

PA6 – Polyamide 6 PA6 GF45

AKROMID® B3 GF 45 1 black (5744)

Tensile modulus

14000 MPa

 1 mm/min
 ISO 527-2

Stress at break

200 MPa

 5 mm/min
 ISO 527-2

Charpy impact strength

110 kJ/m²

 23°C
 ISO 179-1/1eU

AKROMID® B3 GF 45 1 black (5744) is a 45% glass fibre reinforced, heat stabilised polyamide 6 with very high rigidity and strength

Typical applications

Components in mechanical engineering and in the automotive industry and highly stressed parts in the sports and leisure industry, demanding a good surface quality.



Mechanical Properties

Tensile modulus (1 mm/min ISO 527-2) d.a.m.	14000 MPa
Stress at break (5 mm/min ISO 527-2) d.a.m.	200 MPa
Strain at break (5 mm/min ISO 527-2) d.a.m.	4,5 %
Flexural modulus (2 mm/min ISO 178) d.a.m.	13000 MPa
Flexural strength (2 mm/min ISO 178) d.a.m.	315 MPa
Flexural strain at break (2 mm/min ISO 178) d.a.m.	4,5 %
Charpy impact strength (23°C ISO 179-1/1eU) d.a.m.	110 kJ/m ²
Charpy impact strength (-30°C ISO 179-1/1eU) d.a.m.	95 kJ/m ²
Charpy notched impact strength (23°C ISO 179-1/1eA) d.a.m.	22 kJ/m ²
Charpy notched impact strength (-30°C ISO 179-1/1eA) d.a.m.	18 kJ/m ²



Thermal Properties

Temperature of deflection under load HDT/A (1,8 MPa ISO 75)	200 °C
Temperature of deflection under load HDT/B (0,45 MPa ISO 75)	220 °C
Melt temperature (DSC, 10K/min DIN EN 11357-1)	220 °C



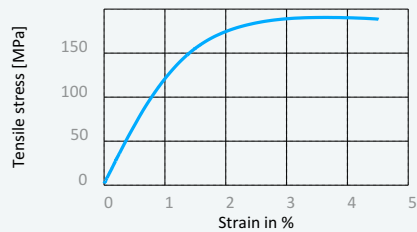
Flammability

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

Disclaimer:

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Stress strain chart at 23°C

**General properties**

Density (23°C ISO 1183)	1,5 g/cm ³
Molding shrinkage (flow ISO 294-4)	0,1 - 0,3 %
Molding shrinkage (transverse ISO 294-4)	0,45 - 0,65 %

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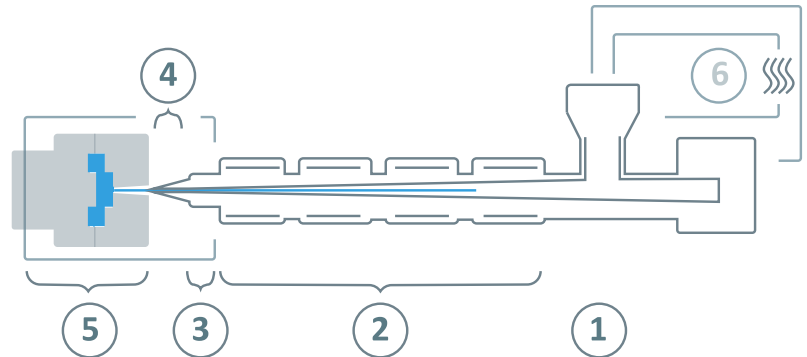
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Processing information

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	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	240 - 290°C
③	Nozzle temperature	260 - 300°C
④	Melt temperature	270 - 290°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

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