

TECHNICAL DATA SHEET

TECHNYL C 238 NC

(Previously DOMAMID 6I3H2 NC)

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

General

|                       |                       |                 |
|-----------------------|-----------------------|-----------------|
| Feature               | Heat-aging stabilized | Impact modified |
| Polymer type          | PA6 (Polyamide 6)     |                 |
| Processing technology | Injection molding     |                 |
| Certification         | RoHS                  |                 |

Product identification

|                       |                   |
|-----------------------|-------------------|
| ISO 1043 abbreviation | PA6-HI            |
| ISO 16396 designation | PA6-I,M1H,S14-020 |

|                              | Condition      | Standard | Unit              | Value     |
|------------------------------|----------------|----------|-------------------|-----------|
| Physical properties          |                |          |                   |           |
| Density                      |                | ISO 1183 | g/cm <sup>3</sup> | 1.09      |
| Humidity absorption          | T=23°C, 50% RH | ISO 62   | %                 | 2.5 - 2.9 |
| Water absorption             | 24 hr, 23°C    | ISO 62   | %                 | 1.8 - 2   |
| Water absorption, saturation |                |          | %                 | 9.1       |

|                                       |           |              |                   |              |
|---------------------------------------|-----------|--------------|-------------------|--------------|
| Mechanical properties                 |           |              |                   | dam / cond.* |
| Tensile modulus                       | 1 mm/min  | ISO 527-1/-2 | MPa               | 2300 / 800   |
| Strain at break                       | 50 mm/min | ISO 527-1/-2 | %                 | 30 / 100     |
| Yield stress                          | 50 mm/min | ISO 527-1/-2 | MPa               | 55 / 30      |
| Yield strain                          | 50 mm/min | ISO 527-1/-2 | %                 | 4 / 25       |
| Flexural modulus, ISO 178             | 2 mm/min  | ISO 178      | MPa               | 2000 / 600   |
| 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/m <sup>2</sup> | 15 / 100     |
| Charpy notched impact strength, -30°C | -30°C     | ISO 179/1eA  | kJ/m <sup>2</sup> | 10 / -       |
| 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> | 15 / 95      |

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|                                          | Condition    | Standard    | Unit | Value |
|------------------------------------------|--------------|-------------|------|-------|
| <b>Thermal properties</b>                |              |             |      |       |
| Melting temperature, 10°C/min            |              | ISO 11357-1 | °C   | 221   |
| Temp. of deflection under load, 0.45 MPa | 0.45 MPa     | ISO 75      | °C   | 165   |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa     | ISO 75      | °C   | 54    |
| Vicat softening temperature              | 50°C/h - 50N | ISO 306     | °C   | 175   |

**Electrical properties**

|                     |  |               |       |        |
|---------------------|--|---------------|-------|--------|
| Volume resistivity  |  | IEC 62631-3-1 | ohm.m | 1E+013 |
| Surface resistivity |  | IEC 62631-3-1 | ohm   | 1E+013 |

**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).  
\*: 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  | 240 - 280 °C                                          |
| Recommended mould temperature | 60 - 80 °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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