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PA6 – Polyamide 6 PA6-I GF30

AKROMID® B3 GF 30 S1 black (2091)

Tensile modulus	Stress at break	Charpy impact strength
7500 MPa	**125 MPa**	**110 kJ/m²**
1 mm/min	**5 mm/min**	**23°C**
ISO 527-2	ISO 527-2	ISO 179-1/1eU

AKROMID® B3 GF 30 S1 black 950089 (2091) is a 30% glass fibre reinforced, cold impact strength polyamide 6 with high stiffness and strength

Typical applications

Housings and covers for the automotive industry and power tools

Mechanical Properties

Tensile modulus (1 mm/min | ISO 527-2)	
d.a.m.	7500 MPa
conditioned	4200 MPa
Stress at break (5 mm/min | ISO 527-2)	
d.a.m.	125 MPa
conditioned	70 MPa
Strain at break (5 mm/min | ISO 527-2)	
d.a.m.	6 %
conditioned	13 %
Flexural modulus (2 mm/min | ISO 178)	
d.a.m.	6600 MPa
Standard bending strength RP 3,5 (2 mm/min | ISO 178)	
d.a.m.	170 MPa
Charpy impact strength (23°C | ISO 179-1/1eU)	
d.a.m.	110 kJ/m²
conditioned	135 kJ/m²
Charpy impact strength (-10°C | ISO 179-1/1eU)	
d.a.m.	112 kJ/m²
Charpy impact strength (-20°C | ISO 179-1/1eU)	
d.a.m.	117 kJ/m²
Charpy impact strength (-30°C | ISO 179-1/1eU)	
d.a.m.	n.b. kJ/m²
conditioned	n.b. kJ/m²
Charpy impact strength (-40°C | ISO 179-1/1eU)	
d.a.m.	115 kJ/m²
Charpy notched impact strength (23°C | ISO 179-1/1eA)	
d.a.m.	35 kJ/m²
conditioned	45 kJ/m²
Charpy notched impact strength (-10°C | ISO 179-1/1eA)	
d.a.m.	26 kJ/m²
Charpy notched impact strength (-20°C | ISO 179-1/1eA)	
d.a.m.	25 kJ/m²
Charpy notched impact strength (-30°C | ISO 179-1/1eA)	
d.a.m.	25 kJ/m²
conditioned	22 kJ/m²
Charpy notched impact strength (-40°C | ISO 179-1/1eA)	
d.a.m.	22 kJ/m²

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Thermal Properties

Temperature of deflection under load HDT/A (1,8 MPa | ISO 75)	200 °C
Melt temperature (DSC, 10K/min | DIN EN 11357-1)	222 °C
Temperature index for 50% loss of tensile strength after 20.000h (20.000 Std. | IEC 60216)	115 *** °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)	1,28 g/cm³
Humidity absorption (70°C, 62% r.H. | ISO 1110)	1,4 %
Molding shrinkage (flow | ISO 294-4)	0,4 %
Molding shrinkage (transverse | ISO 294-4)	0,9 %

Electrical Properties

Volume resistivity (IEC 60093)	
d.a.m.	1,0E+13 Ohm x cm
conditioned	1,0E+10 Ohm x cm
Surface resistivity (acc. to IEC 60093)	
d.a.m.	1,0E+12 Ohm
conditioned	1,0E+10 Ohm

Notes

*** = material does not break in flexural test (ISO 178) before exposure to heat

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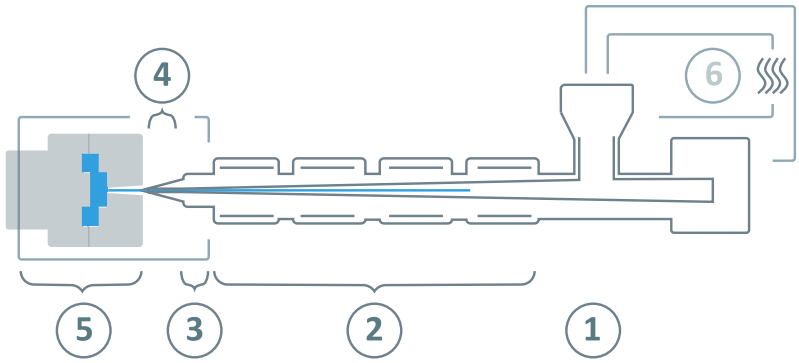
Processing information

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