

TECHNICAL DATA SHEET

TECHNYL A 216 V20 NC

TECHNYL A 216 V20 NC is a polyamide 66, reinforced with 20% of glass fiber, for injection moulding. This grade offers an excellent combination between thermal and mechanical properties.

General

|                       |                              |                                |
|-----------------------|------------------------------|--------------------------------|
| Polymer type          | PA66 (Polyamide 66)          |                                |
| Processing technology | Injection molding            |                                |
| Certification         | RoHS<br>EC 1907/2006 (REACH) | UL-Yellow Card                 |
| Applications          | Outdoor Applications         | White Goods & Small Appliances |
| Colors available      | Black<br>Grey                | Natural<br>Blue                |
| Forms                 | Pellets                      |                                |

Product identification

|                       |           |
|-----------------------|-----------|
| ISO 1043 abbreviation | PA66-GF20 |
|-----------------------|-----------|

Physical properties

|                              | Condition   | Standard | Unit              | Value |
|------------------------------|-------------|----------|-------------------|-------|
| Density                      |             | ISO 1183 | g/cm <sup>3</sup> | 1.27  |
| Water absorption             | 24 hr, 23°C | ISO 62   | %                 | 1     |
| Water absorption, saturation |             |          | %                 | 6.6   |

Mechanical properties

|                                       |          |              |                   | dam / cond.* |
|---------------------------------------|----------|--------------|-------------------|--------------|
| Tensile modulus                       | 1 mm/min | ISO 527-1/-2 | MPa               | 7400 / 5000  |
| Stress at break                       |          | ISO 527-1/-2 | MPa               | 145 / 100    |
| Strain at break                       |          | ISO 527-1/-2 | %                 | 3 / 15       |
| Flexural modulus, ISO 178             | 2 mm/min | ISO 178      | MPa               | 6800 / 4500  |
| Flexural strength, ISO 178            | 2 mm/min | ISO 178      | MPa               | 230 / 150    |
| Charpy impact strength, +23°C         | +23°C    | ISO 179/1eU  | kJ/m <sup>2</sup> | 50 / 80      |
| Charpy notched impact strength, +23°C | +23°C    | ISO 179/1eA  | kJ/m <sup>2</sup> | 7 / 9        |
| Izod impact strength, +23°C           | +23°C    | ISO 180/1U   | kJ/m <sup>2</sup> | 45 / 65      |
| Izod notched impact strength, +23°C   | +23°C    | ISO 180/1A   | kJ/m <sup>2</sup> | 8 / 9        |

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

Thermal properties

|                                          |          |             |    |     |
|------------------------------------------|----------|-------------|----|-----|
| Melting temperature, 10°C/min            |          | ISO 11357-1 | °C | 262 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75      | °C | 245 |

Electrical properties

|                     |      |               |       |        |
|---------------------|------|---------------|-------|--------|
| Volume resistivity  |      | IEC 62631-3-1 | ohm.m | 1E+013 |
| Surface resistivity |      | IEC 62631-3-1 | ohm   | 6E+015 |
| Dielectric strength | 1 mm | IEC 60243-1   | kV/mm | 32     |

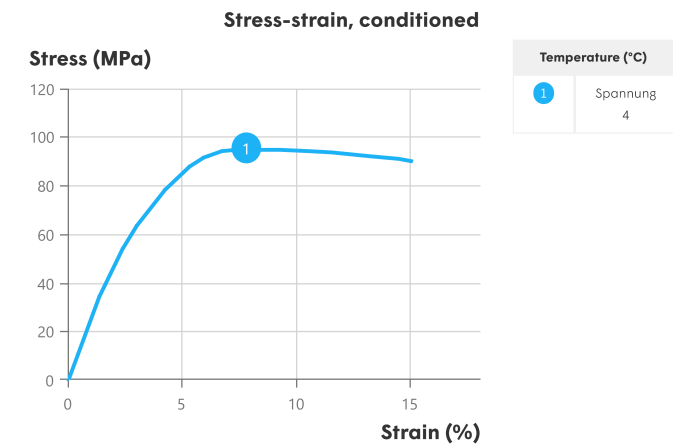
Burning behaviour

|                                                                                                               |                                                                                |                |    |     |
|---------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------|----|-----|
| UL Yellow Card availability  | Click here to have access to the UL Yellow Card → <a href="#">QMFZ2.E44716</a> |                |    |     |
| Flammability, 1.5 mm                                                                                          | 1.5 mm                                                                         | UL 94          |    | HB  |
| Glow-wire flammability index, GWFI, 1.5 mm                                                                    | 1.5 mm                                                                         | IEC 60695-2-12 | °C | 650 |
| Oxygen index                                                                                                  |                                                                                |                | %  | 23  |

\*: conditioned according to ISO 1110

Processing conditions

|                               |              |
|-------------------------------|--------------|
| Drying temperature/time       | 80 °C        |
| Suggested max moisture        | 0.2 %        |
| Rear temperature              | 270 - 280 °C |
| Middle temperature            | 275 - 285 °C |
| Front temperature             | 280 - 290 °C |
| Recommended mould temperature | 70 - 100 °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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