

TECHNICAL DATA SHEET

TECHNYL C 216 MT30 NC

DOMAMID 6M30 NC

TECHNYL C 216 MT30 NC is a polyamide 6, reinforced with 30% of mineral filler, for injection moulding. The isotropic shrinkage and the good dimensional stability make it adequate for every kind of application in which the planarity of the part is important.

General

| | | |
|-----------------------|---|----------------------|
| Certifications | RoHS | EC 1907/2006 (REACH) |
| Polymer type | PA6 | |
| Feature | high dimensional stability not heat stabilized | low warpage |
| Colors available | natural | |
| Forms | pellets | |
| Processing technology | injection moulding | |

Product identification

| | |
|-----------------------|---------------------|
| ISO 1043 abbreviation | PA6-MD30 |
| ISO 16396 designation | PA6,MD30,M1,S14-050 |

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

Physical properties

| | Condition | Standard | Unit | Value |
|-----------------------------|-----------|-----------------|--------------------|-------------|
| Density | | ISO 1183 | g/cm ³ | 1.36 |
| Molding shrinkage, parallel | | ISO 294-4, 2577 | % | 0.85 - 1.05 |
| Molding shrinkage, normal | | ISO 294-4, 2577 | % | 0.8 - 1.0 |
| Viscosity number | 96% H2SO4 | ISO 307 | cm ³ /g | 145.0 |

| | Condition | Standard | Unit | Value |
|---------------------------------------|-----------|--------------|-------------------|---------------------|
| Mechanical properties | | | | dam / cond.* |
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 5000 / 2500 |
| Stress at break | 5 mm/min | ISO 527-1/-2 | MPa | 80 / 45 |
| Strain at break | 5 mm/min | ISO 527-1/-2 | % | 15 / 55 |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 4400 / - |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 120 / - |
| Charpy impact strength, +23°C | +23°C | ISO 179/1eU | kJ/m ² | 75 / - |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m ² | 5 / - |
| Izod impact strength, +23°C | +23°C | ISO 180/1U | kJ/m ² | 70 / - |
| Izod notched impact strength, +23°C | +23°C | ISO 180/1A | kJ/m ² | 5 / - |

*: **conditioned according to ISO 1110**

| | Condition | Standard | Unit | Value |
|--|--------------|-------------|------|-------|
| 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 | 185 |
| 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 | 200 |

| | Condition | Standard | Unit | Value |
|-------------------------------------|-----------|-----------|------|--------------|
| Burning behaviour | | | | |
| Flammability, 0.75 mm | 0.75 mm | UL 94 | | HB |
| Burning rate, FMVSS, Thickness 1 mm | | FMVSS 302 | | < 100 mm/min |

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

Electrical properties

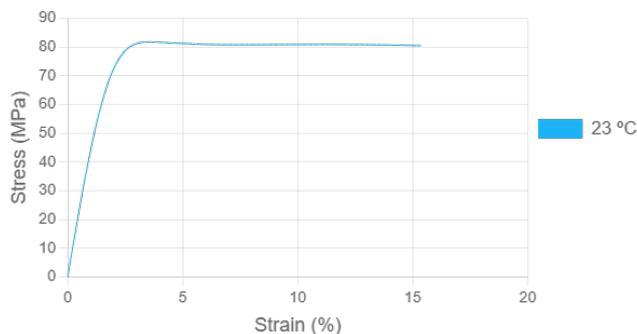
| | | | | |
|---------------------|------|---------------|-------|--------|
| Volume resistivity | | IEC 62631-3-1 | ohm.m | 1.0E13 |
| Surface resistivity | | IEC 62631-3-1 | ohm | 1.0E13 |
| Dielectric strength | 1 mm | IEC 60243-1 | kV/mm | 25.0 |

Processing conditions

| | |
|-------------------------------|---|
| Drying temperature/time | 75-85°C / 2-4h (with dew point of dried air < -30 °C) |
| Recommended melt temperature | 240 - 280 °C |
| Recommended mould temperature | 90 - 120 °C |

Stress-strain, dry

Temperature (°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 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.