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PA6.6 – Polyamide 6.6 PA66 GF25

AKROMID® A3 GF 25 1 black (2384)

Tensile modulus	Stress at break	Charpy impact strength
8500 MPa	**185 MPa**	**70 kJ/m²**
1 mm/min	**5 mm/min**	**23°C**
ISO 527-2	ISO 527-2	ISO 179-1/1eU

AKROMID® A3 GF 25 1 black (2384) is a 25% glass fibre reinforced, heat stabilised polyamide 6.6 with high stiffness and strength and UL listed.

Typical applications

Mainly components in mechanical engineering and in the automotive industry

Regulatory

Mechanical Properties

Tensile modulus (1 mm/min | ISO 527-2)	
d.a.m.	8500 MPa
conditioned	6000 MPa
Stress at break (5 mm/min | ISO 527-2)	
d.a.m.	185 MPa
conditioned	115 MPa
Strain at break (5 mm/min | ISO 527-2)	
d.a.m.	3,6 %
conditioned	6,5 %
Flexural modulus (2 mm/min | ISO 178)	
d.a.m.	7600 MPa
conditioned	6200 MPa
Flexural strength (2 mm/min | ISO 178)	
d.a.m.	260 MPa
conditioned	200 MPa
Charpy impact strength (23°C | ISO 179-1/1eU)	
d.a.m.	70 kJ/m²
conditioned	90 kJ/m²
Charpy impact strength (-30°C | ISO 179-1/1eU)	
d.a.m.	64 kJ/m²
Charpy notched impact strength (23°C | ISO 179-1/1eA)	
d.a.m.	10 kJ/m²
conditioned	13 kJ/m²
Charpy notched impact strength (-30°C | ISO 179-1/1eA)	
d.a.m.	9 kJ/m²
Ball indentation hardness (961N/30s | ISO 2039-1)	
d.a.m.	225 MPa

Thermal Properties

Temperature of deflection under load HDT/A (1,8 MPa | ISO 75)	255 °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
Temperature index for 50% loss of tensile strength after 5.000h (5.000 h | IEC 60216)	160 - 175 °C
Temperature index for 50% loss of tensile strength after 20.000h (20.000 Std. | IEC 60216)	130 - 150 °C

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Flammability

Burning rate (UL 94)	
0,8mm Wall thickness	HB Class
GWFI (IEC 60695-2-12)	
1,6mm Wall thickness	650 °C
Burning rate (<100 mm/min) (> 1 mm Thickness | FMVSS 302)	+

General properties

Density (23°C | ISO 1183)	1,32 g/cm³
Humidity absorption (70°C, 62% r.H. | ISO 1110)	2,0 - 2,2 %
Water absorption 23°C saturated (23°C, saturated | ISO 62)	5,7 - 6,3 %
Molding shrinkage (flow | ISO 294-4)	0,2 %
Molding shrinkage (transverse | ISO 294-4)	1,3 %

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
Comparative tracking index (Test liquid A | IEC 60112)	600 V

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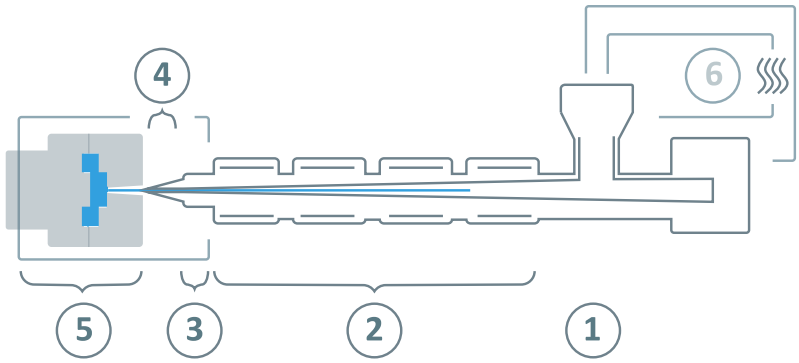
Processing information

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	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