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PA6 – Polyamide 6 PA6 GF50

AKROMID® B+ GF 50 6 black (7389)

Tensile modulus	Stress at break	Charpy impact strength
16500 MPa	**231 MPa**	**106 kJ/m²**
1 mm/min	**5 mm/min**	**23°C**
ISO 527-2	ISO 527-2	ISO 179-1/1eU

High-heat stabilized PA6 compound with enhanced mechanical properties in conditioned state to substitute PA 66 compounds

Typical applications

Components in mechanical engineering and in the automotive industry

Mechanical Properties

Tensile modulus (1 mm/min | ISO 527-2)		
d.a.m.		16500 MPa
conditioned		10000 MPa
Stress at break (5 mm/min | ISO 527-2)		
d.a.m.		231 MPa
conditioned		164 MPa
Strain at break (5 mm/min | ISO 527-2)		
d.a.m.		3,1 %
conditioned		5 %
Flexural modulus (2 mm/min | ISO 178)		
d.a.m.		16500 MPa
Flexural strength (2 mm/min | ISO 178)		
d.a.m.		365 MPa
Standard bending strength RP 3,5 (2 mm/min | ISO 178)		
d.a.m.		3,3 MPa
Charpy impact strength (23°C | ISO 179-1/1eU)		
d.a.m.		106 kJ/m²
Charpy impact strength (-30°C | ISO 179-1/1eU)		
d.a.m.		105 kJ/m²
Charpy notched impact strength (23°C | ISO 179-1/1eA)		
d.a.m.		23 kJ/m²
conditioned		28 kJ/m²
Charpy notched impact strength (-30°C | ISO 179-1/1eA)		
d.a.m.		19 kJ/m²
conditioned		21 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A (1,8 MPa | ISO 75)	210 °C
Temperature of deflection under load HDT/B (0,45 MPa | ISO 75)	218 °C
Melt temperature (DSC, 10K/min | DIN EN 11357-1)	220 °C
Coefficent of linear thermal expansion, parallel (23°C bis 80°C | ISO 11359-1/2)	0,11 1,0E-4/K
Coefficent of linear thermal expansion, transverse (23°C bis 80°C | ISO 11359-1/2)	1,03 1,0E-4/K

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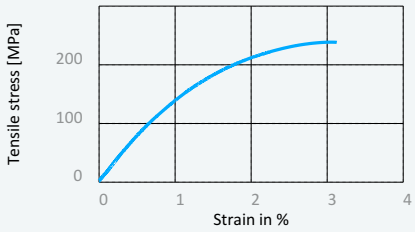
Stress strain chart at 23°C



Flammability

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

General properties

Density (23°C | ISO 1183)	1,56 g/cm³
Molding shrinkage (flow | ISO 294-4)	0,1-0,3 %
Molding shrinkage (transverse | ISO 294-4)	0,4-0,6 %

Electrical Properties

Surface resistivity (acc. to IEC 60093)	
d.a.m.	1,0E+12 Ohm
conditioned	1,0E+10 Ohm

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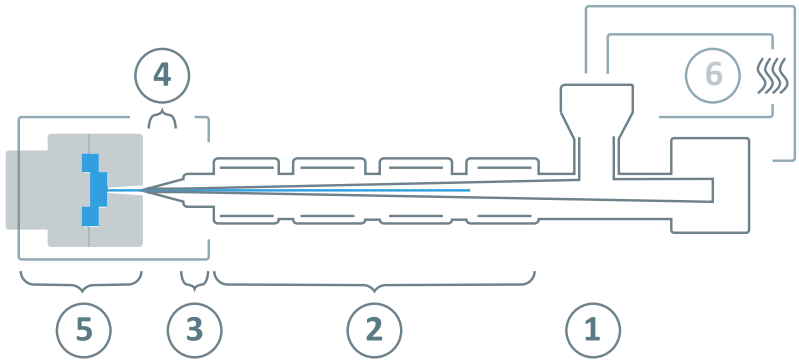
Processing information

The listed values are recommendations. Higher values should be used for higher glass loadings. We recommend only de-humidifying or vacuum dryers. Extensive drying can cause filling problems and surface defects.



6	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
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 - 150 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min