------------|-----------------------------------------------------------|-----------------|
| Product Description                                |                                                       |                                                           |                 |
| Flow, good; Reinforced (20%); Flame Retardant, V-1 |                                                       |                                                           |                 |
| General                                            |                                                       |                                                           |                 |
| Filler / Reinforcement                             | • Glass Fiber, 20% Filler by Weight                   |                                                           |                 |
| Additive                                           | • Flame Retardant                                     |                                                           |                 |
| Features                                           | • Flame Retardant                                     | • Good Flow                                               |                 |
| Uses                                               | • Automotive Applications<br>• Automotive Electronics | • Electrical/Electronic Applications<br>• General Purpose |                 |
| ASTM & ISO Properties <sup>1</sup>                 |                                                       |                                                           |                 |
| Physical                                           | Nominal Value                                         | Unit                                                      | Test Method     |
| Density                                            | 1.23                                                  | g/cm³                                                     | ISO 1183        |
| Melt Volume-Flow Rate (MVR) (280°C/5.0 kg)         | 31                                                    | cm³/10min                                                 | ISO 1133        |
| Molding Shrinkage                                  |                                                       |                                                           | Internal Method |
| Across Flow : 3.20 mm                              | 0.30 to 0.50                                          | %                                                         |                 |
| Flow : 3.20 mm                                     | 0.20 to 0.40                                          | %                                                         |                 |
| Water Absorption (Saturation, 23°C)                | 0.060                                                 | %                                                         | ISO 62          |
| Mechanical                                         | Nominal Value                                         | Unit                                                      | Test Method     |
| Tensile Modulus                                    | 5700                                                  | MPa                                                       | ISO 527-1/1     |
| Tensile Stress (Break)                             | 80.0                                                  | MPa                                                       | ISO 527-2/5     |
| Tensile Strain (Break)                             | 2.7                                                   | %                                                         | ISO 527-2/5     |
| Flexural Modulus <sup>2</sup>                      | 5500                                                  | MPa                                                       | ISO 178         |
| Flexural Stress <sup>2</sup>                       | 132                                                   | MPa                                                       | ISO 178         |
| Impact                                             | Nominal Value                                         | Unit                                                      | Test Method     |
| Charpy Notched Impact Strength (23°C)              | 6.0                                                   | kJ/m²                                                     | ISO 179         |
| Thermal                                            | Nominal Value                                         | Unit                                                      | Test Method     |
| Deflection Temperature Under Load                  |                                                       |                                                           | ISO 75-2/A      |
| 1.8 MPa, Unannealed                                | 115                                                   | °C                                                        |                 |
| CLTE                                               |                                                       |                                                           | ISO 11359-2     |
| Flow                                               | 3.7E-5                                                | cm/cm/°C                                                  |                 |
| Transverse                                         | 6.8E-5                                                | cm/cm/°C                                                  |                 |
| Electrical                                         | Nominal Value                                         | Unit                                                      | Test Method     |
| Surface Resistivity                                | 1.0E+15                                               | ohms                                                      | IEC 60093       |
| Volume Resistivity                                 | 5.0E+15                                               | ohms·cm                                                   | IEC 60093       |
| Electric Strength                                  |                                                       |                                                           | IEC 60243-1     |
| 1.00 mm                                            | 35                                                    | kV/mm                                                     |                 |
| 3.00 mm                                            | 18                                                    | kV/mm                                                     |                 |



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| Electrical                 | Nominal Value | Unit | Test Method |
|----------------------------|---------------|------|-------------|
| Dielectric Constant        |               |      | IEC 60250   |
| 100 Hz                     | 3.20          |      |             |
| 1 MHz                      | 3.10          |      |             |
| Dissipation Factor         |               |      | IEC 60250   |
| 100 Hz                     | 5.7E-3        |      |             |
| 1 MHz                      | 6.7E-3        |      |             |
| Comparative Tracking Index | 200           | V    | IEC 60112   |
| Flammability               | Nominal Value | Unit | Test Method |
| Flame Rating (1.5 mm)      | V-1           |      | UL 94       |

### Processing Information

| Injection                          | Nominal Value | Unit |
|------------------------------------|---------------|------|
| Drying Temperature - Hot Air Dryer | 60 to 100     | °C   |
| Drying Time - Hot Air Dryer        | 2.0 to 4.0    | hr   |
| Rear Temperature                   | 240 to 270    | °C   |
| Middle Temperature                 | 250 to 290    | °C   |
| Front Temperature                  | 250 to 290    | °C   |
| Nozzle Temperature                 | 250 to 280    | °C   |
| Mold Temperature                   | 80 to 100     | °C   |
| Injection Pressure                 | 20.0 to 150   | MPa  |
| Injection Rate                     | Moderate      |      |
| Screw Speed                        | 60 to 150     | rpm  |

