TECHNYL STAR®
High-flow PA6 & PA66

DOMO
caring is our formula

TECHNICAL DATA SHEET

# TECHNYL STAR SX 216 V50 NC

TECHNYL STAR SX 216 V50 NC is based on a patented high flow polyamide 6 resin (Technylstar), reinforced with 50% of glass fibre, for injection moulding. Due to its outstanding flow caracteristics, this grade allows more freedom in mould and part design versus a standard polyamide solutions.

## General

| | | |
|---|---|---|
| Certifications | RoHS | EC 1907/2006 (REACH) |
| Polymer type | PA6 | |
| Feature | excellent surface finish<br>high stiffness | high dimensional stability<br>very high flow |
| Applications | consumer applications<br>industrial applications | electrical/electronic applications<br>sport |
| Colors available | black | natural |
| Forms | pellets | |
| Processing technology | injection moulding | |

## Product identification

| | |
|---|---|
| ISO 1043 abbreviation | PA6-GF50 |

## Physical properties

| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| Density | | ISO 1183 | g/cm³ | 1.55 |
| Water absorption | 24 hr, 23°C | ISO 62 | % | 0.7 - 0.8 |
| Molding shrinkage, parallel | | ISO 294-4, 2577 | % | 0.15 |
| Molding shrinkage, normal | | ISO 294-4, 2577 | % | 0.6 |

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| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| **Mechanical properties** | | | | **dam / cond.*** |
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 17000 / 11600 |
| Stress at break | | ISO 527-1/-2 | MPa | 230 / 162 |
| Strain at break | | ISO 527-1/-2 | % | 2.6 / - |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 15500 / 10000 |
| Charpy impact strength, +23°C | +23°C | ISO 179/1eU | kJ/m² | 85 / 95 |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m² | 15 / 20 |
| Izod impact strength, +23°C | +23°C | ISO 180/1U | kJ/m² | 90 / 100 |
| Izod notched impact strength, +23°C | +23°C | ISO 180/1A | kJ/m² | 15 / 22 |

***: conditioned according to ISO 1110**

| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| **Thermal properties** | | | | |
| Melting temperature, 10°C/min | | ISO 11357-1 | °C | 222 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75 | °C | 210 |

| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| **Burning behaviour** | | | | |
| Flammability, 1.5 mm | 1.5 mm | UL 94 | | HB |
| Flammability, 3.0 mm | 3.0 mm | UL 94 | | HB |
| Burning rate, FMVSS, Thickness 1 mm | | FMVSS 302 | | < 100 mm/min |

| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| **Electrical properties** | | | | |
| Comparative tracking index | Solution A | IEC 60112 | V | 500.0 |
| CTI performance level category | | Sol A | | PLC 1 |

## Processing conditions

| | |
|---|---|
| Drying temperature/time | 80 °C |
| Suggested max moisture | 0.2 % |
| Rear temperature | 230 - 235 °C |
| Middle temperature | 235 - 245 °C |
| Front temperature | 245 - 250 °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.