

# TECACOMP PEEK PVX X10 1014854 - Compounds

## Chemical Designation

PEEK (Polyetheretherketone)

## Colour

black

## Density

1.61 g/cm<sup>3</sup>

## Fillers

carbon fibres, graphite

| Mechanical properties                | parameter     | value     | unit              | norm               | comment |
|--------------------------------------|---------------|-----------|-------------------|--------------------|---------|
| Tensile strength                     | 50 mm/min     | 145       | MPa               | DIN EN ISO 527-1   |         |
| Modulus of elasticity (tensile test) | 50 mm/min     | 13500     | MPa               | DIN EN ISO 527-1   |         |
| Elongation at break (tensile test)   | 50 mm/min     | 2         | %                 | DIN EN ISO 527-1   |         |
| Impact strength (Charpy)             |               | 25        | kJ/m <sup>2</sup> | DIN EN ISO 179-1eU |         |
| Thermal properties                   | parameter     | value     | unit              | norm               | comment |
| Glass transition temperature         |               | 143       | °C                | DIN 53765          |         |
| Melting temperature                  |               | 343       | °C                | DIN 53765          |         |
| Service temperature                  | short term    | 300       | °C                | -                  |         |
| Service temperature                  | long term     | 260       | °C                | -                  |         |
| Other properties                     | parameter     | value     | unit              | norm               | comment |
| Melt flow index (MFI)                | 380°C / 10 kg | 19        | g/10 min          | DIN EN ISO 1133    |         |
| Bulk density                         |               | 0,70      | g/cm <sup>3</sup> | EN ISO 60          |         |
| Processing parameter                 | parameter     | value     | unit              | norm               | comment |
| Cylinder/processing temperature      |               | 360 - 400 | °C                | -                  |         |
| Mould temperature                    |               | 160 - 200 | °C                | -                  |         |
| Material temperature                 |               | 390 - 400 | °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 |           | < 0,02    | %    | -    |         |
| Drying temperature                    |           | 140 - 180 | °C   | -    |         |
| Drying time                           |           | 4 - 6     | 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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