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AKRO COMPOUNDS

Compound No.: **8413**

AKROMID® UL
B3 GF 35 1 HU black (8413)

PA6 GF35

AKROMID® B3 GF 35 1 HU black (8413) is a 35% glass fibre reinforced, heat ageing resistant polyamide 6 with high rigidity and strength. This UL94 HB listed grade is suitable for technical components in mechanical engineering and the automotive industry.

Features

heat stabilised 130 | E&E

Regulatory

Properties

Modulus	Strength	Impact
11.500 MPa	**195** MPa	**100** kJ/m²

Mechanical Properties

Tensile modulus ISO 527-2	1 mm/min | d.a.m. 1 mm/min | conditioned	**11500 MPa** **7300 MPa**
Tensile stress at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**195 MPa** **120 MPa**
Tensile strain at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**3 %** **5 %**
Flexural modulus ISO 178	2 mm/min | d.a.m. 2 mm/min | conditioned	**10000 MPa** **7200 MPa**
Flexural strength ISO 178	2 mm/min | d.a.m. 2 mm/min | conditioned	**285 MPa** **195 MPa**
Charpy impact strength ISO 179-1/1eU	23°C | d.a.m. 23°C | conditioned -30°C | d.a.m.	**100 kJ/m²** **110 kJ/m²** **90 kJ/m²**

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Charpy notched impact strength ISO 179-1/1eA	23°C | d.a.m. 23°C | conditioned -30°C | d.a.m.	**15 kJ/m²** **21 kJ/m²** **13 kJ/m²**
Izod impact strength ISO 180/1A	23°C | d.a.m.	**85 kJ/m²**
Izod notched impact strength ISO 180/1A	23°C | d.a.m.	**20 kJ/m²**
Ball indentation hardness ISO 2039-1	961N/30s | d.a.m.	**240 MPa**

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	**215 °C**
Temperature of deflection under load HDT/B ISO 75	0,45 MPa	**220 °C**
Temperature of deflection under load HDT/C ISO 75	8 MPa	**165 °C**
Melting temperature ISO 11357-3	DSC, 10K/min	**220 °C**
Temperature index for 50% loss of tensile strength IEC 60216	5.000 h 20.000 h	**160 - 175 °C** **130 - 150 °C**

Flammability

Flammability UL 94	UL 0,8 mm Wall thickness	**HB Class**
GWFI IEC 60695-2-12	1,6 mm Wall thickness	**650 °C**
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	**+**

General Properties

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Density ISO 1183	23°C	**1,41 g/cm³**
Humidity absorption ISO 1110	70°C, 62% r.H.	**1,8 - 2,1 %**
Water absorption ISO 62	23°C, saturated	**5,9 - 6,5 %**
Molding shrinkage ISO 294-4	flow transverse	**0,1 - 0,3 %** **0,5 - 0,7 %**

Electrical Properties

Volume resistivity IEC 62631-3-1	d.a.m. conditioned	**10^{13} Ω x cm** **10^{10} Ω x cm**
Surface resistivity IEC 62631-3-2	d.a.m. conditioned	**10^{12} Ω** **10^{10} Ω**
Comparative tracking index IEC 60112	UL Test liquid A	**600 V**
Comparative tracking index ASTM D3638	UL	**0 PLC**

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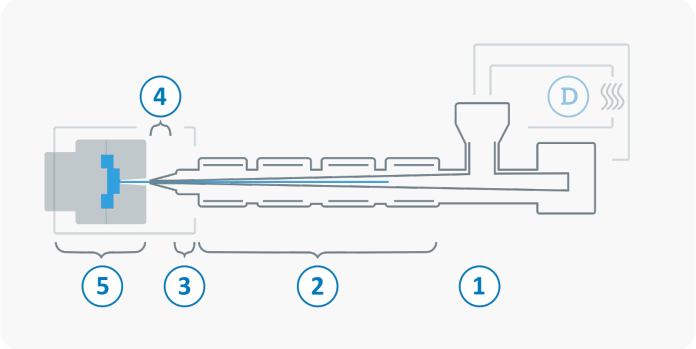
Processing

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	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	240 - 290 °C
3	Nozzle temperature	260 - 300 °C
4	Melt temperature	270 - 290 °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