

## TECHNICAL DATA SHEET

# TECHNYL A 218 V40 NC

TECHNYL A 218 V40 NC is a polyamide PA66, reinforced with 40% of glass fibre, heat stabilised for injection moulding. This grade offers an excellent combination between thermal and mechanical properties.

### General

|                       |                         |                               |
|-----------------------|-------------------------|-------------------------------|
| Feature               | Heat-aging stabilized   |                               |
| Polymer type          | PA66 (Polyamide 66)     |                               |
| Processing technology | Injection molding       |                               |
| Certification         | RoHS                    |                               |
| Applications          | Automotive Applications | Power Tool & Garden Equipment |
| Colors available      | Natural                 |                               |
| Forms                 | Pellets                 |                               |

### Product identification

|                       |           |
|-----------------------|-----------|
| ISO 1043 abbreviation | PA66-GF40 |
|-----------------------|-----------|

|                             | Condition   | Standard        | Unit              | Value |
|-----------------------------|-------------|-----------------|-------------------|-------|
| <b>Physical properties</b>  |             |                 |                   |       |
| Density                     |             | ISO 1183        | g/cm <sup>3</sup> | 1.46  |
| Water absorption            | 24 hr, 23°C | ISO 62          | %                 | 0.7   |
| Molding shrinkage, parallel |             | ISO 294-4, 2577 | %                 | 0.35  |
| Molding shrinkage, normal   |             | ISO 294-4, 2577 | %                 | 0.9   |

### Mechanical properties

|                                       |          |              |                   | dam / cond.* |
|---------------------------------------|----------|--------------|-------------------|--------------|
| Tensile modulus                       | 1 mm/min | ISO 527-1/-2 | MPa               | 13000 / -    |
| Stress at break                       |          | ISO 527-1/-2 | MPa               | 215 / -      |
| Strain at break                       |          | ISO 527-1/-2 | %                 | 3 / -        |
| Flexural modulus, ISO 178             | 2 mm/min | ISO 178      | MPa               | 11000 / -    |
| Charpy notched impact strength, +23°C | +23°C    | ISO 179/1eA  | kJ/m <sup>2</sup> | 13 / -       |

### Thermal properties

|  |          |             |    |     |
|--|----------|-------------|----|-----|
| Melting temperature, 10°C/min            |          | ISO 11357-1 | °C | 262 |
| Temp. of deflection under load, 1.80 MPa | 1.80 MPa | ISO 75      | °C | 255 |

|                                | Condition  | Standard      | Unit  | Value  |
|--------------------------------|------------|---------------|-------|--------|
| <b>Electrical properties</b>   |            |               |       |        |
| Volume resistivity             |            | IEC 62631-3-1 | ohm.m | 1E+013 |
| Surface resistivity            |            | IEC 62631-3-1 | ohm   | 6E+015 |
| Comparative tracking index     | Solution A | IEC 60112     | V     | 400    |
| CTI performance level category |            | Sol A         |       | PLC 1  |
| Dielectric strength            | 1 mm       | IEC 60243-1   | kV/mm | 35     |

### Burning behaviour

|                      |        |       |   |    |
|----------------------|--------|-------|---|----|
| Flammability, 1.5 mm | 1.5 mm | UL 94 |   | HB |
| Oxygen index         |        |       | % | 23 |

\*: conditioned according to ISO 1110

### Processing conditions

|                               |              |
|-------------------------------|--------------|
| Drying temperature/time       | 80 °C        |
| Suggested max moisture        | 0.2 %        |
| Rear temperature              | 260 - 280 °C |
| Middle temperature            | 270 - 300 °C |
| Front temperature             | 280 - 310 °C |
| Recommended mould temperature | 60 - 90 °C   |

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