

AKROMID®

C3 GF 25 1 FR orange (7854)

PA66+PA6 GF25 FR(40)

AKROMID® C3 GF 25 1 FR orange (7854) is a 25 % glass fiber reinforced, flame retardant and heat stabilised PA6/6.6 blend, colored in orange similar to RAL 2003. This material is listed in all colors according to UL 94 including excellent RTI values. It is based on a flame retardant system that is free of red phosphorus, PFAS, zinc borate, halogens and melamine. Due to its good flowability, an improved surface quality is achieved. This grade is also suitable for high voltage components in e-mobility.

Features

heat stabilised 130 flame retardant surface modified
easy flow E-Mobility

Regulatory



Properties

Modulus

9.000 MPa

Strength

126 MPa

Impact

61 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

9000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

126 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,5 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

61 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

9 kJ/m²

Thermal Properties

RTI electrical UL 746B	UL 0,8mm Wall thickness	150 °C
	UL 1,6mm Wall thickness	150 °C
	UL 3,2mm Wall thickness	150 °C
RTI impact UL 746B	UL 0,8mm Wall thickness	125 °C
	UL 1,6mm Wall thickness	125 °C
	UL 3,2mm Wall thickness	125 °C
RTI strength UL 746B	UL 0,8mm Wall thickness	140 °C
	UL 1,6mm Wall thickness	140 °C
	UL 3,2mm Wall thickness	140 °C
Melting temperature ISO 11357-3	DSC, 10K/min	262 °C
Temperature index for 50% loss of tensile strength IEC 60216	5.000 h	155 °C
	20.000 h	130 °C

Flammability

Flammability UL 94	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 0,8 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 0,8 mm Wall thickness	750 °C
	UL 1,6 mm Wall thickness	750 °C
	UL 3,2 mm Wall thickness	750 °C
HWI 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
HAI 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
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

Density ISO 1183	23°C	1,38 g/cm ³
Humidity absorption ISO 1110	70°C, 62% r.H.	1,8 - 2,0 %
Molding shrinkage ISO 294-4	flow	0,1 - 0,3 %
	transverse	0,5 - 0,7 %

Electrical Properties

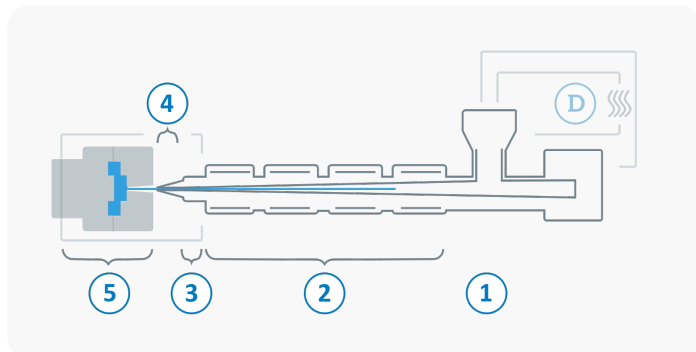
Volume resistivity IEC 62631-3-1	UL d.a.m.	10 ¹² Ω x cm
Comparative tracking index IEC 60112	Test liquid A	600 V
Comparative tracking index ASTM D3638	UL	0 PLC
Dielectric strength IEC 60243	UL 3 mm	12 kV/mm
Inclined-Plane Tracking, IPT ASTM D2303-13		1 kV
High voltage arc tracking rate (HVTR) UL 746A	UL	1 PLC
High Volt, Low Current Arc Resistance ASTM D495	UL	6 PLC

Rheological Properties

Flowability AKRO	1 mm Thickness	220 mm
	2 mm Thickness	480 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	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