

TECHNICAL DATA SHEET

TECHNYL C 256 V18 NC

(Previously TECHNYL C 256 V18 (EX PSB 197) NATURAL)



TECHNYL C 256 V18 NC is a polyamide PA 6 impact modified, reinforced with 18% of glass fibre, for injection moulding. This grade offers high impact strength and good mechanical properties.

General

|                       |                       |                      |  |
|-----------------------|-----------------------|----------------------|--|
| Feature               | High impact resistant |                      |  |
| Polymer type          | PA6 (Polyamide 6)     |                      |  |
| Processing technology | Injection molding     |                      |  |
| Certification         | RoHS                  | EC 1907/2006 (REACH) |  |
| Applications          | Sport                 |                      |  |
| Colors available      | Black                 | Natural              |  |
| Forms                 | Pellets               |                      |  |

Product identification

|                       |          |
|-----------------------|----------|
| ISO 1043 abbreviation | PA6-GF18 |
|-----------------------|----------|

|                             | Condition | Standard        | Unit              | Value |
|-----------------------------|-----------|-----------------|-------------------|-------|
| Density                     |           | ISO 1183        | g/cm <sup>3</sup> | 1.23  |
| Molding shrinkage, parallel |           | ISO 294-4, 2577 | %                 | 0.3   |
| Molding shrinkage, normal   |           | ISO 294-4, 2577 | %                 | 0.85  |

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|                                       | Condition | Standard     | Unit                | Value       |
|---------------------------------------|-----------|--------------|---------------------|-------------|
| <b>Mechanical properties</b>          |           |              | <b>dam / cond.*</b> |             |
| Tensile modulus                       | 1 mm/min  | ISO 527-1/-2 | MPa                 | 6000 / 3300 |
| Stress at break                       |           | ISO 527-1/-2 | MPa                 | 120 / 70    |
| Strain at break                       |           | ISO 527-1/-2 | %                   | 3.5 / 8.7   |
| Flexural modulus, ISO 178             | 2 mm/min  | ISO 178      | MPa                 | 5500 / 3000 |
| Charpy impact strength, +23°C         | +23°C     | ISO 179/1eU  | kJ/m²               | 75 / 80     |
| Charpy impact strength, -30°C         | -30°C     | ISO 179/1eU  | kJ/m²               | 80 / -      |
| Charpy notched impact strength, +23°C | +23°C     | ISO 179/1eA  | kJ/m²               | 13 / 20     |
| Charpy notched impact strength, -30°C | -30°C     | ISO 179/1eA  | kJ/m²               | 7.5 / -     |
| Izod impact strength, +23°C           | +23°C     | ISO 180/1U   | kJ/m²               | 60 / 65     |
| Izod notched impact strength, +23°C   | +23°C     | ISO 180/1A   | kJ/m²               | 13 / 22     |
| Izod notched impact strength, -30°C   | -30°C     | ISO 180/1A   | kJ/m²               | 13 / -      |

**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 | 215 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75      | °C | 192 |

**Electrical properties**

|                    |  |               |       |     |
|--------------------|--|---------------|-------|-----|
| Volume resistivity |  | IEC 62631-3-1 | ohm.m | 100 |
|--------------------|--|---------------|-------|-----|

**Burning behaviour**

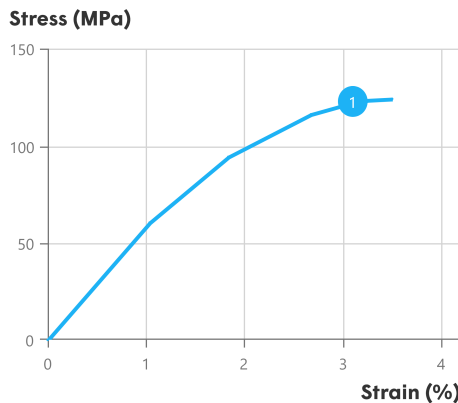
|                      |        |       |  |    |
|----------------------|--------|-------|--|----|
| Flammability, 1.5 mm | 1.5 mm | UL 94 |  | HB |
|----------------------|--------|-------|--|----|

\*: conditioned according to ISO 1110

**Processing conditions**

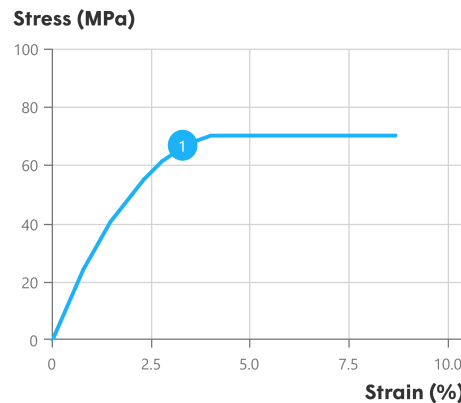
|                               |              |
|-------------------------------|--------------|
| Drying temperature/time       | 80 °C        |
| Suggested max moisture        | 0.2 %        |
| Rear temperature              | 230 - 235 °C |
| Middle temperature            | 235 - 240 °C |
| Front temperature             | 240 - 250 °C |
| Recommended mould temperature | 60 - 90 °C   |

Stress-strain, dry



| Temperature (°C) |          |
|------------------|----------|
| 1                | Spannung |
| 2                |          |

Stress-strain, conditioned



| Temperature (°C) |          |
|------------------|----------|
| 1                | Spannung |
| 4                |          |

## 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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