# TECHNYL® C 52G3 MZ25 GREY R7035 CN

Polyamide 6

Solvay Engineering Plastics

## Message:

TECHNYL® C 52G3 MZ25 Grey R7035 CN is a Non-phosphorous and Non-halogenated flame retardant polyamide 6, reinforced with 25% of mineral filler, heat stabilized, for injection moulding. This grade offers a robust glow wire resistance, combined with enhanced processing behavior suitable for thin wall parts.

| General Information | |
|---|---|
| UL YellowCard | E44716-457081 |
| Filler / Reinforcement | Mineral filler, 25% filler by weight |
| Additive | heat stabilizer<br>Flame retardancy |
| Features | UV Laser Markable<br>Anti-arc<br>Phosphorus content, low (to none)<br>Halogen-free |
| Uses | Electrical/Electronic Applications |
| Agency Ratings | UL QMFZ2 |
| Appearance | Black<br>Grey |
| Forms | Particle |
| Processing Method | Injection molding |
| Resin ID (ISO 1043) | PA6-MD25 FR(30) |

| Physical | Dry | Conditioned | Unit | Test Method |
|---|---|---|---|---|
| Density | 1.37 | -- | g/cm³ | ISO 1183/A |
| Water Absorption | | | | ISO 62 |
| 23°C, 24 hr | 1.1 | -- | % | ISO 62 |
| Saturated, 23°C | 6.0 | -- | % | ISO 62 |
| Equilibrium, 23°C, 50% RH | 2.3 | -- | % | ISO 62 |

| Mechanical | Dry | Conditioned | Unit | Test Method |
|---|---|---|---|---|
| Tensile Modulus (23°C) | 6900 | 2800 | MPa | ISO 527-2/1A |
| Tensile Strength | | | | |
| Fracture, 23°C | 80.0 | -- | MPa | ASTM D638 |
| Fracture, 23°C | 80.0 | 35.0 | MPa | ISO 527-2/1A |
| Tensile Elongation (Break, 23°C) | 3.0 | -- | % | ASTM D638, ISO 527-2 |

| | | | | |
|---|---|---|---|---|
| Flexural Modulus | | | | |
| 23°C | 6700 | -- | MPa | ASTM D790 |
| 23°C | 6900 | 2900 | MPa | ISO 178 |
| Flexural Strength | | | | |
| 23°C | 130 | -- | MPa | ASTM D790 |
| 23°C | 145 | 55.0 | MPa | ISO 178 |
| **Impact** | **Dry** | **Conditioned** | **Unit** | **Test Method** |
| Charpy Notched Impact Strength | | | | ISO 179/1eA |
| -30°C | 3.0 | -- | $kJ/m^2$ | ISO 179/1eA |
| 23°C | 3.0 | 3.5 | $kJ/m^2$ | ISO 179/1eA |
| Charpy Unnotched Impact Strength | | | | ISO 179/1eU |
| -30°C | 45 | -- | $kJ/m^2$ | ISO 179/1eU |
| 23°C | 45 | 90 | $kJ/m^2$ | ISO 179/1eU |
| Notched Izod Impact (23°C) | 45 | -- | J/m | ASTM D256 |
| **Thermal** | **Dry** | **Conditioned** | **Unit** | **Test Method** |
| Heat Deflection Temperature | | | | |
| 0.45 MPa, not annealed | 200 | -- | °C | ISO 75-2/Bf |
| 1.8 MPa, not annealed | 150 | -- | °C | ASTM D648 |
| 1.8 MPa, not annealed | 145 | -- | °C | ISO 75-2/Af |
| Melting Temperature | 222 | -- | °C | ISO 11357-3 |
| **Electrical** | **Dry** | **Conditioned** | **Unit** | **Test Method** |
| Dielectric Strength (0.800 mm) | 37 | -- | kV/mm | IEC 60243-1 |
| Comparative Tracking Index (Solution A) | 450 | -- | V | IEC 60112 |
| **Flammability** | **Dry** | **Conditioned** | **Unit** | **Test Method** |
| Flame Rating | | | | UL 94 |
| 0.8 mm | V-2 | -- | | UL 94 |
| 1.6 mm | V-2 | -- | | UL 94 |
| 3.2 mm | V-2 | -- | | UL 94 |
| Glow Wire Flammability Index | | | | IEC 60695-2-12 |
| 0.8 mm | 960 | -- | °C | IEC 60695-2-12 |
| 1.6 mm | 960 | -- | °C | IEC 60695-2-12 |
| 3.2 mm | 960 | -- | °C | IEC 60695-2-12 |
| Oxygen Index | 31 | -- | % | ISO 4589-2 |
| **Injection** | **Dry** | **Unit** | | |
| Drying Temperature | 80 | | °C | |
| Suggested Max Moisture | 0.20 | | % | |
| Rear Temperature | 230 - 235 | | °C | |

| | | |
|---|---|---|
| Middle Temperature | 235 - 240 | °C |
| Front Temperature | 235 - 245 | °C |
| Mold Temperature | 60 - 90 | °C |

## Injection instructions

The material is supplied in airtight bags, ready for use. In case that the virgin material has absorbed moisture, it must be dried with a dehumidified air drying equipment, dew point mini -20°C. Recommended time 2-4hInjection Advice:
All reinforced flame retardant compounds generate some level of abrasion/corrosion to the steel processing equipment.
These issues can be worsened by using incorrect processing conditions (temperatures, residence time, moisture level ...) during the moulding process. Therefore, Solvay recommends to use the advised processing conditions detailed in this technical data sheet. For equipment that comes into contact with molten flame retarded compounds, Solvay advises to use a steel containing high chromium & high carbon content (minimum concentration of 16% Chromium) to prevent corrosion and abrasion. For the correct reference of steel associated to flame retardant compounds processing, please refer to your equipment manufacturers. For Mould Temperature, in the case of parts where the surface roughness is required we can recommend a temperature at 120°C. Of course it should be noted that this improvement in the surface appearance may be at the expense of the cycle time.



## Recommended distributors for this material

### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China