

## TECHNYL ® A 216 V30

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**Description**

Polyamide PA66, reinforced with 30% of glass fibre, for injection moulding.

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**Applications**

TECHNYL A 216 V30 is used in all sectors of industry, offering an excellent combination between thermal and mechanical properties.

This grade is used in :

- automotive industry,
- manufacture of components for electrical tools,
- transport and building.

This product is available in natural and black, and in a wide range of standard colours.

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**Processing**

The material is supplied in airtight bags, ready for use. In the case that the virgin material has absorbed moisture, it must be dried to a final moisture content of less than 0,2% with a dehumidified air drying equipment at approx 80°C.

Recommended moulding conditions :

|                       |                    |             |
|-----------------------|--------------------|-------------|
| Barrel temperatures : | - feed zone        | 260 - 270°C |
|                       | - compression zone | 270 - 280°C |
|                       | - front zone       | 280 - 290°C |

|                      |            |
|----------------------|------------|
| Mould temperatures : | 60 at 80°C |
|----------------------|------------|

For more detailed information , please refer to the technical sheet "Injection moulding".

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**Safety**

Please refer to the Material Safety Data Sheet A1

## Main properties

Values measured at 23 °C

The values of properties are for natural grade.

| Properties               |                                          | Standards            | Unit       | Values       |               |
|--------------------------|------------------------------------------|----------------------|------------|--------------|---------------|
|                          |                                          |                      |            | EH 0 – 23 °C | EH 50 – 23 °C |
| <b><u>Physical</u></b>   | Water absorption, 24h in water at 23°C   | ISO 62               | %          | 0.8          | -             |
|                          | Density                                  | ISO 1183-A           | g/cm3      | 1.37         | -             |
|                          | Moulding shrinkage longitudinal          | RHODIA-EP            | %          | 0.5          | -             |
|                          | Moulding shrinkage transverse            | RHODIA-EP            | %          | 0.8          | -             |
| <b><u>Mechanical</u></b> | Tensile Modulus                          | ISO 527              | MPa        | 10000        | 7500          |
|                          | Yield stress                             | ISO 527              | MPa        | 190          | 135           |
|                          | Nominal elongation at break              | ISO 527              | %          | 3            | 4             |
|                          | Tensile stress at break                  | ISO 527              | MPa        | 190          | 135           |
|                          | Flexural modulus                         | ISO 178              | MPa        | 8400         | 5900          |
|                          | Flexural strength                        | ISO 178              | MPa        | 260          | 176           |
|                          | Charpy notched impact strength           | ISO 179/1EA-1993     | kJ/m2      | 12           | 16            |
|                          | Charpy notched impact strength ISO179/1A | ISO 179-1982         | kJ/m2      | 11           | 15            |
|                          | Charpy impact strength                   | ISO 179/1EU-1993     | kJ/m2      | 80           | 95            |
|                          | Charpy impact strength ISO 179/1D        | ISO 179-1982         | kJ/m2      | 65           | 70            |
|                          | Izod notched impact strength             | ISO 180              | kJ/m2      | 11           | 16            |
| <b><u>Thermal</u></b>    | Melt temperature                         | ISO 3146 - C         | °C         | 263          | -             |
|                          | Temper. of dimensional stability 1,8 MPa | ISO 75-2             | °C         | 255          | -             |
|                          | Coef. linear expansion longit. 23°C-85°C | ASTM E 831           | E-5 / °C   | 2.5          | -             |
|                          | Flammability UL94 thickness 1,6 mm       | ISO 1210/UL 94       | -          | HB           | -             |
|                          | Glow wire test thickness 1,6 mm          | IEC 695-2-1          | °C         | 650          | -             |
|                          | Glow wire test thickness 3,2 mm          | IEC 695-2-1          | °C         | 750          | -             |
|                          | Glow wire test thick. 1,6 mm : no flame  | IEC 695-2-1          | °C         | 650          | -             |
| <b><u>Electrical</u></b> | Relative permittivity 1MHz               | IEC 250              | -          | 3.75         | 4             |
|                          | Dissipation factor 1 MHz                 | IEC 250              | -          | 0.01         | 0.11          |
|                          | Volume resistivity                       | IEC 93               | E14.Ohm.cm | 10           | 0.2           |
|                          | Surface resistivity                      | IEC 93               | E14.Ohm    | 6            | 0.01          |
|                          | Dielectric strength                      | IEC 243-1            | kV/mm      | 40           | 30            |
|                          | Comparative tracking index KC            | IEC 112              | Volt       | 600          | 600           |
|                          | Comparative tracking index KB            | IEC 112              | Volt       | 500          | 500           |
| <b><u>Specifical</u></b> | Fire and Smoke. F index                  | NFF 16.101 ET 16.102 | -          | 2            | -             |
|                          | Fire and Smoke. I index                  | NFF 16.101 ET 16.102 | -          | 4            | -             |
|                          | Fire and Smoke, specif.n°                | NFF 16.102           | -          | 1            | -             |
|                          | Limit oxygen index                       | ISO 4589             | %          | 23           | -             |

## Identification code

>PA66-GF30<

The information contained in this document is supplied in good faith. It is based on the extent of our knowledge of the products as listed, and on the tests and experiments carried out in our laboratories. It is to be used only as an indication and shall not be construed in any way as a formal commitment or warranty on our part. Compliance of our products with your conditions of application or use can only be determined pursuant to your own prior appropriate test. The listed values of properties are for natural grade, if not otherwise specified.



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