Industriegebiet Brohltal Ost · Im Stiefelfeld 1 · D-56651 Niederzissen · www.akro-plastic.com

PBT – Polybutyleneterephthalate PBT GF 20

# PRECITE® P3 GF 20 black (7609)

| Tensile modulus | Stress at break | Charpy impact strength |
|---|---|---|
| **7000 MPa** | **120 MPa** | **50 kJ/m²** |
| **1 mm/min** | **5 mm/min** | **23°C** |
| ISO 527-2 | ISO 527-2 | ISO 179-1/1eU |

PRECITE® P3 GF 20 black (7609) is a 20% glass fibre reinforced, lubricated polybutylene terephthalate (PBT) with high stiffness and toughness. Good dimensional stability and chemical resistance

**Typical applications**

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

## Mechanical Properties

| | |
|---|---|
| Tensile modulus (1 mm/min \| ISO 527-2) d.a.m. | 7000 MPa |
| Stress at break (5 mm/min \| ISO 527-2) d.a.m. | 120 MPa |
| Strain at break (5 mm/min \| ISO 527-2) d.a.m. | 3,5 % |
| Charpy impact strength (23°C \| ISO 179-1/1eU) d.a.m. | 50 kJ/m² |
| Charpy notched impact strength (23°C \| ISO 179-1/1eA) d.a.m. | 10 kJ/m² |

## Thermal Properties

| | |
|---|---|
| Temperature of deflection under load HDT/A (1,8 MPa \| ISO 75) | 205 °C |
| Melting temperature (DSC, 10K/min \| DIN EN 11357-1) | 225 °C |

## Flammability

| | |
|---|---|
| Burning rate (UL 94) 1,6mm Wall thickness | HB Class |
| Burning rate (<100 mm/min) (> 1 mm Thickness \| FMVSS 302) | + |

## General properties

| | |
|---|---|
| Density (23°C \| ISO 1183) | 1,45 g/cm³ |
| Molding shrinkage (flow \| ISO 294-4) | 0,4 - 0,6 % |
| Molding shrinkage (transverse \| ISO 294-4) | 0,9 - 1,1 % |

## Rheological Properties

| | |
|---|---|
| MVR (250°C/2,16kg \| ISO 1133) | 10 cm³/10min |

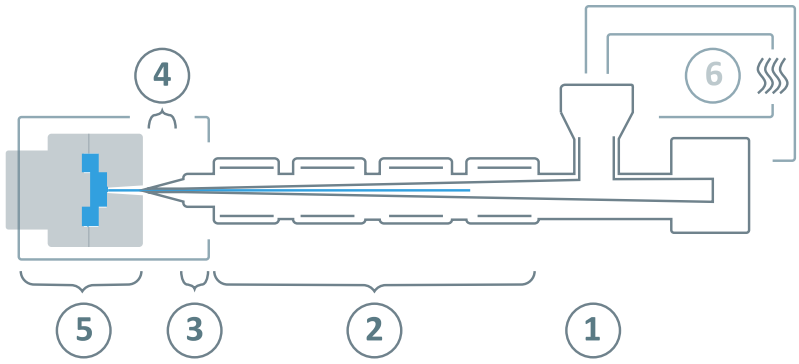
Industriegebiet Brohltal Ost · Im Stiefelfeld 1 · D-56651 Niederzissen · www.akro-plastic.com

PBT – Polybutyleneterephthalate PBT GF 20

# PRECITE® P3 GF 20 black (7609)

**Processing information**

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




| | | |
|---|---|---|
| 6 | Drying time | 3 - 4 h |
| | Drying temperature (τ ≤ -30°C) | 100 - 120°C |
| | Processing moisture | 0,02 - 0,04% |
| 1 | Feed section | 60 - 80°C |
| 2 | Temperature zone 1 - Zone 4 | 250 - 275°C |
| 3 | Nozzle temperature | 250 - 280°C |
| 4 | Melt temperature | 260 - 275°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.