

Product Texts

Injection Molding, 50% Glass Reinforced, Heat Stabilized

ISO 1043 PA66-GF50

| Processing/Physical Characteristics | dry / cond | Unit | Test Standard |
|--|-------------------|-------------|----------------------|
| ISO Data | | | |
| ^[C] Molding shrinkage, parallel | 0.3 / * | % | ISO 294-4, 2577 |
| ^[C] Molding shrinkage, normal | 0.9 / * | % | ISO 294-4, 2577 |

[C]: CAMPUS

| Mechanical properties | dry / cond | Unit | Test Standard |
|--|----------------------|-------------------|----------------------|
| ISO Data | | | |
| ^[C] Tensile Modulus | 16000 / 10200 | MPa | ISO 527 |
| ^[C] Stress at break | 230 / 160 | MPa | ISO 527 |
| ^[C] Strain at break | 2.6 / 4 | % | ISO 527 |
| ^[C] Charpy impact strength, +23°C | 95 / 95 | kJ/m ² | ISO 179/1eU |
| ^[C] Charpy impact strength, -30°C | 100 / 100 | kJ/m ² | ISO 179/1eU |
| ^[C] Charpy notched impact strength, +23°C | 15 / 23 | kJ/m ² | ISO 179/1eA |
| ^[C] Charpy notched impact strength, -30°C | 13 / 15 | kJ/m ² | ISO 179/1eA |
| ^[C] Puncture - maximum force, +23°C | 1100 / 1200 | N | ISO 6603-2 |
| ^[C] Puncture - maximum force, -30°C | 1000 / - | N | ISO 6603-2 |
| ^[C] Puncture energy, +23°C | 4 / 5 | J | ISO 6603-2 |
| ^[C] Puncture energy, -30°C | 3 / - | J | ISO 6603-2 |

[C]: CAMPUS

| Thermal properties | dry / cond | Unit | Test Standard |
|--|-------------------|-------------|----------------------|
| ISO Data | | | |
| ^[C] Melting temperature, 10°C/min | 261 / * | °C | ISO 11357-1/-3 |
| ^[C] Temp. of deflection under load, 1.80 MPa | 247 / * | °C | ISO 75-1/-2 |
| ^[C] Temp. of deflection under load, 0.45 MPa | 250 / * | °C | ISO 75-1/-2 |
| ^[C] Coeff. of linear therm. expansion, parallel | 20 / * | E-6/K | ISO 11359-1/-2 |
| ^[C] Coeff. of linear therm. expansion, normal | 80 / * | E-6/K | ISO 11359-1/-2 |
| ^[C] Burning Behav. at 1.5 mm nom. thickn. | HB / * | class | IEC 60695-11-10 |
| Thickness tested | 1.5 / * | mm | - |
| ^[C] Oxygen index | 27 / * | % | ISO 4589-1/-2 |

[C]: CAMPUS

| Electrical properties | dry / cond | Unit | Test Standard |
|---|--------------------|-------------|----------------------|
| ISO Data | | | |
| ^[C] Relative permittivity, 100Hz | 4.5 / 14 | - | IEC 62631-2-1 |
| ^[C] Relative permittivity, 1MHz | 4 / 5 | - | IEC 62631-2-1 |
| ^[C] Dissipation factor, 100Hz | 90 / 3200 | E-4 | IEC 62631-2-1 |
| ^[C] Dissipation factor, 1MHz | 150 / 850 | E-4 | IEC 62631-2-1 |
| ^[C] Volume resistivity | 1E13 / 1E12 | Ohm*m | IEC 62631-3-1 |
| ^[C] Surface resistivity | * / 1E12 | Ohm | IEC 62631-3-2 |
| ^[C] Electric strength | 40 / 35 | kV/mm | IEC 60243-1 |
| ^[C] Comparative tracking index | 550 / - | - | IEC 60112 |

[C]: CAMPUS

| Other properties | dry / cond | Unit | Test Standard |
|------------------------------------|-------------------|-------------------|----------------------|
| ^[C] Water absorption | 4.5 / * | % | Sim. to ISO 62 |
| ^[C] Humidity absorption | 1.4 / * | % | Sim. to ISO 62 |
| ^[C] Density | 1570 / - | kg/m ³ | ISO 1183 |

[C]: CAMPUS

| Material specific properties | dry / cond | Unit | Test Standard |
|---------------------------------|------------|-------|---------------------|
| ISO Data | | | |
| ^[C] Viscosity number | 146 / * | cm³/g | ISO 307, 1157, 1628 |
| [C]: CAMPUS | | | |

| Test specimen production | Value | Unit | Test Standard |
|--|-------|------|---------------|
| ISO Data | | | |
| ^[C] Injection Molding, melt temperature | 290 | °C | ISO 294 |
| Injection Molding, mold temperature | 80 | °C | ISO 294 |
| [C]: CAMPUS | | | |

| Processing Recommendation Injection Molding | Value | Unit | Test Standard |
|---|-----------|------|---------------|
| Pre-drying - Temperature | 80 | °C | - |
| Pre-drying - Time | 2 - 6 | h | - |
| Processing humidity | ≤0.12 | % | - |
| Melt temperature | 280 - 300 | °C | - |
| Mold temperature | 80 - 120 | °C | - |

Characteristics

Processing

Injection Molding

Special Characteristics

Heat stabilized or stable to heat

Delivery form

Pellets

Regional Availability

North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Additives

Release agent

Other text information

Injection molding

PREPROCESSING

Residual moisture content: 0.03 - 0.12%
Drying temperature dry air dryer: 80 °C

Drying time dry air dryer 2 - 6 h

PROCESSING

Melt temperature (Tmin - Tmax): 280 - 300 °C

Mold temperature: 80 - 120 °C