

PBT/PET Compound PBT-PET- GF 50

PRECITE® K GF 50 black (7434)

Tensile modulus

17000 MPa

1 mm/min

ISO 527-2

Stress at break

180 MPa

5 mm/min

ISO 527-2

Charpy impact strength

66 kJ/m²

23°C

ISO 179-1/1eU

PRECITE K GF 50 black (7434) is a 50% glass fibre reinforced PBT/PET blend with high strength and improved surface finish.

Typical applications

Technical, precision and surface parts in automobile, industrial, E/E and appliances industry.

**Mechanical Properties**

| | |
|---|----------------------|
| Tensile modulus (1 mm/min ISO 527-2) d.a.m. | 17000 MPa |
| Stress at break (5 mm/min ISO 527-2) d.a.m. | 180 MPa |
| Strain at break (5 mm/min ISO 527-2) d.a.m. | 1,8 % |
| Charpy impact strength (23°C ISO 179-1/1eU) d.a.m. | 66 kJ/m ² |
| Charpy notched impact strength (23°C ISO 179-1/1eA) d.a.m. | 11 kJ/m ² |

**Thermal Properties**

| | |
|---|--------|
| Temperature of deflection under load HDT/A (1,8 MPa ISO 75) | 210 °C |
| Melting temperature (DSC, 10K/min DIN EN 11357-1) | 223 °C |

**Flammability**

| | |
|--|----------|
| Burning rate (UL 94) 0,8mm Wall thickness | HB Class |
|--|----------|

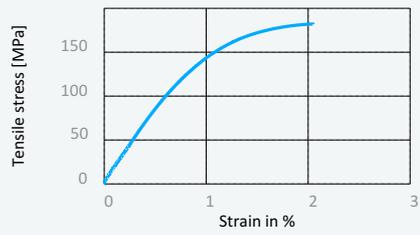
**General properties**

| | |
|---------------------------|------------------------|
| Density (23°C ISO 1183) | 1,72 g/cm ³ |
|---------------------------|------------------------|

Disclaimer:

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Stress strain chart at 23°C



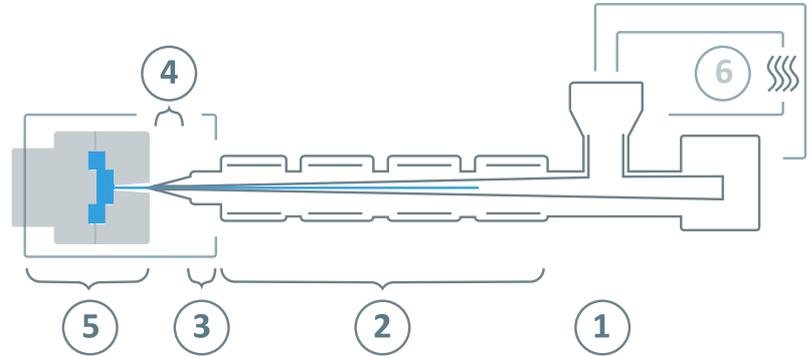
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PRECITE® K GF 50 black (7434)**Processing information**

The listed values are recommendations. Higher values should be used for higher glass loadings. We recommend only dehumidifying or vacuum dryers. Extensive drying can cause filling problems and surface defects.



| | | |
|---|--|----------------|
| ⑥ | Drying time | 3 - 4 h |
| | Drying temperature ($\tau \leq -30^{\circ}\text{C}$) | 120 - 140°C |
| | Processing moisture | $\leq 0,02\%$ |
| ① | Feed section | 60 - 80°C |
| ② | Temperature zone 1 - Zone 4 | 260 - 280°C |
| ③ | Nozzle temperature | 260 - 290°C |
| ④ | Melt temperature | 270 - 280°C |
| ⑤ | Mold temperature | 80 - 100°C |
| → | Holding pressure, spec. | 300 - 800 bar |
| ← | Back pressure, spec. | 30 - 100 bar |
| | Injection speed | medium to high |
| | Screw speed | 8 - 15 m/min |

Warning

Due to hydrolysis sensitivity of polyesters, a careful drying of the material before processing is very important. High residual moisture contents causes, in addition to surface defects, a decomposition of the molecular chains and thus reduced mechanical properties. If there are longer interruptions of the process, the cylinder temperature should be lowered. Furthermore, we recommend a thorough cleaning of the screw cylinder with extended dwell time or a material change. Glass-fiber-reinforced polyolefins (PE, PP) have established a particularly good cleaning effect.

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