

AKROLOY®

PA GF 50 black (6507)

PA66+PA6I/6T GF50

AKROLOY® PA GF 50 black (6507) is a 50% glass fibre reinforced, semi-aromatic polyamide-blend with very high stiffness and strength, even in conditioned state. Consider the UL-listed version PA GF 50 HU black (8198)

Features

reduced moisture metal substitution

Properties

Modulus

17.000 MPa

Strength

265 MPa

Impact

105 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

17000 MPa

1 mm/min | conditioned

15500 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

265 MPa

5 mm/min | conditioned

190 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,7 %

5 mm/min | conditioned

2,7 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

16500 MPa

2 mm/min | conditioned

15000 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

385 MPa

2 mm/min | conditioned

285 MPa

Flexural strain at break

ISO 178

2 mm/min | d.a.m.

2,8 %

2 mm/min | conditioned

2,6 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

105 kJ/m²

23°C | conditioned

100 kJ/m²

-30°C | d.a.m.

95 kJ/m²

-40°C | d.a.m.

95 kJ/m²

Charpy notched impact strength

ISO 179-1/eA

23°C | d.a.m.

18 kJ/m²

23°C | conditioned

17 kJ/m²

-30°C | d.a.m.

17 kJ/m²

-40°C | d.a.m.

17 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

245 °C

Temperature of deflection under load HDT/C

ISO 75

8 MPa

185 °C

Melting temperature

ISO 11357-3

DSC, 10K/min

255 °C

Coefficient of linear thermal expansion

ISO 11359-1/2

23°C to 80°C | parallel

0,15 10⁻⁴/K

23°C to 80°C | transverse

0,65 10⁻⁴/K

Temperature index for 50% loss of tensile strength

IEC 60216

5.000 h

150 °C

20.000 h

115 °C

Flammability

Flammability

UL 94

0,8 mm Wall thickness

HB Class

GWFI

IEC 60695-2-12

1,6 mm Wall thickness

650 °C

GWIT

IEC 60695-2-13

1,6 mm Wall thickness

675 °C

Burning rate (<100 mm/min)

FMVSS 302

> 1 mm Thickness

+

General Properties

Density

ISO 1183

23°C

1,56 g/cm³

Humidity absorption

ISO 1110

70°C, 62% r.H.

1,3 - 1,5 %

Molding shrinkage

ISO 294-4

flow

0,1 - 0,3 %

transverse

0,3 - 0,5 %

Electrical Properties

Comparative tracking index

IEC 60112

Test liquid A

600 V

Rheological Properties

Flowability

AKRO

1 mm Thickness

100 mm

2 mm Thickness

260 mm

Processing

The values mentioned are recommendations. We only recommend desiccant / dry air dryers or vacuum dryers. Too long a drying time and the resulting residual moisture content below the lower limit can lead to filling problems and surface defects. The specified drying time refers to closed and undamaged bagged material. When processing from previously opened bags or from octabins with polyolefin inliners, a longer drying time may be necessary. It is recommended to check the residual moisture content after the drying process.



D	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

Diagrams

