

Compound No.: 2000

AKROMID® B3 GF 50 S1 black (2000)

PA6-I GF50

AKROMID® B3 GF 50 S1 black 950089 (2000) is a 50% glass fiber reinforced, impact modified Polyamide 6. It is characterised by very high stiffness and strength as well as a higher notched impact strength compared to a standard PA 6 GF 50. The material is therefore perfectly suitable for industrial applications and for housings and covers in the automotive industry.

Features

impact modified

Properties

| Modulus | Strength | Impact |
|-------------------|----------------|------------------|
| 15.000 MPa | 190 MPa | 100 kJ/m² |

Mechanical Properties

| Tensile modulus | 1 mm/min d.a.m. | 15000 MPa |
|--------------------------------|------------------------|----------------------|
| ISO 527-2 | 1 mm/min conditioned | 7800 MPa |
| Tensile stress at break | 5 mm/min d.a.m. | 190 MPa |
| ISO 527-2 | 5 mm/min conditioned | 120 MPa |
| Tensile strain at break | 5 mm/min d.a.m. | 5 % |
| ISO 527-2 | 5 mm/min conditioned | 8 % |
| Charpy impact strength | 23°C d.a.m. | 100 kJ/m² |
| ISO 179-1/1eU | 23°C conditioned | > 110 kJ/m² |
| | -30°C d.a.m. | 100 kJ/m² |
| Charpy notched impact strength | 23°C d.a.m. | 25 kJ/m² |
| ISO 179-1/1eA | 23°C conditioned | 40 kJ/m ² |
| | -30°C d.a.m. | 20 kJ/m² |
| | -30°C conditioned | 20 kJ/m ² |

Thermal Properties



Compound No.: 2000

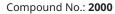
| Temperature of deflection under load HDT/A ISO 75 | 1,8 MPa | 210 °C |
|---|--------------|--------|
| Melting temperature ISO 11357-3 | DSC, 10K/min | 222 °C |

Flammability

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

General Properties

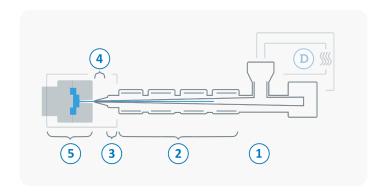
| Density ISO 1183 | 23°C | 1,54 g/cm³ |
|--------------------------------|--------------------|----------------------------|
| Humidity absorption ISO 1110 | 70°C, 62% r.H. | 1,3 % |
| Molding shrinkage ISO 294-4 | flow transverse | 0,1 - 0,3 % 0,4 - 0,6 % |





Processing

The values mentioned are recommendations. We only recommend desiccant / dry air dryers or vacuum dryers. Too long a drying time and the resulting residual moisture content below the lower limit can lead to filling problems and surface defects. The specified drying time refers to closed and undamaged bagged material. When processing from previously opened bags or from octabins with polyolefin inliners, a longer drying time may be necessary. It is recommended to check the residual moisture content after the drying process.



| D | Drying time | 0 - 4 h |
|---------------|---------------------------------|----------------|
| | Drying temperature (τ <= -30°C) | 80 °C |
| | Processing moisture | 0,02 - 0,1 % |
| 1 | Feed section | 60 - 80 °C |
| 2 | Temperature Zone 1 - Zone 4 | 240 - 290 °C |
| 3 | Nozzle temperature | 260 - 300 °C |
| 4 | Melt temperature | 270 - 290 °C |
| 5 | Mold temperature | 80 - 100 °C |
| \Rightarrow | Holding pressure, spec. | 300 - 800 bar |
| | Back pressure, spec. | 50 - 150 bar |
| | Injection speed | medium to high |
| | Screw speed | 8 - 15 m/min |
| | | |



Compound No.: 2000

Diagrams

