

TECHNICAL DATA SHEET

TECHNYL C 218 V40 BK  
(Previously DOMAMID 6LVG40H2 BK)

Polyamide 6, 40% glass fiber reinforced, heat-aging stabilized, improved flowability, for injection moulding, black

General

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

Product identification

|                       |                      |
|-----------------------|----------------------|
| ISO 1043 abbreviation | PA6-GF40             |
| ISO 16396 designation | PA6,GF40,M1H,S12-120 |

Physical properties

|                             | Condition      | Standard        | Unit               | Value       |
|-----------------------------|----------------|-----------------|--------------------|-------------|
| Density                     |                | ISO 1183        | g/cm <sup>3</sup>  | 1.45        |
| Humidity absorption         | T=23°C, 50% RH | ISO 62          | %                  | 1.7 - 2     |
| Water absorption            | 24 hr, 23°C    | ISO 62          | %                  | 5.5 - 6     |
| Molding shrinkage, parallel |                | ISO 294-4, 2577 | %                  | 0.15 - 0.35 |
| Molding shrinkage, normal   |                | ISO 294-4, 2577 | %                  | 0.65 - 0.85 |
| Viscosity number            | 96% H2SO4      | ISO 307         | cm <sup>3</sup> /g | 125         |

Mechanical properties

|                                       |          |              |                   | dam / cond.* |
|---------------------------------------|----------|--------------|-------------------|--------------|
| Tensile modulus                       | 1 mm/min | ISO 527-1/-2 | MPa               | 12500 / 8000 |
| Stress at break                       | 5 mm/min | ISO 527-1/-2 | MPa               | 200 / 140    |
| Strain at break                       | 5 mm/min | ISO 527-1/-2 | %                 | 3 / 5        |
| Flexural modulus, ISO 178             | 2 mm/min | ISO 178      | MPa               | 11500 / 7000 |
| Flexural strength, ISO 178            | 2 mm/min | ISO 178      | MPa               | 300 / 210    |
| Charpy impact strength, +23°C         | +23°C    | ISO 179/1eU  | kJ/m <sup>2</sup> | 90 / 105     |
| Charpy impact strength, -30°C         | -30°C    | ISO 179/1eU  | kJ/m <sup>2</sup> | 85 / 100     |
| Charpy notched impact strength, +23°C | +23°C    | ISO 179/1eA  | kJ/m <sup>2</sup> | 15 / 24      |
| Charpy notched impact strength, -30°C | -30°C    | ISO 179/1eA  | kJ/m <sup>2</sup> | 11 / 13      |

TECHNICAL DATA SHEET

TECHNYL C 218 V40 BK

|  | 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 | 220 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75      | °C | 210 |

Electrical properties

|                     |  |               |       |        |
|---------------------|--|---------------|-------|--------|
| Volume resistivity  |  | IEC 62631-3-1 | ohm.m | 1E+016 |
| Surface resistivity |  | IEC 62631-3-1 | ohm   | 1E+014 |

Burning behaviour

|                                     |  |           |  |              |
|-------------------------------------|--|-----------|--|--------------|
| Burning rate, FMVSS, Thickness 1 mm |  | FMVSS 302 |  | < 100 mm/min |
|-------------------------------------|--|-----------|--|--------------|

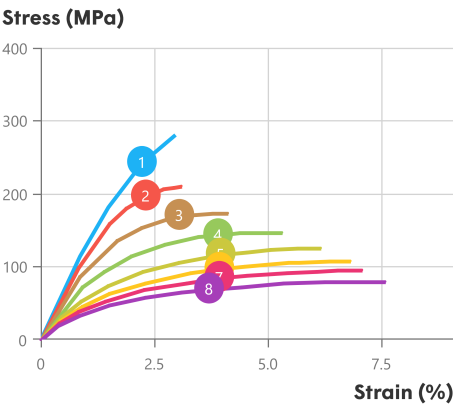
Test run at 23°C if not differently specified, DAM state (dry as moulded).  
\*: conditioned according to ISO 1110

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 | 80 - 100 °C                                           |

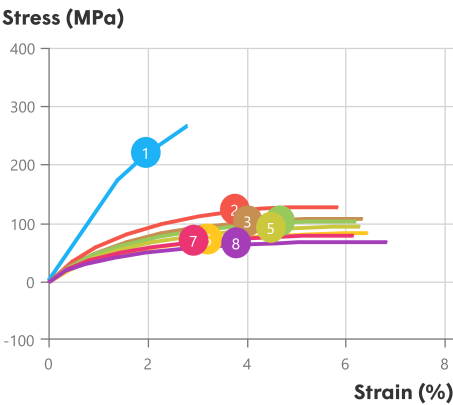
These parameters are typical of the product but should be related to the type of machinery used and to the type of moulded part.

Stress-strain, dry



| Temperature (°C) |            |
|------------------|------------|
| 1                | Spannung 1 |
| 2                | Spannung 2 |
| 3                | Spannung 3 |
| 4                | Spannung 4 |
| 5                | Spannung 5 |
| 6                | Spannung 6 |

Stress-strain, conditioned



| Temperature (°C) |            |
|------------------|------------|
| 1                | Spannung 1 |
| 2                | Spannung 2 |
| 3                | Spannung 3 |
| 4                | Spannung 4 |
| 5                | Spannung 5 |
| 6                | Spannung 6 |

## Disclaimer

The information provided in this documentation corresponds to our technical knowledge at the date of its publication and do not constitute a specification. This information may be subject to revision at our discretion. Domo cannot anticipate all conditions under which this information and our products of other manufactures in combination with our products may be used. Domo accepts no responsibility for results obtained by the application of this information or for the safety and suitability of our products alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each product or product combination for their own purposes. Unless otherwise agreed in writing, Domo sells the product without warranties. Buyers and users assume all responsibility and liability for loss or damage arising from handling and use of our products, whether used alone or in combination with other products. Unless specifically indicated, the grades mentioned are not suitable for applications in the pharmaceutical/medical sector.