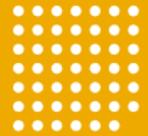


TECHNICAL DATA SHEET

**TECHNYL SHAPE C 406P3 NC**  
**DOMAMID 6HVPS3 NC01**



Polyamide 6, plasticized, high viscosity, for extrusion

**General**

|                       |                |                      |  |
|-----------------------|----------------|----------------------|--|
| Polymer type          | PA6            |                      |  |
| Certifications        | RoHS           | EC 1907/2006 (REACH) |  |
| Feature               | high viscosity | plasticized          |  |
| Colors available      | natural        |                      |  |
| Forms                 | pellets        |                      |  |
| Processing technology | extrusion      |                      |  |

**Product identification**

|                       |                 |
|-----------------------|-----------------|
| ISO 1043 abbreviation | PA6-P           |
| ISO 16396 designation | PA6-P,E,S27-007 |

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

**Physical properties**

| Condition                    | Standard        | Unit              | Value              |             |
|------------------------------|-----------------|-------------------|--------------------|-------------|
| Density                      | ISO 1183        | g/cm <sup>3</sup> | 1.14               |             |
| Humidity absorption          | T=23°C, 50% RH  | ISO 62            | %                  | 2.5 - 2.6   |
| Water absorption             | 24 hr, 23°C     | ISO 62            | %                  | 1.8 - 1.9   |
| Water absorption, saturation |                 |                   | %                  | 8.5         |
| Molding shrinkage, parallel  | ISO 294-4, 2577 | %                 |                    | 1.35 - 1.5  |
| Molding shrinkage, normal    | ISO 294-4, 2577 | %                 |                    | 1.45 - 1.65 |
| Melt flow rate, MFR          | 235°C/2,16 kg   | ISO 1133          | g/10 min           | 7.5         |
| Viscosity number             | 96% H2SO4       | ISO 307           | cm <sup>3</sup> /g | 245.0       |

|                                       | Condition | Standard     | Unit              | Value               |
|---------------------------------------|-----------|--------------|-------------------|---------------------|
| <b>Mechanical properties</b>          |           |              |                   | <b>dam / cond.*</b> |
| Tensile modulus                       | 1 mm/min  | ISO 527-1/-2 | MPa               | 700 / 400           |
| Stress at break                       |           | ISO 527-1/-2 | MPa               | 55 / 45             |
| Strain at break                       | 50 mm/min | ISO 527-1/-2 | %                 | 200 / 200           |
| Yield stress                          | 50 mm/min | ISO 527-1/-2 | MPa               | 50 / 50             |
| Yield strain                          |           | ISO 527-1/-2 | %                 | 200 / 200           |
| Flexural modulus, ISO 178             | 2 mm/min  | ISO 178      | MPa               | 600 / 550           |
| Flexural strength, ISO 178            | 2 mm/min  | ISO 178      | MPa               | 30 / 25             |
| Charpy impact strength, +23°C         | +23°C     | ISO 179/1eU  | kJ/m <sup>2</sup> | NB                  |
| Charpy impact strength, -30°C         | -30°C     | ISO 179/1eU  | kJ/m <sup>2</sup> | 100 / -             |
| Charpy impact strength, -40°C         | -40°C     | ISO 179/1eU  | kJ/m <sup>2</sup> | 130 / -             |
| Charpy notched impact strength, +23°C | +23°C     | ISO 179/1eA  | kJ/m <sup>2</sup> | 40 / NB             |
| Charpy notched impact strength, -30°C | -30°C     | ISO 179/1eA  | kJ/m <sup>2</sup> | 2 / -               |
| Charpy notched impact strength, -40°C | -40°C     | ISO 179/1eA  | kJ/m <sup>2</sup> | 3.5 / -             |
| Izod impact strength, +23°C           | +23°C     | ISO 180/1U   | kJ/m <sup>2</sup> | NB                  |
| Izod notched impact strength, +23°C   | +23°C     | ISO 180/1A   | kJ/m <sup>2</sup> | 35 / NB             |

\*: **conditioned according to ISO 1110**

|  | 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   | 138   |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa  | ISO 75      | °C   | 53    |

| 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 |

**Processing conditions**

|  |  |  |  |  |
|--|--|--|--|--|
| Drying temperature/time                    | 3hrs max at 70°C with dry air, dew point -35°C |  |  |  |
| Suggested max moisture                     | 0.08 %   |  |  |  |
| Feed zone temperature for extrusion        | 225 - 245 °C                                   |  |  |  |
| Compression zone temperature for extrusion | 220 - 240 °C                                   |  |  |  |
| Front zone temperature for extrusion       | 215 - 235 °C                                   |  |  |  |
| Die zone temperature for extrusion         | 200 - 220 °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 -35°C.