TECHNYL® SAFE
Food and water contact

DOMO
caring is our formula

TECHNICAL DATA SHEET

# TECHNYL SAFE A 216FC V25 BK

## DOMAMID 66G25FC BK

TECHNYL SAFE A 216FC V25 BK is a polyamide 66, 25% glass fiber reinforced, food contact approved for injection moulding. Designed to be used in moulded parts requiring food contact compliance in industrial consumer good as well as appliance applications.

### General

| | | |
|---|---|---|
| Certifications | Food contact EU<br>RoHS | Food contact FDA<br>UL listed product |
| Polymer type | PA66 | |
| Feature | food contact approved | not heat stabilized |
| Applications | small appliance<br>industrial applications<br>building / construction | consumer applications<br>large appliance |
| Colors available | black | |
| Forms | pellets | |
| Processing technology | injection moulding | |

### Product identification

| | |
|---|---|
| ISO 1043 abbreviation | PA66-GF25 |
| ISO 16396 designation | PA66,GF25,M,S14-080 |

| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| **Physical properties** | | | | |
| Density | | ISO 1183 | g/cm³ | 1.32 |
| Humidity absorption | T=23°C, 50% RH | ISO 62 | % | 3.1 - 3.2 |
| Water absorption | 24 hr, 23°C | ISO 62 | % | 1.2 - 1.3 |
| Water absorption, saturation | | | % | 8.3 |
| Molding shrinkage, parallel | | ISO 294-4, 2577 | % | 0.2 - 0.4 |
| Molding shrinkage, normal | | ISO 294-4, 2577 | % | 0.8 - 1.0 |
| Viscosity number | 96% H2SO4 | ISO 307 | cm³/g | 145.0 |

| | Condition | Standard | Unit | Value |
|---|---|---|---|---|
| **Mechanical properties** | | | | **dam / cond.*** |
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 8500 / 6100 |
| Stress at break | 5 mm/min | ISO 527-1/-2 | MPa | 160 / 110 |
| Strain at break | 5 mm/min | ISO 527-1/-2 | % | 3 / 6 |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 7500 / 4000 |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 250 / 135 |
| Charpy impact strength, +23°C | +23°C | ISO 179/1eU | kJ/m² | 60 / 90 |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m² | 9.5 / 13 |
| Izod impact strength, +23°C | +23°C | ISO 180/1U | kJ/m² | 55 / 85 |
| Izod notched impact strength, +23°C | +23°C | ISO 180/1A | kJ/m² | 8.5 / 12.5 |

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

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

## Thermal properties

| | | | | |
|---|---|---|---|---|
| Melting temperature, 10°C/min | | ISO 11357-1 | °C | 262 |
| Temp. of deflection under load, 0.45 MPa | 0.45 MPa | ISO 75 | °C | 255 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75 | °C | 240 |
| Vicat softening temperature | 50°C/h - 50N | ISO 306 | °C | 250 |

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

## Burning behaviour

| | | | | |
|---|---|---|---|---|
| UL Yellow Card availability 1 | **Click here to have access to the UL Yellow Card availability 1 -> E170540-102223078** | | | |
| Flammability, 0.75 mm | 0.75 mm | UL 94 | | HB |
| Flammability, 1.5 mm | 1.5 mm | UL 94 | | HB |
| Flammability, 3.0 mm | 3.0 mm | UL 94 | | HB |
| Glow-wire flammability index, GWFI | 1-3 mm | IEC 60695-2-12 | °C | >= 650 |
| Burning rate, FMVSS, Thickness 1 mm | | FMVSS 302 | | < 100 mm/min |

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

## Electrical properties

| | | | | |
|---|---|---|---|---|
| Volume resistivity | | IEC 62631-3-1 | ohm.m | 1.0E13 |
| Surface resistivity | | IEC 62631-3-1 | ohm | 1.0E13 |
| Comparative tracking index | Solution A | IEC 60112 | V | 500.0 |
| CTI performance level category | | Sol A | | PLC 1 |

## Processing conditions

| | |
|---|---|
| Drying temperature/time | 75-85°C / 2-4h (with dew point of dried air < -30 °C) |
| Recommended melt temperature | 270 - 290 °C |
| Recommended mould temperature | 90 - 110 °C |

## Injection notes

## 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

The information provided in this documentation corresponds to our technical knowledge at the date of its publication and do not constitute a specification. This information may be subject to revision at our discretion. Domo cannot anticipate all conditions under which this information and our products of other manufactures in combination with our products may be used. Domo accepts no responsibility for results obtained by the application of this information or for the safety and suitability of our products alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each product or product combination for their own purposes. Unless otherwise agreed in writing, Domo sells the product without warranties. Buyers and users assume all responsibility and liability for loss or damage arising from handling and use of our products, whether used alone or in combination with other products. Unless specifically indicated, the grades mentioned are not suitable for applications in the pharmaceutical/medical sector.