

AKROMID®

B28 GF 35 FR EN black (7484)

PA6 GF35 FR(40)

AKROMID® B28 GF 35 FR EN black (7484) is a flame retardant PA6 with 35% glass fibres. The flame retardant system is free of red phosphorus and halogens, leading to optimised electrical properties for e-mobility applications. Due to formulation and production measures, electrical neutrality with regard to halogen compounds < 10 ppm for bromine + iodine can be guaranteed. Due to its very good flowability, it is characterised by easy processability as well as good surface properties. The material has excellent long-term heat stability and outstanding mechanical properties. This product is subject to an increased testing effort.

Features

heat stabilised 130 electrically neutral flame retardant easy flow E&E E-Mobility

Properties

Modulus

12.600 MPa

Strength

152 MPa

Impact

70 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

12600 MPa

1 mm/min | conditioned

8300 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

152 MPa

5 mm/min | conditioned

108 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,6 %

5 mm/min | conditioned

4,0 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

11800 MPa

2 mm/min | conditioned

9000 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

240 MPa

2 mm/min | conditioned

179 MPa

Flexural strain at break

ISO 178

2 mm/min | d.a.m.

2,8 %

2 mm/min | conditioned

3,6 %

Charpy impact strength	23°C d.a.m.	70 kJ/m²
ISO 179-1/1eU	-30°C d.a.m.	70 kJ/m²
Charpy notched impact strength	23°C d.a.m.	12 kJ/m²
ISO 179-1/1eA	23°C conditioned	14 kJ/m²
	-30°C d.a.m.	11 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A	1,8 MPa	211 °C
ISO 75		
Melting temperature	DSC, 10K/min	222 °C
ISO 11357-3		
Temperature index for 50% loss of tensile strength	5.000 h	165 °C
IEC 60216	20.000 h	135 °C

Flammability

Flammability	1,6 mm Wall thickness	V-0 Class
UL 94	3,2 mm Wall thickness	V-0 Class
GWFI	0,8 mm Wall thickness	960 °C
IEC 60695-2-12	1,6 mm Wall thickness	850 °C
HWI	1,6 mm Wall thickness	0 PLC
UL 746A		
HAI	1,6 mm Wall thickness	0 PLC
UL 746A	3,2 mm Wall thickness	0 PLC
Burning rate (<100 mm/min)	> 1 mm Thickness	+
FMVSS 302		

General Properties

Density	23°C	1,46 g/cm³
ISO 1183		
Humidity absorption	70°C, 62% r.H.	1,6 - 1,8 %
ISO 1110		

Molding shrinkage	flow	0,1 - 0,3 %
ISO 294-4	transverse	0,4 - 0,6 %

Electrical Properties

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

Surface resistivity	d.a.m.	$10^{11} \Omega$
IEC 62631-3-2		

Comparative tracking index	Test liquid A	600 V
IEC 60112		

Dielectric strength	3 mm	22 kV/mm
IEC 60243		

Inclined-Plane Tracking, IPT		1,5 kV
ASTM D2303-13		

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

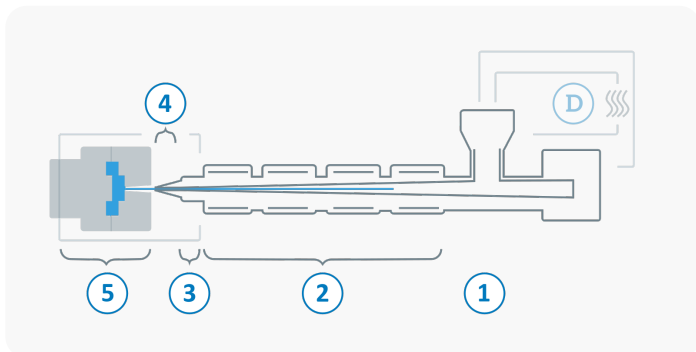
High Volt, Low Current Arc Resistance		6 PLC
ASTM D495		

Rheological Properties

Flowability	2 mm Thickness	380 mm
AKRO		

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

Diagrams

