# TECACOMP PEEK CF30 black 1077822 - Compounds

**Chemical Designation**
PEEK (Polyetheretherketone)

**Colour**
black

**Density**
1.39 g/cm$^3$

**Fillers**
carbon fibres

**Main features**
- very high stiffness
- very high strength
- good wear resistance
- very good heat resistance
- high creep resistance
- very good chemical resistance
- hydrolysis and superheated steam resistant
- for injection moulding

**Target Industries**
- mechanical engineering
- oil and gas industry
- chemical technology
- automotive industry
- vacuum technology

| Mechanical properties | condition | value | unit | test method | comment |
|---|---|---|---|---|---|
| Tensile strength | | 242 | MPa | DIN EN ISO 527-1 | |
| Modulus of elasticity (tensile test) | | 24400 | MPa | DIN EN ISO 527-1 | |
| Elongation at break (tensile test) | | 1,8 | % | DIN EN ISO 527-1 | |
| Impact strength (Charpy) | | 44 | kJ/m$^2$ | DIN EN ISO 179-1eU | |

| Thermal properties | condition | value | unit | test method | | comment |
|---|---|---|---|---|---|---|
| Glass transition temperature | | 143 | °C | - | 1) | (1) literature value<br>(2) literature value<br>(3) literature value<br>(4) literature value |
| Melting temperature | | 343 | °C | - | 2) | |
| Heat distortion temperature | | 332 | °C | ISO-R 75 Method A | | |
| Service temperature | long term | 260 | °C | - | 3) | |
| Service temperature | short term | 300 | °C | - | 4) | |

| Electrical properties | condition | value | unit | test method | comment |
|---|---|---|---|---|---|
| surface resistivity | | $10^5$ | Ω | DIN EN 61340-2-3 | |
| volume resistivity | | $10^4$ | Ω*cm | DIN EN 61340-2-3 | |

| Other properties | condition | value | unit | test method | comment |
|---|---|---|---|---|---|
| Molding shrinkage | longitudinal | 0,3 | % | DIN EN ISO 294-4 | |
| Molding shrinkage | transverse | 0,9 | % | DIN EN ISO 294-4 | |

| Processing parameter | condition | value | unit | test method | comment |
|---|---|---|---|---|---|
| processing temperatures | | 360 - 400 | °C | - | |
| Mould temperature | | 160 - 210 | °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 | condition | value | unit | test method | comment |
|---|---|---|---|---|---|
| Permissible residual moisture content | | < 0,1 | % | - | |
| Drying temperature | | 120 - 140 | °C | - | |
| Drying time | | 4 | h | - | |

- To achieve optimum mechanical properties, it is recommended to pre-dry the material with the above mentioned parameters.
- Information on storage and shelf life: The granules must be stored in dry, normally tempered rooms and in closed containers. For moisture-sensitive materials, the granules must be sealed airtight. Protection against direct sunlight must be guaranteed. The granules are usually subject to the requirements of no shelf life limitation. Shelf Life may be limited by some additives.

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