

TECHNICAL DATA SHEET

## TECHNYL AR2 216 V30 BK

TECHNYL AR2 216 V30 BK is a wide specs polyamide PA 66, reinforced with 30% of GF, for Injection moulding. This grade offers a medium mechanical performance compare to a virgin material.

### General

|                       |                    |                      |
|-----------------------|--------------------|----------------------|
| Certifications        | RoHS               | EC 1907/2006 (REACH) |
| Polymer type          | PA66               |                      |
| Feature               | second choice      |                      |
| Colors available      | black              |                      |
| Forms                 | pellets            |                      |
| Processing technology | injection moulding |                      |

### Product identification

|                       |                     |
|-----------------------|---------------------|
| ISO 1043 abbreviation | PA66,GF30           |
| ISO 16396 designation | PA66,GF30,M,S14-070 |

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

### Physical properties

|                              | Condition      | Standard | Unit              | Value     |
|------------------------------|----------------|----------|-------------------|-----------|
| Density                      |                | ISO 1183 | g/cm <sup>3</sup> | 1.35      |
| Humidity absorption          | T=23°C, 50% RH | ISO 62   | %                 | 2.2 - 2.4 |
| Water absorption             | 24 hr, 23°C    | ISO 62   | %                 | 0.8       |
| Water absorption, saturation |                |          | %                 | 5.3       |

|                                       | Condition | Standard     | Unit              | Value               |
|---------------------------------------|-----------|--------------|-------------------|---------------------|
| <b>Mechanical properties</b>          |           |              |                   | <b>dam / cond.*</b> |
| Tensile modulus                       | 1 mm/min  | ISO 527-1/-2 | MPa               | 7000 / 4900         |
| Stress at break                       |           | ISO 527-1/-2 | MPa               | 130 / 85            |
| Strain at break                       |           | ISO 527-1/-2 | %                 | 2.1 / 4.5           |
| Flexural modulus, ISO 178             | 2 mm/min  | ISO 178      | MPa               | 6300 / 4400         |
| Flexural strength, ISO 178            | 2 mm/min  | ISO 178      | MPa               | 200 / 140           |
| Charpy impact strength, +23°C         | +23°C     | ISO 179/1eU  | kJ/m <sup>2</sup> | 38 / 47             |
| Charpy notched impact strength, +23°C | +23°C     | ISO 179/1eA  | kJ/m <sup>2</sup> | 5.5 / 6.8           |

\*: **conditioned according to ISO 1110**

|                               | Condition | Standard    | Unit | Value |
|-------------------------------|-----------|-------------|------|-------|
| <b>Thermal properties</b>     |           |             |      |       |
| Melting temperature, 10°C/min |           | ISO 11357-1 | °C   | 260   |

|                                     | Condition | Standard  | Unit | Value       |
|-------------------------------------|-----------|-----------|------|-------------|
| <b>Burning behaviour</b>            |           |           |      |             |
| Burning rate, FMVSS, Thickness 1 mm |           | FMVSS 302 |      | < 100mm/min |

|                               |              |
|-------------------------------|--------------|
| <b>Processing conditions</b>  |              |
| 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.

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## 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.