

TECACOMP® PPS TRM PVX black 4008 - Compounds

Chemical Designation

PPS (Polyphenylensulfide)

Colour

black

Density

1.49 g/cm³

Fillers

carbon fibres, solid lubricant

Main features

→ very good bearing and wear properties

Target Industries

→ automotive industry

→ mechanical engineering

| Mechanical properties | parameter | value | unit | norm | comment |
|--------------------------------------|-----------|-------|-------------------|--------------------|---------|
| Modulus of elasticity (tensile test) | 50 mm/min | 12500 | MPa | DIN EN ISO 527-1 | |
| Tensile strength | 50 mm/min | 130 | MPa | DIN EN ISO 527-1 | |
| Elongation at break | 50 mm/min | 1,0 | % | DIN EN ISO 527-1 | |
| Impact strength (Charpy) | | 15 | kJ/m ² | DIN EN ISO 179-1eU | |

| Thermal properties | parameter | value | unit | norm | comment |
|------------------------------|------------------------------|-------|----------------------------------|----------------------|---------|
| Glass transition temperature | | 90 | °C | DIN 53765 | |
| Melting temperature | | 280 | °C | DIN 53765 | |
| Heat distortion temperature | HDT A | 270 | °C | ISO-R 75 Method A | |
| Heat distortion temperature | HDT B | 285 | °C | ISO-R 75 Method B | |
| Service temperature | short term | 260 | °C | - | |
| Service temperature | long term | 230 | °C | - | |
| Thermal expansion (CLTE) | longitudinal (at 23 - 80 °C) | 13 | 10 ⁻⁶ K ⁻¹ | DIN EN ISO 11359-1;2 | |
| Thermal expansion (CLTE) | transverse (at 23 - 80 °C) | 49 | 10 ⁻⁶ K ⁻¹ | DIN EN ISO 11359-1;2 | |

| Other properties | parameter | value | unit | norm | comment |
|-----------------------|------------------|-------|-------------------------|------------------|---------|
| Molding shrinkage | longitudinal | 0,21 | % | DIN EN ISO 294-4 | |
| Molding shrinkage | transverse | 0,58 | % | DIN EN ISO 294-4 | |
| Melt flow index (MFI) | 316 °C / 2,16 kg | 45 | g/10 min | DIN EN ISO 1133 | |
| MVR | 316 °C / 2,16 kg | 35 | cm ³ /10 min | DIN EN ISO 1133 | |
| Bulk density | | 0,65 | g/cm ³ | EN ISO 60 | |

| Processing parameter | parameter | value | unit | norm | comment |
|---------------------------------|-----------|-----------|------|------|---------|
| Cylinder/processing temperature | | 300 - 350 | °C | - | |
| Mould temperature | | 140 - 160 | °C | - | |
| Material temperature | | 335 - 360 | °C | - | |

→ This material can be processed as a thermoplastic taking the normal technical provisions into account. The above mentioned information refers exclusively to the injection moulding process.

→ Processing should be carried out as gently as possible, in order to maintain the maximum fibre length in the component. Back pressure and injection rate should be adjusted to the component geometry accordingly. The optimum processing temperature depends upon the respective geometry of the moulded part and can be different from machine to machine.

| Predrying | parameter | value | unit | norm | comment |
|---------------------------------------|-----------|-----------|------|------|---------|
| Permissible residual moisture content | | < 0,05 | % | - | |
| Drying temperature | | 140 - 150 | °C | - | |
| Drying time | | 4 - 6 | h | - | |

→ In order to achieve optimum mechanical properties, pre-drying of the material is recommended with the parameters mentioned above.

→ Granulate should preferably be stored in dry rooms at normal temperatures and be protected from direct sunlight.

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