

PA6.6 – Polyamide 6.6 PA66 GF50

AKROMID® A3 GF 50 6 black (6860)

Tensile modulus

18000 MPa

1 mm/min
ISO 527-2

Stress at break

250 MPa

5 mm/min
ISO 527-2

Charpy impact strength

105 kJ/m²

23°C
ISO 179-1/1eU

AKROMID® A3 GF 50 6 black (6860) is a 50% glass fibre reinforced, inorganic high heat stabilised polyamide 6.6 with very high stiffness and strength.

Typical applications

Functional parts in mechanical engineering and the automotive industry.



Mechanical Properties

Tensile modulus (1 mm/min | ISO 527-2)

d.a.m.	18000 MPa
conditioned	14000 MPa

Stress at break (5 mm/min | ISO 527-2)

d.a.m.	250 MPa
conditioned	180 MPa

Strain at break (5 mm/min | ISO 527-2)

d.a.m.	2,7 %
conditioned	3,7 %

Charpy impact strength (23°C | ISO 179-1/1eU)

d.a.m.	105 kJ/m ²
conditioned	110 kJ/m ²

Charpy notched impact strength (23°C | ISO 179-1/1eA)

d.a.m.	19 kJ/m ²
conditioned	23 kJ/m ²



Thermal Properties

Temperature of deflection under load HDT/A (1,8 MPa | ISO 75) 260 °C

Temperature of deflection under load HDT/B (0,45 MPa | ISO 75) 260 °C

Melt temperature (DSC, 10K/min | DIN EN 11357-1) 262 °C



Flammability

Burning rate (UL 94)

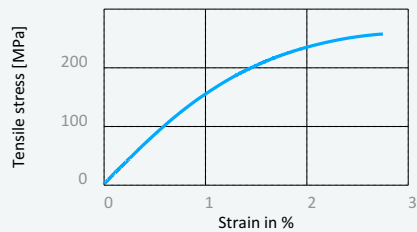
1,6mm Wall thickness HB Class

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)	1,57 g/cm ³
Humidity absorption (70°C, 62% r.H. ISO 1110)	1,3-1,5 %
Water absorption 23°C saturated (23°C, saturated ISO 62)	3,7-4,3 %
Molding shrinkage (flow ISO 294-4)	0,1-0,3 %
Molding shrinkage (transverse ISO 294-4)	0,5-0,7 %

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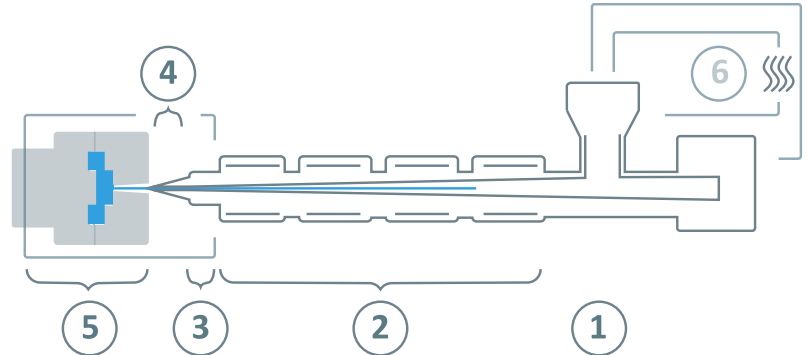
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Processing information

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	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

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