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PA6 – Polyamide 6 PA6 + PP LGF40

AKROMID® B28 LGF 40 1 L black (6155)

Tensile modulus	Stress at break	Charpy impact strength
12000 MPa	**200 MPa**	**100 kJ/m²**
1 mm/min	**5 mm/min**	**23°C**
ISO 527-2	ISO 527-2	ISO 179-1/1eU

AKROMID® B28 LGF 40 1 L black (6155) is a 40% long glass fibre reinforced easy flowing polyamide 6 with extraordinary high stiffness and strength even at high temperature and very high impact and notched impact strength at elevated and low temperature as well as a reduced density compared to standard PA6 LGF 40. B28 LGF 40 1 L black (6155) distinguish due to isotrop mechanical properties, low shrinkage, higher heat deflection temperature and very good fatigue performance. The material has very good surface properties.

Typical applications

Technical components in the automobile and mechanical engineering industries.

Mechanical Properties

Tensile modulus (1 mm/min | ISO 527-2)	
d.a.m.	12000 MPa
conditioned	9500 MPa
Stress at break (5 mm/min | ISO 527-2)	
d.a.m.	200 MPa
conditioned	150 MPa
Strain at break (5 mm/min | ISO 527-2)	
d.a.m.	2,5 %
conditioned	2,5 %
Flexural modulus (2 mm/min | ISO 178)	
d.a.m.	8000 MPa
Flexural strength (2 mm/min | ISO 178)	
d.a.m.	220 MPa
Charpy impact strength (23°C | ISO 179-1/1eU)	
d.a.m.	100 kJ/m²
conditioned	80 kJ/m²
Charpy impact strength (-30°C | ISO 179-1/1eU)	
d.a.m.	80 kJ/m²
Charpy notched impact strength (23°C | ISO 179-1/1eA)	
d.a.m.	35 kJ/m²
conditioned	35 kJ/m²
Charpy notched impact strength (-30°C | ISO 179-1/1eA)	
d.a.m.	35 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A (1,8 MPa | ISO 75)	200 °C
Temperature of deflection under load HDT/C (8 MPa | ISO 75)	190 °C
Melting 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)	0,12 1,0E-4/K
Coefficent of linear thermal expansion, transverse (23°C bis 80°C | ISO 11359-1/2)	0,93 1,0E-4/K

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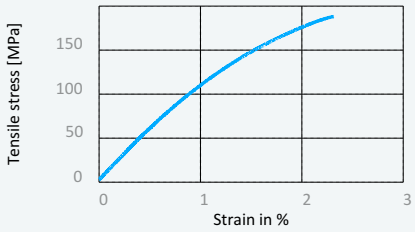
Stress strain chart at 23°C



General properties

Density (23°C | ISO 1183)	1,36 g/cm³
Humidity absorption (70°C, 62% r.H. | ISO 1110)	1,2 %
Molding shrinkage (flow | ISO 294-4)	0,3-0,5 %
Molding shrinkage (transverse | ISO 294-4)	0,6-0,8 %

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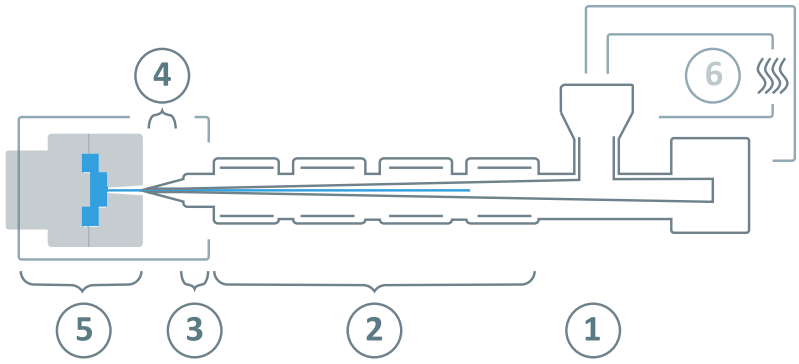
Processing information

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 - 290°C
3	Nozzle temperature	270 - 300°C
4	Melt temperature	270 - 290°C
5	Mold temperature	80 - 100°C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	10 - 30 bar
	Injection speed	slow to medium
	Screw speed	5 - 15 m/min