

TECHNICAL DATA SHEET

TECHNYL C 226 BK

DOMAMID 6N1 BK

Polyamide 6, nucleated, for injection moulding, black

General

| | | | |
|-----------------------|--------------------|---------------------|--|
| Certifications | RoHS | | |
| Polymer type | PA6 | | |
| Feature | nucleated | not heat stabilized | |
| Processing technology | injection moulding | | |

Product identification

| | |
|-----------------------|---------------|
| ISO 1043 abbreviation | PA6 |
| ISO 16396 designation | PA6,M,S14-040 |

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

Physical properties

| | Condition | Standard | Unit | Value |
|------------------------------|----------------|-----------------|--------------------|-----------|
| Density | | ISO 1183 | g/cm ³ | 1.13 |
| Humidity absorption | T=23°C, 50% RH | ISO 62 | % | 3.3 - 3.4 |
| Water absorption | 24 hr, 23°C | ISO 62 | % | 1.9 - 2.0 |
| Water absorption, saturation | | | % | 9.1 |
| Molding shrinkage, parallel | | ISO 294-4, 2577 | % | 1.2 - 1.4 |
| Molding shrinkage, normal | | ISO 294-4, 2577 | % | 1.2 - 1.4 |
| 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 | 3300 / 1300 |
| Yield stress | 50 mm/min | ISO 527-1/-2 | MPa | 80 / 40 |
| Yield strain | 50 mm/min | ISO 527-1/-2 | % | 4.5 / 20 |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 2700 / 850 |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 105 / 30 |
| Charpy impact strength, +23°C | +23°C | ISO 179/1eU | kJ/m ² | NB |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m ² | 4.5 / 20 |
| Charpy notched impact strength, -30°C | -30°C | ISO 179/1eA | kJ/m ² | 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 | 155 |
| 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 |

| | Condition | Standard | Unit | Value |
|-------------------------------------|-----------|-----------|------|--------------|
| Burning behaviour | | | | |
| 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 |

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 | 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.