

TECHNICAL DATA SHEET

TECHNYL SAFE A 216FC NC
(Previously TECHNYL A 216 NATURAL FA)

TECHNYL SAFE A 216FC NC is a polyamide 66, 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 appliances applications.

General

| | | |
|-----------------------|---|--|
| Feature | UL V2 | Food contact approved |
| Polymer type | PA66 (Polyamide 66) | |
| Processing technology | Injection molding | |
| Certification | RoHS EC 1907/2006 (REACH) | UL-Yellow Card |
| Applications | Small appliance Industrial Applications large appliance | Consumer good application building / construction |
| Colors available | Natural | |
| Forms | Pellets | |

Product identification

| | |
|-----------------------|------|
| ISO 1043 abbreviation | PA66 |
|-----------------------|------|

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

Physical properties

| Condition | Standard | Unit | Value | |
|-----------------------------|-----------------|-------------------|-------|-----|
| Density | ISO 1183 | g/cm ³ | 1.14 | |
| Water absorption | 24 hr, 23°C | ISO 62 | % | 1.3 |
| Molding shrinkage, parallel | ISO 294-4, 2577 | % | 1.6 | |
| Molding shrinkage, normal | ISO 294-4, 2577 | % | 1.5 | |

Mechanical properties

dam / cond.*


| Condition | Standard | Unit | Value | |
|---------------------------------------|----------|--------------|-------------------|-------------|
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 3000 / 1500 |
| Stress at break | | ISO 527-1/-2 | MPa | 80 / 65 |
| Strain at break | | ISO 527-1/-2 | % | 30 / - |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 2900 / 1300 |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 120 / 50 |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m ² | 4.5 / 14 |
| Izod notched impact strength, +23°C | +23°C | ISO 180/1A | kJ/m ² | 4 / 12 |

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| | Condition | Standard | Unit | Value |
|--|-----------|-------------|------|-------|
| Thermal properties | | | | |
| Melting temperature, 10°C/min | | ISO 11357-1 | °C | 263 |
| Temp. of deflection under load, 0.45 MPa | 0.45 MPa | ISO 75 | °C | 200 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75 | °C | 75 |

| | | | | |
|------------------------------|------|-------------|-------|----|
| Electrical properties | | | | |
| Dielectric strength | 1 mm | IEC 60243-1 | kV/mm | 22 |

| | | | | |
|---|--|----------------|----|-----|
| Burning behaviour | | | | |
| UL Yellow Card availability  | Click here to have access to the UL Yellow Card → QMfZ2.E44716 | | | |
| 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, 0.75 mm | 0.75 mm | IEC 60695-2-12 | °C | 650 |
| Glow-wire flammability index, GWFI, 1.5 mm | 1.5 mm | IEC 60695-2-12 | °C | 650 |

*: conditioned according to ISO 1110

| | |
|-------------------------------|--------------|
| Processing conditions | |
| Drying temperature/time | 80 °C |
| Suggested max moisture | 0.2 % |
| Rear temperature | 265 - 275 °C |
| Middle temperature | 270 - 280 °C |
| Front temperature | 280 - 285 °C |
| Recommended mould temperature | 60 - 80 °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.

Injection advice

For unfilled polyamides, Domo recommends the use of high alloy steel with a low chromium content. For example: X38CrMoV5-1 (EN Norm) - 1.2367 /1.2343 (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

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