

TECHNICAL DATA SHEET

TECHNYL C 219 V30 NC  
(Previously DOMAMID 6G30H1 NC)

Polyamide 6, 30% glass fiber reinforced, heat-aging stabilized, for injection moulding

General

|                       |                   |                       |
|-----------------------|-------------------|-----------------------|
| Feature               | UL HB             | Heat-aging stabilized |
| Polymer type          | PA6 (Polyamide 6) |                       |
| Processing technology | Injection molding |                       |
| Certification         | RoHS              | UL-Yellow Card        |

Product identification

|                       |                      |
|-----------------------|----------------------|
| ISO 1043 abbreviation | PA6-GF30             |
| ISO 16396 designation | PA6,GF30,M1H,S14-090 |

Physical properties

|                                    | Condition      | Standard        | Unit                    | Value     |
|------------------------------------|----------------|-----------------|-------------------------|-----------|
| Density                            |                | ISO 1183        | g/cm <sup>3</sup>       | 1.36      |
| Humidity absorption                | T=23°C, 50% RH | ISO 62          | %                       | 2         |
| Water absorption                   | 24 hr, 23°C    | ISO 62          | %                       | 7         |
| Molding shrinkage, parallel        |                | ISO 294-4, 2577 | %                       | 0.3 - 0.5 |
| Molding shrinkage, normal          |                | ISO 294-4, 2577 | %                       | 0.8 - 1   |
| Melt volume-flow rate, MVR, 5.0 kg | 275°C, 5kg     | ISO 1133        | cm <sup>3</sup> /10 min | 45        |
| Viscosity number                   | 96% H2SO4      | ISO 307         | cm <sup>3</sup> /g      | 145       |

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|                                       | Condition | Standard     | Unit                | Value       |
|---------------------------------------|-----------|--------------|---------------------|-------------|
| <b>Mechanical properties</b>          |           |              | <b>dam / cond.*</b> |             |
| Tensile modulus                       | 1 mm/min  | ISO 527-1/-2 | MPa                 | 9500 / 6000 |
| Stress at break                       | 5 mm/min  | ISO 527-1/-2 | MPa                 | 180 / 110   |
| Strain at break                       | 5 mm/min  | ISO 527-1/-2 | %                   | 3.5 / 6     |
| Flexural modulus, ISO 178             | 2 mm/min  | ISO 178      | MPa                 | 8500 / 5000 |
| Flexural strength, ISO 178            | 2 mm/min  | ISO 178      | MPa                 | 270 / 160   |
| Charpy impact strength, +23°C         | +23°C     | ISO 179/1eU  | kJ/m²               | 90 / 105    |
| Charpy impact strength, -30°C         | -30°C     | ISO 179/1eU  | kJ/m²               | 75 / 90     |
| Charpy notched impact strength, +23°C | +23°C     | ISO 179/1eA  | kJ/m²               | 15 / 25     |
| Charpy notched impact strength, -30°C | -30°C     | ISO 179/1eA  | kJ/m²               | 10 / 22     |
| Izod impact strength, +23°C           | +23°C     | ISO 180/1U   | kJ/m²               | 80 / 90     |
| Izod notched impact strength, +23°C   | +23°C     | ISO 180/1A   | kJ/m²               | 15 / 25     |
| Rockwell hardness                     |           | ISO 2039/2   | ScaleR              | 122 / -     |

**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 | 220 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa     | ISO 75      | °C | 200 |
| Vicat softening temperature              | 50°C/h - 50N | ISO 306     | °C | 215 |

**Electrical properties**

|                                |            |               |       |        |
|--------------------------------|------------|---------------|-------|--------|
| Volume resistivity             |            | IEC 62631-3-1 | ohm.m | 1E+013 |
| Surface resistivity            |            | IEC 62631-3-1 | ohm   | 1E+013 |
| Comparative tracking index     | Solution A | IEC 60112     | V     | 500    |
| CTI performance level category |            | Sol A         |       | PLC 1  |

**Burning behaviour**

|                                                                                                                 |                                                                                  |                |    |              |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|----------------|----|--------------|
| UL Yellow Card availability  | Click here to have access to the UL Yellow Card → <a href="#">E170540-225450</a> |                |    |              |
| Flammability, 1.5 mm                                                                                            | 1.5 mm                                                                           | UL 94          |    | HB           |
| Flammability, 3.0 mm                                                                                            | 3.0 mm                                                                           | UL 94          |    | HB           |
| Glow-wire flammability index, GWFI                                                                              | 1-3 mm                                                                           | IEC 60695-2-12 | °C | 650          |
| 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) |
| Recommended melt temperature  | 240 - 270 °C                                          |
| Recommended mould temperature | 90 - 100 °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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