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AKRO COMPOUNDS

Compound No.: **8069**

AKROMID® UL PRELIMINARY
B28 GF 30 9 FR natural (8069)

PA6 GF 30 FR(40)

AKROMID® B28 GF 30 9 FR natural (8069) is a flame retardant PA6 with 30% glass fibres. 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&E

Regulatory

Properties

Modulus	Strength	Impact
10.200 MPa	**144** MPa	**80** kJ/m²

Mechanical Properties

Tensile modulus ISO 527-2	1 mm/min | d.a.m. 1 mm/min | conditioned	**10200 MPa** **6900 MPa**
Tensile stress at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**144 MPa** **96 MPa**
Tensile strain at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**3,5 %** **4,6 %**
Charpy impact strength ISO 179-1/1eU	23°C | d.a.m. 23°C | conditioned	**80 kJ/m²** **77 kJ/m²**

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	UL 1,8 MPa	**207 °C**

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Melting temperature ISO 11357-3	DSC, 10K/min	**220 °C**
Coefficient of linear thermal expansion ISO 11359-1/2	23°C to 80°C | parallel 23°C to 80°C | transverse	**0,19 10^{-4}/K** **0,85 10^{-4}/K**
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	**1,42 g/cm^3**
Humidity absorption ISO 1110	70°C, 62% r.H.	**2,0 - 2,2 %**
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.	**10^{10} Ω x cm**

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Surface resistivity IEC 62631-3-2	UL d.a.m.	**10^{12} 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**

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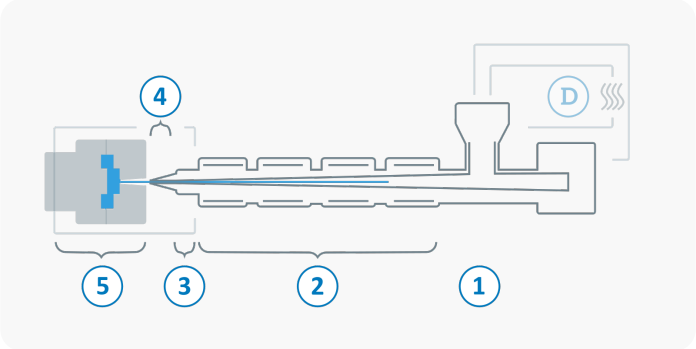
Processing

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 (τ <= -30°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