

AKROMID®

B3 GM 10/20 1 L black (4646)

PA6+PP (GF10+GB20)

AKROMID® B3 GM 10/20 1 L black (4646) is a PA6/PP-blend with reduced density compared to standard PA6 GM 10/20. With 10% glass fibre reinforcement and 20% glass bead filling the material is suitable for components with average strength and stiffness where cost and weight reduction are required at the same time. The chemical resistance of AKROMID® B3 GM 10/20 1 L black (4646) is particularly superior to calcium chloride (CaCl₂).

Features

heat stabilised 130 reduced density

Properties

Modulus	Strength	Impact
5.100 MPa	88 MPa	46 kJ/m²

Mechanical Properties

Tensile modulus	1 mm/min d.a.m.	5100 MPa
ISO 527-2	1 mm/min conditioned	3300 MPa
Tensile stress at break	5 mm/min d.a.m.	88 MPa
ISO 527-2	5 mm/min conditioned	55 MPa
Tensile strain at break	5 mm/min d.a.m.	3,4 %
ISO 527-2	5 mm/min conditioned	6 %
Flexural modulus	2 mm/min d.a.m.	4700 MPa
ISO 178		
Flexural strength	2 mm/min d.a.m.	130 MPa
ISO 178		
Charpy impact strength	23°C d.a.m.	46 kJ/m²
ISO 179-1/1eU	23°C conditioned	44 kJ/m²
	-30°C d.a.m.	43 kJ/m²
	-30°C conditioned	42 kJ/m²

Charpy notched impact strength ISO 179-1/1eA	23°C d.a.m.	7 kJ/m ²
	23°C conditioned	9 kJ/m ²
	-30°C d.a.m.	4 kJ/m ²
	-30°C conditioned	4 kJ/m ²

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	165 °C
Temperature of deflection under load HDT/B ISO 75	0,45 MPa	208 °C
Melting temperature ISO 11357-3	DSC, 10K/min	220 °C

Flammability

Flammability UL 94	0,8 mm Wall thickness	HB Class
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

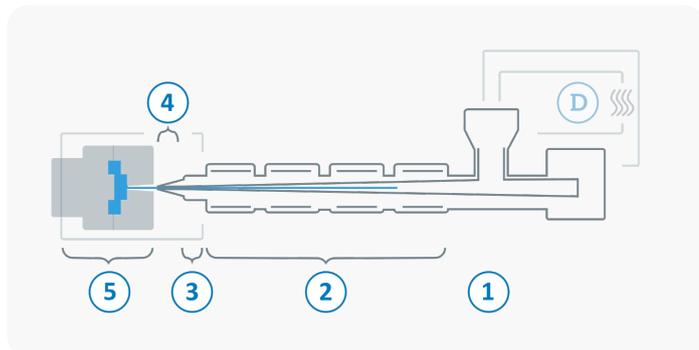
Density ISO 1183	23°C	1,26 g/cm ³
Humidity absorption ISO 1110	70°C, 62% r.H.	1,4 %
Molding shrinkage ISO 294-4	flow	0,3 - 0,5 %
	transverse	0,6 - 0,8 %

Rheological Properties

MVR ISO 1133	275°C/5kg	18 cm ³ /10 min
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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	220 - 290 °C
3	Nozzle temperature	240 - 300 °C
4	Melt temperature	240 - 290 °C
5	Mold temperature	70 - 100 °C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 - 150 bar
	Injection speed	medium to high
	Screw speed	5 - 15 m/min