

TECHNICAL DATA SHEET

**TECHNYL SAFE C 216FC NC**  
(Previously DOMAMID 6FC NC)

TECHNYL SAFE C 216FC NC is a polyamide 6, unfilled, 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**

|                       |  |  |
|-----------------------|--|--|
| Feature               | UL V2                                      | Food contact approved                        |
| Polymer type          | PA6 (Polyamide 6)                          |  |
| Processing technology | Injection molding                          |  |
| Certification         | Food contact EU<br>RoHS                    | Food contact FDA<br>UL-Yellow Card           |
| Applications          | Small appliance<br>Industrial Applications | Consumer good application<br>large appliance |

**Product identification**

|                       |                |
|-----------------------|----------------|
| ISO 1043 abbreviation | PA6            |
| ISO 16396 designation | PA6,M1,S14-030 |

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

**Physical properties**

|                                    | Condition  | Standard        | Unit                    | Value     |
|------------------------------------|------------|-----------------|-------------------------|-----------|
| Density                            |            | ISO 1183        | g/cm <sup>3</sup>       | 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        | cm <sup>3</sup> /10 min | 165       |
| Viscosity number                   | 96% H2SO4  | ISO 307         | cm <sup>3</sup> /g      | 145       |

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|                                       | Condition | Standard     | Unit              | Value               |
|---------------------------------------|-----------|--------------|-------------------|---------------------|
| <b>Mechanical properties</b>          |           |              |                   | <b>dam / cond.*</b> |
| Tensile modulus                       | 1 mm/min  | ISO 527-1/-2 | MPa               | 3200 / 1000         |
| Strain at break                       | 50 mm/min | ISO 527-1/-2 | %                 | 40 / 50             |
| Yield stress                          | 50 mm/min | ISO 527-1/-2 | MPa               | 80 / 40             |
| Flexural modulus, ISO 178             | 2 mm/min  | ISO 178      | MPa               | 2800 / 900          |
| Flexural strength, ISO 178            | 2 mm/min  | ISO 178      | MPa               | 105 / 35            |
| Charpy impact strength, +23°C         | +23°C     | ISO 179/1eU  |                   | NB / NB             |
| Charpy notched impact strength, +23°C | +23°C     | ISO 179/1eA  | kJ/m <sup>2</sup> | 4.5 / 20            |
| Izod impact strength, +23°C           | +23°C     | ISO 180/1U   |                   | NB / NB             |
| Izod notched impact strength, +23°C   | +23°C     | ISO 180/1A   | kJ/m <sup>2</sup> | 4.5 / 19            |
| 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 | 175 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa     | ISO 75      | °C | 65  |
| Vicat softening temperature              | 50°C/h - 50N | ISO 306     | °C | 200 |

**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**

|   |  |                |    |              |
|---|--|----------------|----|--------------|
| UL Yellow Card availability  | Click here to have access to the UL Yellow Card → <a href="#">E170540-225449</a> |                |    |              |
| Flammability, 0.75 mm   | 0.75 mm  | UL 94          |    | V2           |
| Glow-wire flammability index, GWFI, 3.0 mm  | 3.0 mm   | IEC 60695-2-12 | °C | 850          |
| Glow-wire flammability index, GWFI  | 1.0 mm   | IEC 60695-2-12 | °C | 750          |
| 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

### 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 | 60 - 90 °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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