

AKROMID®

A3 GF 30 FR natural (7087)

PA66 GF30 FR(40)

AKROMID® A3 GF 30 FR natural (7087) is a 30 % glass fibre reinforced, flame-retardant and heat-stabilized PA6.6. The material is listed by UL in all-colors. It is based on a flame retardant system that is free from red phosphorus, halogens, PFAS, zinc borate and melamine. For applications where RTI values are required, we refer to our AKROMID® C3 GF 30 1 FR natural (7207), which is also characterized by high flow properties and improved surface quality.

Features

heat stabilised 130 flame retardant E&E E-Mobility

Regulatory



Properties

Modulus

10.000 MPa

Strength

140 MPa

Impact

61 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

10000 MPa

1 mm/min | conditioned

7600 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

140 MPa

5 mm/min | conditioned

102 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3 %

5 mm/min | conditioned

4 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

61 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

245 °C

Temperature of deflection under load HDT/B

ISO 75

0,45 MPa

261 °C

Melting temperature

ISO 11357-3

DSC, 10K/min

260 °C

Flammability

Flammability

UL 94

UL 0,4 mm Wall thickness

V-0 Class

UL 0,8 mm Wall thickness

V-0 Class

UL 1,6 mm Wall thickness

V-0 Class

UL 3,2 mm Wall thickness

V-0 Class

GWFI

IEC 60695-2-12

UL 0,4 mm Wall thickness

960 °C

UL 0,8 mm Wall thickness

960 °C

UL 1,6 mm Wall thickness

960 °C

UL 3,2 mm Wall thickness

960 °C

GWIT

IEC 60695-2-13

UL 0,4 mm Wall thickness

750 °C

UL 0,8 mm Wall thickness

750 °C

UL 1,6 mm Wall thickness

750 °C

UL 3,2 mm Wall thickness

775 °C

HWI

UL 746A

UL 0,4 mm Wall thickness

0 PLC

UL 0,8 mm Wall thickness

0 PLC

UL 1,6 mm Wall thickness

0 PLC

UL 3,2 mm Wall thickness

0 PLC

HAI

UL 746A

UL 0,4 mm Wall thickness

0 PLC

UL 0,8 mm Wall thickness

0 PLC

UL 1,6 mm Wall thickness

0 PLC

UL 3,2 mm Wall thickness

0 PLC

Burning rate (<100 mm/min)

FMVSS 302

> 1 mm Thickness

+

General Properties

Density

ISO 1183

23°C

1,37 g/cm³

Humidity absorption

ISO 1110

70°C, 62% r.H.

1,9 - 2,1 %

Water absorption

ISO 62

23°C, saturated

5,3 - 5,6 %

Molding shrinkage	flow	0,1 - 0,3 %
ISO 294-4	transverse	0,7 - 0,9 %

Electrical Properties

Volume resistivity	d.a.m.	$10^{13} \Omega \times \text{cm}$
IEC 62631-3-1		

Comparative tracking index	Test liquid A	600 V
IEC 60112		

Comparative tracking index	UL	0 PLC
ASTM D3638		

Dielectric strength	UL 3 mm	15 kV/mm
IEC 60243		

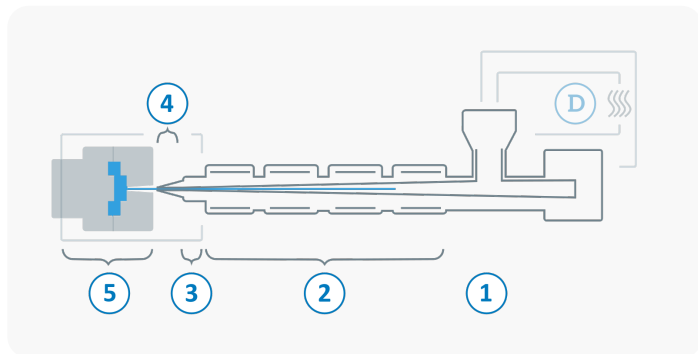
Inclined-Plane Tracking, IPT	UL	1 kV
ASTM D2303-13		

High voltage arc tracking rate (HVTR)	UL	1 PLC
UL 746A		

High Volt, Low Current Arc Resistance	UL	6 PLC
ASTM D495		

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	2 - 4 h
	Drying temperature ($\tau \leq -30^{\circ}\text{C}$)	80 °C
	Processing moisture	0,02 - 0,08 %
1	Feed section	60 - 80 °C
2	Temperature Zone 1 - Zone 4	260 - 290 °C
3	Nozzle temperature	260 - 300 °C
4	Melt temperature	270 - 290 °C
5	Mold temperature	60 - 100 °C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	30 - 100 bar
	Injection speed	medium
	Screw speed	5 - 10 m/min