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AKROMID® PRELIMINARY
NEXT 5.6 3 GF 35 9 FR natural (8401)

PA56 GF35 FR(40)

AKROMID® NEXT 5.6 3 GF 35 9 FR natural (8401) is a partially bio-based and flame retardant PA 5.6 and meets the requirement according to UL94 V0 @ 1.6 mm. The flame-retardant system is free of red phosphorus and halogens. PA 5.6 is a HMD-free (hexamethylenediamine) alternative to PA 6.6. With 35% glass fibre reinforcement, the material is suitable for components with high strength requirements for E&E and E-Mobility, such as busbar supports, switches, terminal strips and connector housings.

Features

Bio-based | heat stabilised 130 | flame retardant | E&E

Properties

Modulus	Strength	Impact
12.000 MPa	**160** MPa	**71** kJ/m²

Sustainability

Biobased carbon content	**35 %**

Mechanical Properties

Tensile modulus ISO 527-2	1 mm/min | d.a.m. 1 mm/min | conditioned	**12000 MPa** **7200 MPa**
Tensile stress at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**160 MPa** **105 MPa**
Tensile strain at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**2,5 %** **4,1 %**
Flexural modulus ISO 178	2 mm/min | d.a.m. 2 mm/min | conditioned	**12500 MPa** **7700 MPa**
Flexural strength ISO 178	2 mm/min | d.a.m. 2 mm/min | conditioned	**255 MPa** **160 MPa**

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Flexural strain at break ISO 178	2 mm/min | d.a.m. 2 mm/min | conditioned	**2,8 %** **4,0 %**
Charpy impact strength ISO 179-1/1eU	23°C | d.a.m. 23°C | conditioned -30°C | d.a.m.	**71 kJ/m²** **70 kJ/m²** **69 kJ/m²**
Charpy notched impact strength ISO 179-1/1eA	23°C | d.a.m. 23°C | conditioned -30°C | d.a.m.	**12 kJ/m²** **15 kJ/m²** **11 kJ/m²**

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	**230 °C**
Melting temperature ISO 11357-3	DSC, 10K/min	**254 °C**

Flammability

Flammability UL 94	1,6 mm Wall thickness 3,2 mm Wall thickness	**V-0 Class** **V-0 Class**
GWFI IEC 60695-2-12	0,8 mm Wall thickness 1,6 mm Wall thickness	**960 °C** **900 °C**
GWIT IEC 60695-2-13	0,8 mm Wall thickness 1,6 mm Wall thickness	**725 °C** **725 °C**
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

Density ISO 1183	23°C	**1,43 g/cm³**
Water absorption ISO 62	23°C, saturated	**2,0 %**

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Electrical Properties

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

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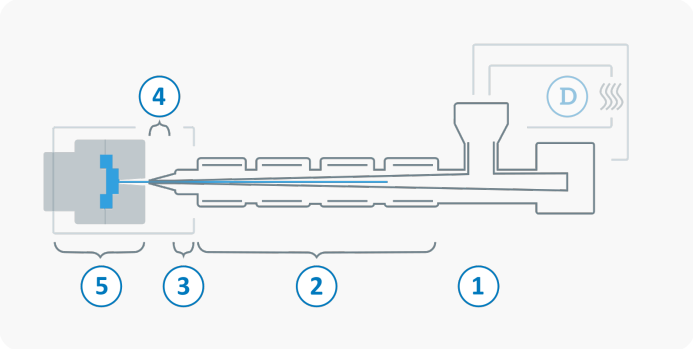
Processing

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)	80 °C
	Processing moisture	0,02 - 0,1 %
1	Feed section	60 - 80 °C
2	Temperature Zone 1 - Zone 4	260 - 300 °C
3	Nozzle temperature	270 - 310 °C
4	Melt temperature	280 - 300 °C
5	Mold temperature	80 - 100 °C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 - 150 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min