

AKROMID® UL PRELIMINARY A3 GF 50 8 HU black (8116)

PA66 GF50

AKROMID® A3 GF 50 8 HU black (8116) is a 50% glass fibre reinforced, heat ageing resistant polyamide 6.6 with very high rigidity and strength. This UL94 HB all colors listed grade is suitable for technical components in household appliances and mechanical engineering. This grade is listed according to NSF61 and WRAS and complies to the EU10/2011 requirements. It doesn't meet the FDA requirements.

Features

heat stabilised 130

Regulatory



Properties

Modulus

17.400 MPa

Strength

265 MPa

Impact

115 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

17400 MPa

1 mm/min | conditioned

13400 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.

2,9 %

5 mm/min | conditioned

3,9 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

115 kJ/m²

23°C | conditioned

120 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

24 kJ/m²

23°C | conditioned

29 kJ/m²

UV Exposure and Water Immersion

UL 746C

UL

f1

Thermal Properties

Temperature of deflection under load HDT/A	1,8 MPa	260 °C
ISO 75		

Melting temperature	DSC, 10K/min	262 °C
ISO 11357-3		

Flammability

Flammability	UL 0,8 mm Wall thickness	HB Class
UL 94	UL 1,6 mm Wall thickness	HB Class
	UL 3,2 mm Wall thickness	HB Class

HWI	UL 0,4 mm Wall thickness	4 PLC
UL 746A	UL 0,8 mm Wall thickness	4 PLC
	UL 1,6 mm Wall thickness	4 PLC
	UL 3,2 mm Wall thickness	4 PLC

HAI	UL 0,4 mm Wall thickness	0 PLC
UL 746A	UL 0,8 mm Wall thickness	0 PLC
	UL 1,6 mm Wall thickness	0 PLC
	UL 3,2 mm Wall thickness	0 PLC

General Properties

Density	23°C	1,57 g/cm ³
ISO 1183		

Humidity absorption	70°C, 62% r.H.	1,3 - 1,5 %
ISO 1110		

Water absorption	23°C, saturated	3,7 - 4,3 %
ISO 62		

Molding shrinkage	flow	0,1 - 0,3 %
ISO 294-4	transverse	0,5 - 0,7 %

Electrical Properties

Volume resistivity	UL d.a.m.	10 ¹¹ Ω x cm
IEC 62631-3-1		

Comparative tracking index

ASTM D3638

UL

0 PLC

Dielectric strength

IEC 60243

UL 3 mm

12 kV/mm

High voltage arc tracking rate (HVTR)

UL 746A

UL

1 PLC

High Volt, Low Current Arc Resistance

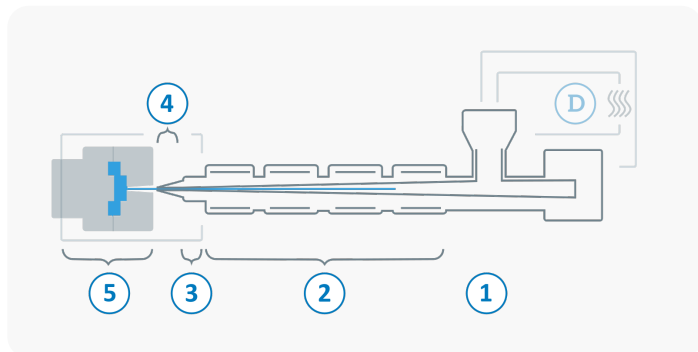
ASTM D495

UL

5 PLC

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 - 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