

AKROMID®

A3 GM 20/10 S1 natural (1217)

PA66-I (GF20+GB10)

AKROMID® A3 GM 20/10 S1 natural (1217) is a 20% glass fiber and 10% glass beads reinforced, impact modified PA 6.6. It is characterised by a medium cold impact strength as well as good adhesion properties. Furthermore, the material impresses with a good surface appearance and low warpage and is therefore perfectly suitable for technical demanding components in the mechanical engineering and automotive industry. It has a light inherent color.

Features

impact modified surface modified low warpage adhesion modified

Properties

Modulus

6.900 MPa

Strength

130 MPa

Impact

80 kJ/m²

Sustainability

Recycled content **10 %**

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

6900 MPa

1 mm/min | conditioned

4200 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

130 MPa

5 mm/min | conditioned

85 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

4 %

5 mm/min | conditioned

10 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

6900 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

205 MPa

Charpy impact strength ISO 179-1/1eU	23°C d.a.m.	80 kJ/m²
	23°C conditioned	80 kJ/m²
	-30°C d.a.m.	76 kJ/m²
Charpy notched impact strength ISO 179-1/1eA	23°C d.a.m.	15 kJ/m²
	23°C conditioned	16 kJ/m²
	-30°C d.a.m.	8 kJ/m²
Ball indentation hardness ISO 2039-1	358N/30s d.a.m.	127 MPa

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	245 °C
Temperature of deflection under load HDT/B ISO 75	0,45 MPa	260 °C
Melting temperature ISO 11357-3	DSC, 10K/min	262 °C
Coefficient of linear thermal expansion ISO 11359-1/2	23°C to 80°C parallel	0,27 10⁻⁴/K
	23°C to 80°C transverse	1,11 10⁻⁴/K

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	1,31 g/cm³
Humidity absorption ISO 1110	70°C, 62% r.H.	2 %
Water absorption ISO 62	23°C, saturated	5,1 %

Molding shrinkage

ISO 294-4

flow

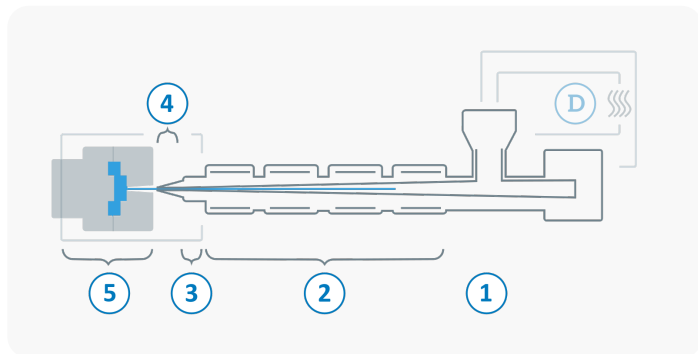
0,4 - 0,6 %

transverse

0,9 - 1,1 %

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 ($\tau \leq -30^{\circ}\text{C}$)	80 °C
	Processing moisture	0,02 - 0,1 %
1	Feed section	60 - 80 °C
2	Temperature Zone 1 - Zone 4	260 - 300 °C
3	Nozzle temperature	270 - 310 °C
4	Melt temperature	280 - 300 °C
5	Mold temperature	80 - 100 °C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 - 150 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min

Diagrams

