+135-3858-6433 (GuangDong)
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AKRO COMPOUNDS

Compound No.: **null**

AKROMID®
NEXT C3 GF 30 1 FR natural (7207BMBCI)

PA66+PA6 GF30 FR(40)

AKROMID® C3 GF 30 1 FR natural (7207BMBCI) is a 30 % glass fiber reinforced, flame retardant and heat stabilised PA6/6.6 blend. The flame retardant system is free of halogens, red phosphorus, PFAS and melamine. Due to its good flowability, an improved surface quality is achieved. This grade is also suitable E&E applications (e.g. control cabinets) as well as for railroad applications and meets the requirements for public transportation (EN 45545-2 R22/23/24/26 HL3). The material is certified according to ISCC PLUS. 98 % of the fossil raw materials required for manufacturing this product were replaced by sustainable biomass-balanced PA and FR (¥allocation factor).

Features

biomass balanced | heat stabilised 130 | electrically neutral | flame retardant | easy flow | E&E | public transportation | Sports & leisure | E-Mobility

Regulatory

EN45545-2 | ISCC International Sustainability & Carbon Certification

Properties

Modulus	Strength	Impact
10.700 MPa	**150** MPa	**76** kJ/m²

Sustainability

Allocation factor only valid for ISCC PLUS/REDcert² certified products	**98 %**

Mechanical Properties

Tensile modulus ISO 527-2	1 mm/min | d.a.m.	**10700 MPa**
	1 mm/min | conditioned	**7200 MPa**
Tensile stress at break ISO 527-2	5 mm/min | d.a.m.	**150 MPa**
	5 mm/min | conditioned	**104 MPa**
Tensile strain at break ISO 527-2	5 mm/min | d.a.m.	**3,1 %**
	5 mm/min | conditioned	**5,3 %**

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Charpy impact strength ISO 179-1/1eU	23°C | d.a.m. 23°C | conditioned	**76 kJ/m²** **76 kJ/m²**
Charpy notched impact strength ISO 179-1/1eA	23°C | d.a.m. 23°C | conditioned	**13 kJ/m²** **16 kJ/m²**

Thermal Properties

RTI electrical UL 746B	0,4mm Wall thickness 0,8mm Wall thickness 1,6mm Wall thickness 3,2mm Wall thickness	**140 °C** **150 °C** **150 °C** **150 °C**
RTI impact UL 746B	0,4mm Wall thickness 0,8mm Wall thickness 1,6mm Wall thickness 3,2mm Wall thickness	**120 °C** **125 °C** **125 °C** **125 °C**
RTI strength UL 746B	0,4mm Wall thickness 0,8mm Wall thickness 1,6mm Wall thickness 3,2mm Wall thickness	**135 °C** **140 °C** **140 °C** **140 °C**
Temperature of deflection under load HDT/A ISO 75	1,8 MPa	**225 °C**
Temperature of deflection under load HDT/B ISO 75	0,45 MPa	**251 °C**
Temperature of deflection under load HDT/C ISO 75	8 MPa	**168 °C**
Melting temperature ISO 11357-3	DSC, 10K/min	**262 °C**
Ball pressure test IEC 60695-10-2		**> 210 °C**
Temperature index for 50% loss of tensile strength IEC 60216	5.000 h 20.000 h	**155 °C** **130 °C**

Flammability

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Flammability UL 94	0,4 mm Wall thickness	**V-0 Class**
	0,8 mm Wall thickness	**V-0 Class**
	1,6 mm Wall thickness	**V-0 Class**
	3,2 mm Wall thickness	**V-0 Class**
Burning rate 5V UL 94	1,6 mm Wall thickness	**5VA Class**
	3,2 mm Wall thickness	**5VA Class**
GWFI IEC 60695-2-12	0,4 mm Wall thickness	**960 °C**
	0,8 mm Wall thickness	**960 °C**
	1,6 mm Wall thickness	**960 °C**
	3,2 mm Wall thickness	**960 °C**
GWIT IEC 60695-2-13	0,4 mm Wall thickness	**725 °C**
	0,8 mm Wall thickness	**725 °C**
	1,6 mm Wall thickness	**725 °C**
	3,2 mm Wall thickness	**775 °C**
HWI UL 746A	0,4 mm Wall thickness	**0 PLC**
	0,8 mm Wall thickness	**0 PLC**
	1,6 mm Wall thickness	**0 PLC**
	3,2 mm Wall thickness	**0 PLC**
HAI UL 746A	0,4 mm Wall thickness	**0 PLC**
	0,8 mm Wall thickness	**0 PLC**
	1,6 mm Wall thickness	**0 PLC**
	3,2 mm Wall thickness	**0 PLC**
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	**+**
Protection Train EN 45545-2		**R22/R23/R24/R26 HL3**

General Properties

Density ISO 1183	23°C	**1,43 g/cm³**
Humidity absorption ISO 1110	70°C, 62% r.H.	**1,6 - 1,8 %**
Molding shrinkage ISO 294-4	flow	**0,1 - 0,3 %**
	transverse	**0,6 - 0,8 %**

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Electrical Properties

Volume resistivity IEC 62631-3-1	d.a.m.	**10^{12} Ω x cm**
Comparative tracking index IEC 60112	Test liquid A	**600 V**
Comparative tracking index ASTM D3638		**0 PLC**
Dielectric strength IEC 60243	1 mm	**24,6 kV/mm**
Inclined-Plane Tracking, IPT ASTM D2303-13		**1 kV**
High voltage arc tracking rate (HVTR) UL 746A		**0 PLC**
High Volt, Low Current Arc Resistance ASTM D495		**6 PLC**

Rheological Properties

Flowability AKRO	2 mm Thickness	**460 mm**

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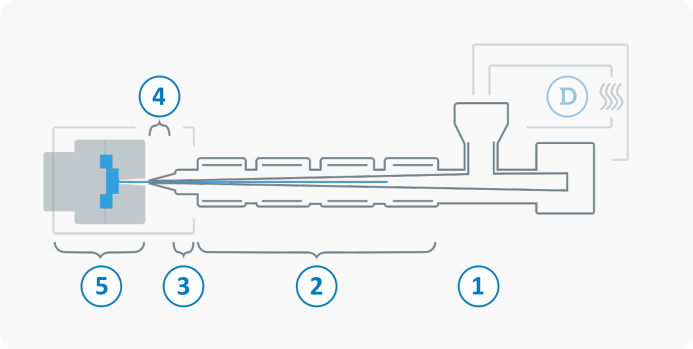
Processing

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	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