

TECHNICAL DATA SHEET

TECHNYL B 218 BK 21N

TECHNYL B 218 BK 21N is an unreinforced copolyamide PA 66/6, heat stabilized, medium viscosity, for injection moulding . This grade offers an excellent combination between impact resistance, rigidity, thermal resistance and surface appearance.

General

|                       |                              |                     |
|-----------------------|------------------------------|---------------------|
| Feature               | Heat-aging stabilized        | Good surface finish |
| Polymer type          | PA66/6 copolymer             |                     |
| Processing technology | Injection molding            |                     |
| Certification         | RoHS<br>EC 1907/2006 (REACH) | UL-Yellow Card      |
| Applications          | Connectors                   |                     |
| Colors available      | Black                        |                     |
| Forms                 | Pellets                      |                     |

Product identification

|                       |        |
|-----------------------|--------|
| ISO 1043 abbreviation | PA66/6 |
|-----------------------|--------|

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

Physical properties

|                              |             |                 |       |      |
|------------------------------|-------------|-----------------|-------|------|
| Density                      |             | ISO 1183        | g/cm³ | 1.14 |
| Water absorption             | 24 hr, 23°C | ISO 62          | %     | 1.6  |
| Water absorption, saturation |             |                 | %     | 3.6  |
| Molding shrinkage, parallel  |             | ISO 294-4, 2577 | %     | 1.5  |
| Molding shrinkage, normal    |             | ISO 294-4, 2577 | %     | 1.5  |

Mechanical properties

dam / cond.\*

|                                       |          |              |       |            |
|---------------------------------------|----------|--------------|-------|------------|
| Tensile modulus                       | 1 mm/min | ISO 527-1/-2 | MPa   | 3300 / 950 |
| Stress at break                       |          | ISO 527-1/-2 | MPa   | 75 / 30    |
| Strain at break                       |          | ISO 527-1/-2 | %     | 6 / 100    |
| Flexural modulus, ISO 178             | 2 mm/min | ISO 178      | MPa   | 3100 / 900 |
| Flexural strength, ISO 178            | 2 mm/min | ISO 178      | MPa   | 120 / 35   |
| Charpy notched impact strength, +23°C | +23°C    | ISO 179/1eA  | kJ/m² | 4 / 15     |
| Izod notched impact strength, +23°C   | +23°C    | ISO 180/1A   | kJ/m² | 4 / 15     |

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|                                          | Condition | Standard    | Unit | Value |
|------------------------------------------|-----------|-------------|------|-------|
| <b>Thermal properties</b>                |           |             |      |       |
| Melting temperature, 10°C/min            |           | ISO 11357-1 | °C   | 242   |
| Temp. of deflection under load, 0.45 MPa | 0.45 MPa  | ISO 75      | °C   | 180   |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa  | ISO 75      | °C   | 55    |

|                              |      |               |       |        |
|------------------------------|------|---------------|-------|--------|
| <b>Electrical properties</b> |      |               |       |        |
| Volume resistivity           |      | IEC 62631-3-1 | ohm.m | 1E+013 |
| Surface resistivity          |      | IEC 62631-3-1 | ohm   | 1E+015 |
| Dielectric strength          | 1 mm | IEC 60243-1   | kV/mm | 25     |

|                                                                                                               |                                                                                |                |    |     |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------|----|-----|
| <b>Burning behaviour</b>                                                                                      |                                                                                |                |    |     |
| UL Yellow Card availability  | Click here to have access to the UL Yellow Card → <a href="#">QMFZ2.E44716</a> |                |    |     |
| Glow-wire flammability index, GWFI, 1.5 mm                                                                    | 1.5 mm                                                                         | IEC 60695-2-12 | °C | 650 |

\*: conditioned according to ISO 1110

|                               |              |
|-------------------------------|--------------|
| <b>Processing conditions</b>  |              |
| Drying temperature/time       | 80 °C        |
| Suggested max moisture        | 0.2 %        |
| Rear temperature              | 250 - 260 °C |
| Middle temperature            | 255 - 265 °C |
| Front temperature             | 265 - 275 °C |
| Recommended mould temperature | 60 - 80 °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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