

TECHNICAL DATA SHEET

TECHNYL C 218 V35 BK

TECHNY C 218 V35 BK is a polyamide 6, reinforced with 35% of glass fiber, heat stabilized, for injection moulding. The product offers an excellent combination between thermal and mechanical properties.

General

|                       |                         |                                    |
|-----------------------|-------------------------|------------------------------------|
| Feature               | Heat-aging stabilized   |                                    |
| Polymer type          | PA6 (Polyamide 6)       |                                    |
| Processing technology | Injection molding       |                                    |
| Certification         | RoHS                    |                                    |
| Applications          | Automotive Applications | Electrical/Electronic Applications |
| Colors available      | Black                   |                                    |
| Forms                 | Pellets                 |                                    |

Product identification

|                       |          |
|-----------------------|----------|
| ISO 1043 abbreviation | PA6-GF35 |
|-----------------------|----------|

|                             | Condition      | Standard        | Unit              | Value |
|-----------------------------|----------------|-----------------|-------------------|-------|
| Physical properties         |                |                 |                   |       |
| Density                     |                | ISO 1183        | g/cm <sup>3</sup> | 1.41  |
| Humidity absorption         | T=23°C, 50% RH | ISO 62          | %                 | 0.85  |
| Molding shrinkage, parallel |                | ISO 294-4, 2577 | %                 | 0.25  |
| Molding shrinkage, normal   |                | ISO 294-4, 2577 | %                 | 0.7   |

Mechanical properties

|                                       |          |              |                   | dam / cond.* |
|---------------------------------------|----------|--------------|-------------------|--------------|
| Tensile modulus                       | 1 mm/min | ISO 527-1/-2 | MPa               | 11000 / 6500 |
| Stress at break                       |          | ISO 527-1/-2 | MPa               | 175 / 110    |
| Strain at break                       |          | ISO 527-1/-2 | %                 | 3.2 / 7      |
| Flexural modulus, ISO 178             | 2 mm/min | ISO 178      | MPa               | 9600 / 6000  |
| Flexural strength, ISO 178            | 2 mm/min | ISO 178      | MPa               | 280 / 185    |
| Charpy impact strength, +23°C         | +23°C    | ISO 179/1eU  | kJ/m <sup>2</sup> | 83 / 94      |
| Charpy notched impact strength, +23°C | +23°C    | ISO 179/1eA  | kJ/m <sup>2</sup> | 17 / 19      |
| Izod notched impact strength, +23°C   | +23°C    | ISO 180/1A   | kJ/m <sup>2</sup> | 15 / 28      |

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|--|-----------|----------|------|-------|
|--|-----------|----------|------|-------|

Thermal properties

|  |          |             |    |     |
|--|----------|-------------|----|-----|
| Melting temperature, 10°C/min            |          | ISO 11357-1 | °C | 222 |
| Temp. of deflection under load, 0.45 MPa | 0.45 MPa | ISO 75      | °C | 220 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75      | °C | 210 |

Electrical properties

|                                |            |               |       |        |
|--------------------------------|------------|---------------|-------|--------|
| Volume resistivity             |            | IEC 62631-3-1 | ohm.m | 1E+013 |
| Surface resistivity            |            | IEC 62631-3-1 | ohm   | 1E+014 |
| Comparative tracking index     | Solution A | IEC 60112     | V     | 400    |
| CTI performance level category |            | Sol A         |       | PLC 1  |

Burning behaviour

|  |        |                |    |     |
|--|--------|----------------|----|-----|
| Glow-wire flammability index, GWFI, 1.5 mm | 1.5 mm | IEC 60695-2-12 | °C | 650 |
| Glow-wire flammability index, GWFI, 3.0 mm | 3.0 mm | IEC 60695-2-12 | °C | 650 |

*\*: conditioned according to ISO 1110*

Injection notes

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 minimum -20°C. Recommended time 2-4h.

Injection advice

For reinforced polyamides, Domo 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). In the case of high requirements on surface quality a mould temperature of up to 120°C can be considered. The processing parameters like processing temperatures are a recommendation and can be adjusted in function of injection machine size, part geometry / design.

Disclaimer

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