

PA6.6 – Polyamide 6.6 PA66+PA6I/6T GF40

AKROLOY® PA GF 40 natural (6413)

Tensile modulus

13000 MPa

1 mm/min

ISO 527-2

Stress at break

235 MPa

5 mm/min

ISO 527-2

Charpy impact strength

95 kJ/m²

23°C

ISO 179-1/1eU

AKROLOY® PA GF 40 natural (6413) is a 40% glass fibre reinforced, semi-aromatic polyamide blend with very high stiffness and strength, even in conditioned state.

Typical applications

Components with high dimensional stability, independent from moisture content. AKROLOY® PA GF 40 is an alternative for aluminium- and zinc diecast alloys.



Mechanical Properties

Tensile modulus (1 mm/min ISO 527-2) d.a.m.	13000 MPa
Stress at break (5 mm/min ISO 527-2) d.a.m.	235 MPa
Strain at break (5 mm/min ISO 527-2) d.a.m.	2,9 %
Flexural modulus (2 mm/min ISO 178) d.a.m.	12500 MPa
Flexural strength (2 mm/min ISO 178) d.a.m.	330 MPa
Flexural strain at break (2 mm/min ISO 178) d.a.m.	3,1 %
Charpy impact strength (23°C ISO 179-1/1eU) d.a.m.	95 kJ/m ²
Charpy notched impact strength (23°C ISO 179-1/1eA) d.a.m.	15 kJ/m ²



Thermal Properties

Temperature of deflection under load HDT/A (1,8 MPa ISO 75)	237 °C
Temperature of deflection under load HDT/C (8 MPa ISO 75)	173 °C
Melt temperature (DSC, 10K/min DIN EN 11357-1)	255 °C



General properties

Density (23°C ISO 1183)	1,47 g/cm ³
Molding shrinkage (flow ISO 294-4)	0,3 %
Molding shrinkage (transverse ISO 294-4)	0,8 %



Rheological Properties

Flowability (1mm Thickness AKRO)	140 mm
Flowability (2mm Thickness AKRO)	400 mm

Disclaimer:

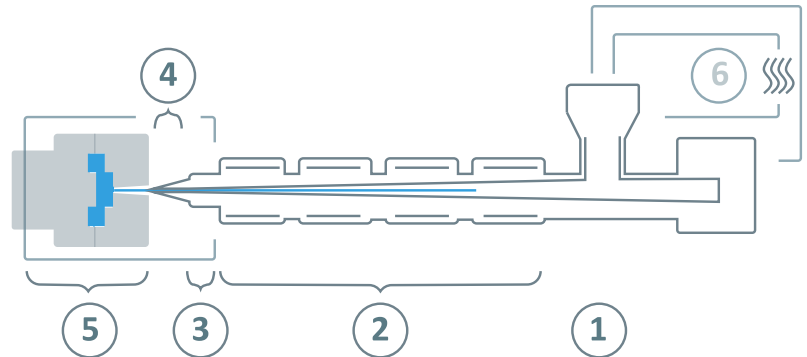
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Processing information

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 - 300°C
④	Melt temperature	280 - 300°C
⑤	Mold temperature	90 - 130°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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