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AKRO COMPOUNDS

Compound No.: **8104**

AKROMID® PRELIMINARY
T91 GF 30 FR orange (8104)

PPA GF30 FR(40)

AKROMID® T91 GF 30 FR orange (8104) is a flame retardant and 30% glass fiber reinforced Polyamide 9T with high stiffness and strength. This material is based on the latest flame retardant technology, that is free of red phosphorous, melamine, PFAS and halogenes. This product is characterised by very high flowability for thin walled parts. Due its high melting point and low water uptake it is a perfect candidate for SMT devices. This grade is colored in orange similar to RAL 2003 for e-mobility applications

Features

heat stabilised 130 | hydrolysis / chemically stabilised | electrically neutral | flame retardant | laser markable | reduced moisture | easy flow | process improved | metal substitution | E-Mobility

Properties

Modulus	Strength	Impact
9.900 MPa	**110** MPa	**30** kJ/m²

Mechanical Properties

Tensile modulus ISO 527-2	1 mm/min | d.a.m. 1 mm/min | conditioned	**9900 MPa** **9800 MPa**
Tensile stress at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**110 MPa** **110 MPa**
Tensile strain at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**1,5 %** **1,5 %**
Charpy impact strength ISO 179-1/1eU	23°C | d.a.m.	**30 kJ/m²**
Charpy notched impact strength ISO 179-1/1eA	23°C | d.a.m.	**5 kJ/m²**

Thermal Properties

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Temperature of deflection under load HDT/A ISO 75	1,8 MPa	**265 °C**
Temperature of deflection under load HDT/B ISO 75	0,45 MPa	**> 280 °C**
Glass transition temperature ISO 11357-2	DSC, 2nd heating	**125 °C**
Melting temperature ISO 11357-3	DSC, 10K/min	**305 °C**

Flammability

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**
GWFI IEC 60695-2-12	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	0,8 mm Wall thickness	**800 °C**
	1,6 mm Wall thickness	**825 °C**
	3,2 mm Wall thickness	**850 °C**

General Properties

Density ISO 1183	23°C	**1,43 g/cm³**
Humidity absorption ISO 1110	70°C, 62% r.H.	**0,6 - 0,7 %**
Molding shrinkage ISO 294-4	flow	**0,2 - 0,4 %**
	transverse	**0,8 - 1,0 %**

Electrical Properties

Comparative tracking index IEC 60112	Test liquid A	**600 V**

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Dielectric strength IEC 60243	1 mm	**37 kV/mm**

Rheological Properties

Flowability AKRO	2 mm Thickness	**600 mm**

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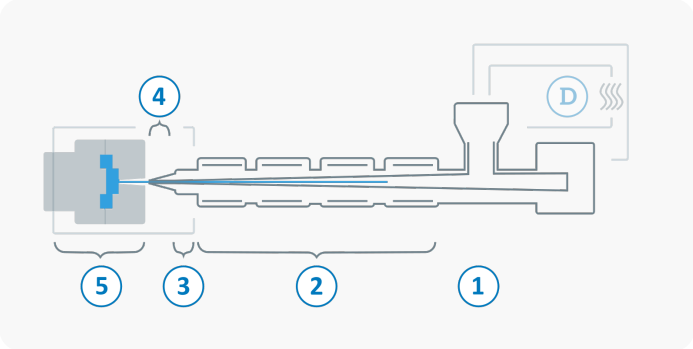
Processing

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	0 - 4 h
	Drying temperature (τ <= -30°C)	120 °C
	Processing moisture	<0,05 %
1	Feed section	60 - 90 °C
2	Temperature Zone 1 - Zone 4	305 - 325 °C
3	Nozzle temperature	310 - 340 °C
4	Melt temperature	310 - 325 °C
5	Mold temperature	>135 °C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 - 150 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min