

TECHNICAL DATA SHEET

TECHNYL SAFE C 116FC NC  
(Previously DOMAMID 6LVFC NC)

TECHNYL SAFE C 116FC NC is a polyamide 6, unfilled, improved flowability, food contact approved for injection moulding. Designed to be used for food contact in industrial consumer good as well as appliance applications.

General

|                       |                                                               |                                                      |
|-----------------------|---------------------------------------------------------------|------------------------------------------------------|
| Feature               | Food contact approved                                         | Improved flowability                                 |
| Polymer type          | PA6 (Polyamide 6)                                             |                                                      |
| Processing technology | Injection molding                                             |                                                      |
| Certification         | Food contact EU<br>RoHS                                       | Food contact FDA                                     |
| Applications          | Small appliance<br>Industrial Applications<br>large appliance | Consumer good application<br>building / construction |
| Colors available      | Natural                                                       |                                                      |
| Forms                 | Pellets                                                       |                                                      |

Product identification

|                       |                |
|-----------------------|----------------|
| ISO 1043 abbreviation | PA6            |
| ISO 16396 designation | PA6,M1,S12-030 |

|                                    | Condition  | Standard        | Unit       | Value     |
|------------------------------------|------------|-----------------|------------|-----------|
| Density                            |            | ISO 1183        | g/cm³      | 1.14      |
| Molding shrinkage, parallel        |            | ISO 294-4, 2577 | %          | 0.9 - 1.1 |
| Molding shrinkage, normal          |            | ISO 294-4, 2577 | %          | 1 - 1.2   |
| Melt volume-flow rate, MVR, 5.0 kg | 275°C, 5kg | ISO 1133        | cm³/10 min | 225       |
| Viscosity number                   | 96% H2SO4  | ISO 307         | cm³/g      | 125       |

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|                                       | Condition | Standard     | Unit   | Value        |
|---------------------------------------|-----------|--------------|--------|--------------|
| Mechanical properties                 |           |              |        | dam / cond.* |
| Tensile modulus                       | 1 mm/min  | ISO 527-1/-2 | MPa    | 3100 / -     |
| Strain at break                       | 50 mm/min | ISO 527-1/-2 | %      | 50 / -       |
| Yield stress                          | 50 mm/min | ISO 527-1/-2 | MPa    | 80 / -       |
| Flexural modulus, ISO 178             | 2 mm/min  | ISO 178      | MPa    | 2700 / -     |
| Flexural strength, ISO 178            | 2 mm/min  | ISO 178      | MPa    | 100 / -      |
| Charpy impact strength, +23°C         | +23°C     | ISO 179/1eU  | kJ/m²  | NB / -       |
| Charpy notched impact strength, +23°C | +23°C     | ISO 179/1eA  | kJ/m²  | 4 / -        |
| Izod impact strength, +23°C           | +23°C     | ISO 180/1U   | kJ/m²  | NB / -       |
| Izod notched impact strength, +23°C   | +23°C     | ISO 180/1A   | kJ/m²  | 4 / -        |
| Rockwell hardness                     |           | ISO 2039/2   | ScaleR | 120 / -      |

Thermal properties

|                                          |              |             |    |     |
|------------------------------------------|--------------|-------------|----|-----|
| Melting temperature, 10°C/min            |              | ISO 11357-1 | °C | 221 |
| 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 | 70  |
| Vicat softening temperature              | 50°C/h - 50N | ISO 306     | °C | 205 |

Electrical properties

|                                |            |               |       |        |
|--------------------------------|------------|---------------|-------|--------|
| Volume resistivity             |            | IEC 62631-3-1 | ohm.m | 1E+013 |
| Surface resistivity            |            | IEC 62631-3-1 | ohm   | 1E+013 |
| Comparative tracking index     | Solution A | IEC 60112     | V     | 600    |
| CTI performance level category |            | Sol A         |       | PLC 0  |

Burning behaviour

|                                      |         |                |    |              |
|--------------------------------------|---------|----------------|----|--------------|
| Flammability, 0.75 mm                | 0.75 mm | UL 94          |    | V2           |
| Flammability, 1.5 mm                 | 1.5 mm  | UL 94          |    | V2           |
| Flammability, 3.0 mm                 | 3.0 mm  | UL 94          |    | V2           |
| Glow-wire flammability index, GWFI   | 1-3 mm  | IEC 60695-2-12 | °C | 850          |
| Glow-wire ignition temperature, GWIT | 1-3 mm  | IEC 60695-2-13 | °C | 725          |
| Burning rate, FMVSS, Thickness 1 mm  |         | FMVSS 302      |    | < 100 mm/min |

Test run at 23°C if not differently specified, DAM state (dry as moulded), valid for natural colored products.  
\*: conditioned according to ISO 1110

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Processing conditions

|                               |                                                       |
|-------------------------------|-------------------------------------------------------|
| Drying temperature/time       | 75-85°C / 2-4h (with dew point of dried air < -30 °C) |
| Recommended melt temperature  | 230 - 250 °C                                          |
| Recommended mould temperature | 40 - 80 °C                                            |

*These parameters are typical of the product but should be related to the type of machinery used and to the type of moulded part.*

Disclaimer

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