# TECHNYL® A 218 V25 BLACK 21

Polyamide 66

Solvay Engineering Plastics

## Message:

TECHNYL® A 218 V25 Black 21 is a polyamide 66, reinforced with 25% of glass fibre, heat stabilized, for injection moulding.This grade offers an excellent combination between thermal and mechanical properties.

| General Information | |
|---|---|
| UL YellowCard | E44716-235569 |
| Filler / Reinforcement | Glass fiber reinforced material, 25% filler by weight |
| Additive | heat stabilizer |
| Features | Heat Stabilized - Inorganic<br>Good dimensional stability<br>Good liquidity<br>Good demoulding performance |
| Uses | Application in Automobile Field |
| Agency Ratings | UL QMFZ2 |
| RoHS Compliance | RoHS compliance |
| Appearance | Black<br>Natural color |
| Forms | Particle |
| Processing Method | Injection molding |
| Multi-Point Data | Isothermal Stress vs. Strain (ISO 11403-1) |
| Resin ID (ISO 1043) | PA66-GF25 |

| Physical | Dry | Conditioned | Unit | Test Method |
|---|---|---|---|---|
| Specific Gravity | 1.32 | -- | g/cm³ | ASTM D792, ISO 1183/A |
| Water Absorption | | | | ISO 62 |
| 23°C, 24 hr | 0.90 | -- | % | ISO 62 |
| Saturated, 23°C | 6.2 | -- | % | ISO 62 |
| Equilibrium, 23°C, 50% RH | 2.3 | -- | % | ISO 62 |

| Mechanical | Dry | Conditioned | Unit | Test Method |
|---|---|---|---|---|
| Tensile Modulus (23°C) | 8400 | 6300 | MPa | ISO 527-2/1A |
| Tensile Stress (Break, 23°C) | 165 | 120 | MPa | ISO 527-2/1A |
| Tensile Strain (Break, 23°C) | 3.0 | 6.0 | % | ISO 527-2 |
| Flexural Modulus | | | | |
| 23°C | 7300 | -- | MPa | ASTM D790 |
| 23°C | 7300 | 5000 | MPa | ISO 178 |
| Flexural Strength | | | | |

| | | | | |
|---|---|---|---|---|
| 23°C | 250 | -- | MPa | ASTM D790 |
| 23°C | 240 | -- | MPa | ISO 178 |
| Impact | Dry | Conditioned | Unit | Test Method |
| Charpy Notched Impact Strength (23°C) | 10 | 13 | kJ/m² | ISO 179/1eA |
| Charpy Unnotched Impact Strength (23°C) | 57 | 87 | kJ/m² | ISO 179/1eU |
| Notched Izod Impact | | | | |
| 23°C | 80 | -- | J/m | ASTM D256 |
| 23°C | 8.5 | 15 | kJ/m² | ISO 180 |
| Thermal | Dry | Conditioned | Unit | Test Method |
| Heat Deflection Temperature (1.8 MPa, Unannealed) | 250 | -- | °C | ISO 75-2/Af |
| Melting Temperature | 262 | -- | °C | ISO 11357-3 |
| Electrical | Dry | Conditioned | Unit | Test Method |
| Surface Resistivity | 6.0E+15 | 1.0E+13 | ohms | IEC 60093 |
| Volume Resistivity | 1.0E+15 | 1.0E+15 | ohms·cm | IEC 60093 |
| Dielectric Strength (2.00 mm) | 32 | 28 | kV/mm | IEC 60243-1 |
| Relative Permittivity | 3.70 | 4.00 | | IEC 60250 |
| Comparative Tracking Index (Solution A) | 600 | 600 | V | IEC 60112 |
| Flammability | Dry | Conditioned | Unit | Test Method |
| Flame Rating | | | | UL 94 |
| 0.40 mm | HB | -- | | UL 94 |
| 0.8 mm | HB | -- | | UL 94 |
| 1.6 mm | HB | -- | | UL 94 |
| 3.2 mm | HB | -- | | UL 94 |
| Glow Wire Flammability Index (1.6 mm) | 650 | -- | °C | IEC 60695-2-12 |
| Oxygen Index | 23 | -- | % | ISO 4589-2 |
| Injection | Dry | Unit | | |
| Drying Temperature | 80 | | °C | |
| Suggested Max Moisture | 0.20 | | % | |
| Rear Temperature | 270 - 280 | | °C | |
| Middle Temperature | 275 - 285 | | °C | |
| Front Temperature | 280 - 290 | | °C | |
| Mold Temperature | 70 - 100 | | °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:
For reinforced polyamide, Solvay recommends the use of steel with a high content of Carbon and purified for polishing to avoid or limit the abrasion. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (DIN Norm) or X160CrMoV12 (EN Norm) - 1.2601 /1.2379 (DIN Norm). For Mould Temperature, in the case of parts where the surface roughness is required we can recommend a temperature of 90°C to 120°C with an optimum at 105°C.
The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design

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## Recommended distributors for this material

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