

TECHNICAL DATA SHEET

TECHNYL C 219M NC

(Previously DOMAMID 6I1H1)

Polyamide 6, heat-aging stabilized, impact modified, for injection moulding

General

| | | |
|-----------------------|-----------------------|----------------------|
| Feature | Heat-aging stabilized | Impact modified |
| Polymer type | PA6 (Polyamide 6) | |
| Processing technology | Injection molding | |
| Certification | RoHS | EC 1907/2006 (REACH) |
| Colors available | Black | Natural |
| Forms | Pellets | |

Product identification

| | |
|-----------------------|-------------------|
| ISO 1043 abbreviation | PA6-I |
| ISO 16396 designation | PA6-I,M1H,S14-030 |

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

Physical properties

| | | | | |
|------------------------------|----------------|-----------------|-------------------|-----------|
| Density | | ISO 1183 | g/cm ³ | 1.12 |
| Humidity absorption | T=23°C, 50% RH | ISO 62 | % | 2.8 - 3.2 |
| Water absorption | 24 hr, 23°C | ISO 62 | % | 1.8 - 2 |
| Water absorption, saturation | | | % | 9.1 |
| Molding shrinkage, parallel | | ISO 294-4, 2577 | % | 1.1 - 1.3 |
| Molding shrinkage, normal | | ISO 294-4, 2577 | % | 1.4 - 1.6 |

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| | Condition | Standard | Unit | Value dam / cond.* |
|---------------------------------------|-----------|--------------|--------|-----------------------|
| Mechanical properties | | | | |
| Tensile modulus | 1 mm/min | ISO 527-1/-2 | MPa | 2800 / 1000 |
| Stress at break | | ISO 527-1/-2 | MPa | 60 / - |
| Strain at break | 50 mm/min | ISO 527-1/-2 | % | 12 / 50 |
| Yield stress | 50 mm/min | ISO 527-1/-2 | MPa | 70 / 40 |
| Yield strain | | ISO 527-1/-2 | % | 5 / 20 |
| Flexural modulus, ISO 178 | 2 mm/min | ISO 178 | MPa | 2400 / 900 |
| Flexural strength, ISO 178 | 2 mm/min | ISO 178 | MPa | 90 / 30 |
| Charpy impact strength, +23°C | +23°C | ISO 179/1eU | | NB / NB |
| Charpy impact strength, -30°C | -30°C | ISO 179/1eU | | NB / NB |
| Charpy notched impact strength, +23°C | +23°C | ISO 179/1eA | kJ/m² | 10 / 35 |
| Charpy notched impact strength, -30°C | -30°C | ISO 179/1eA | kJ/m² | 10 / 9 |
| Izod impact strength, +23°C | +23°C | ISO 180/1U | | NB / NB |
| Izod notched impact strength, +23°C | +23°C | ISO 180/1A | kJ/m² | 15 / 75 |
| Rockwell hardness | | ISO 2039/2 | ScaleR | 110 / - |

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 | 60 |
| Vicat softening temperature | 50°C/h - 50N | ISO 306 | °C | 190 |

Electrical properties

| | | | | |
|--------------------------------|------------|---------------|-------|--------|
| Volume resistivity | | IEC 62631-3-1 | ohm.m | 1E+016 |
| Surface resistivity | | IEC 62631-3-1 | ohm | 1E+014 |
| 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 | | HB |
| 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) |
| Rear temperature | 240 - 260 °C |
| Middle temperature | 250 - 270 °C |
| Front temperature | 260 - 280 °C |
| Recommended melt temperature | 240 - 280 °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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