

AKROMID®

A3 GF 30 FR orange (7871)

PA66 GF30 FR(40)

AKROMID® A3 GF 30 FR orange (7871) is a 30 % glass fibre reinforced, flame-retardant and heat-stabilized PA6.6, colored in orange similar to RAL 2003. 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 orange (7855), which is also characterized by high flow properties and improved surface quality.

Features

flame retardant

Regulatory



Properties

Modulus

10.400 MPa

Strength

140 MPa

Impact

60 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

10400 MPa

1 mm/min | conditioned

7200 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

140 MPa

5 mm/min | conditioned

100 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,3 %

5 mm/min | conditioned

3,5 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

60 kJ/m²

23°C | conditioned

65 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

10 kJ/m²

23°C | conditioned

12 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	246 °C
Temperature of deflection under load HDT/B ISO 75	0,45 MPa	261 °C
Melting temperature ISO 11357-3	DSC, 10K/min	262 °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

General Properties

Density ISO 1183	23°C	1,38 g/cm³
Humidity absorption ISO 1110	70°C, 62% r.H.	1,9 - 2,1 %

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

Electrical Properties

Volume resistivity	d.a.m.	$10^{15} \Omega \times \text{cm}$
IEC 62631-3-1	UL conditioned	$10^{13} \Omega \times \text{cm}$

Surface resistivity	d.a.m.	$10^{13} \Omega$
IEC 62631-3-2	conditioned	$10^{13} \Omega$

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		

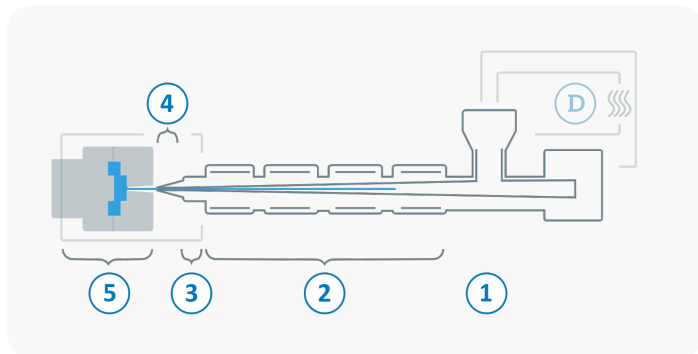
Inclined-Plane Tracking, IPT	UL	1 kV
ASTM D2303-13		

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