

TECHNICAL DATA SHEET

TECHNYL STAR S 216 V35 NC

TECHNYL STAR S 216 V35 NC is based on a patented high flow polyamide 6 resin (TechnylStar), reinforced with 35% of glass fibre, for injection moulding. Due to its outstanding flow characteristics, this grade provides a significant productivity improvement and allows more freedom in mould and part design versus a standard polyamide solutions.

General

| | | |
|-----------------------|---|--|
| Feature | Very high flow | Excellent surface finish |
| Polymer type | PA6 (Polyamide 6) | |
| Processing technology | Injection molding | |
| Certification | RoHS | EC 1907/2006 (REACH) |
| Applications | Consumer good application Industrial Applications Power Tool & Garden Equipment PC / laptop / tablet | home & office furniture Outdoor Applications General Purpose |
| Colors available | Natural | Grey |
| Forms | Pellets | |

Product identification

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

| Condition | Standard | Unit | Value |
|-----------|----------|------|-------|
|-----------|----------|------|-------|

Physical properties

| | | | | |
|------------------|-------------|----------|-------------------|------|
| Density | | ISO 1183 | g/cm ³ | 1.41 |
| Water absorption | 24 hr, 23°C | ISO 62 | % | 0.9 |

Mechanical properties

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|---------------------------------------|----------|--------------|-------------------|--------------|
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 10700 / 7400 |
| Stress at break | | ISO 527-1/-2 | MPa | 195 / 115 |
| Strain at break | | ISO 527-1/-2 | % | 3 / - |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 10000 / 6200 |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 295 / 195 |
| Charpy impact strength, +23°C | +23°C | ISO 179/1eU | kJ/m ² | 75 / 80 |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m ² | 13 / 19 |
| Izod impact strength, +23°C | +23°C | ISO 180/1U | kJ/m ² | 75 / 80 |
| Izod notched impact strength, +23°C | +23°C | ISO 180/1A | kJ/m ² | 13 / 16 |

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| | Condition | Standard | Unit | Value |
|--|-----------|----------------|------|-------|
| Thermal properties | | | | |
| Melting temperature, 10°C/min | | ISO 11357-1 | °C | 222 |
| Burning behaviour | | | | |
| Flammability, 1.5 mm | 1.5 mm | UL 94 | | HB |
| Flammability, 3.0 mm | 3.0 mm | UL 94 | | HB |
| Glow-wire flammability index, GWFI, 1.5 mm | 1.5 mm | IEC 60695-2-12 | °C | 650 |

*: conditioned according to ISO 1110

Processing conditions

| | |
|-------------------------------|--------------|
| Drying temperature/time | 80 °C |
| Suggested max moisture | 0.2 % |
| Rear temperature | 230 - 235 °C |
| Middle temperature | 235 - 240 °C |
| Front temperature | 240 - 245 °C |
| Recommended mould temperature | 60 - 90 °C |

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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