

AKROMID®

B28 GF 25 9 FR orange (8644)

PA6 GF25 FR(40)

AKROMID® B28 GF 25 9 FR orange (8644) is a flame retardant PA6 with 25% glass fibres, colored in orange, similar to RAL 2003. The flame retardant system is free of red phosphorus and halogens, leading to optimised electrical properties for e-mobility applications. This grade is UL listed with a V0 classification at 1.6mm. Due to its very good flowability, it is characterised by easy processability as well as good surface properties. The material has excellent long-term thermal stability and outstanding mechanical properties.

Features

heat stabilised 130 electrically neutral flame retardant

easy flow E-Mobility

Regulatory



Properties

Modulus

9.000 MPa

Strength

135 MPa

Impact

81 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

9000 MPa

1 mm/min | conditioned

6000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

135 MPa

5 mm/min | conditioned

95 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3,7 %

5 mm/min | conditioned

7,0 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

81 kJ/m²

23°C | conditioned

83 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A

ISO 75

 1,8 MPa

207 °C

Melting temperature ISO 11357-3	DSC, 10K/min	220 °C
Temperature index for 50% loss of tensile strength IEC 60216	5,000 h 20,000 h	165 °C 135 °C

Flammability

Flammability UL 94	UL 1,6 mm Wall thickness UL 3,2 mm Wall thickness	V-0 Class V-0 Class
GWFI IEC 60695-2-12	1,6 mm Wall thickness	960 °C
HWI UL 746A	UL 1,6 mm Wall thickness UL 3,2 mm Wall thickness	0 PLC 0 PLC
HAI UL 746A	UL 1,6 mm Wall thickness UL 3,2 mm Wall thickness	0 PLC 0 PLC
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

Density ISO 1183	23°C	1,38 g/cm³
Water absorption ISO 62	23°C, saturated	2,1 - 2,3 %
Molding shrinkage ISO 294-4	flow transverse	0,1 - 0,3 % 0,6 - 0,8 %

Electrical Properties

Volume resistivity IEC 62631-3-1	UL d.a.m.	10¹⁰ Ω x cm
Surface resistivity IEC 62631-3-2	UL d.a.m.	10¹² Ω

Comparative tracking index

IEC 60112

Test liquid A

600 V

Comparative tracking index

ASTM D3638

UL

0 PLC

Dielectric strength

IEC 60243

UL 3 mm

18 kV/mm

Inclined-Plane Tracking, IPT

ASTM D2303-13

UL

1,5 kV

High voltage arc tracking rate (HVTR)

UL 746A

UL

1 PLC

High Volt, Low Current Arc Resistance

ASTM D495

UL

4 PLC

Rheological Properties

Flowability

AKRO

1 mm Thickness

130 mm

2 mm Thickness

410 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	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	220 - 280 °C
3	Nozzle temperature	240 - 280 °C
4	Melt temperature	240 - 280 °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