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AKRO COMPOUNDS

Compound No.: **8186**

AKROLOY® PRELIMINARY

PARA FGF 50 1 black (8186)

PARA FGF50

AKROLOY® PARA FGF 50 1 black (8186) is a 50% flat glass fiber reinforced polyarylamide. Due to the flat glass fiber, the material is characterised by significantly improved properties 90° to the flow direction as well as low warpage. Even in conditioned state, it impresses with very high stiffness and strength owing to its lower moisture uptake. Furthermore, the material shows very good flowability and surface properties. It is perfectly suitable for parts where dimensional stabilitiy is required. Besides, it can be used as an alternative for aluminium and zinc diecast alloys.

Features

surface modified | low warpage | reduced moisture | easy flow | metal substitution

Properties

Modulus	Strength	Impact
19.000 MPa	**295** MPa	**75** kJ/m²

Mechanical Properties

Tensile modulus ISO 527-2	1 mm/min | d.a.m. 1 mm/min | conditioned	**19000 MPa** **19000 MPa**
Tensile stress at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**295 MPa** **265 MPa**
Tensile strain at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**2,0 %** **2,2 %**
Flexural modulus ISO 178	2 mm/min | d.a.m. 2 mm/min | conditioned	**19500 MPa** **19500 MPa**
Flexural strength ISO 178	2 mm/min | d.a.m. 2 mm/min | conditioned	**440 MPa** **405 MPa**
Flexural strain at break ISO 178	2 mm/min | d.a.m. 2 mm/min | conditioned	**2,5 %** **2,5 %**
Charpy impact strength ISO 179-1/1eU	23°C | d.a.m. 23°C | conditioned	**75 kJ/m²** **75 kJ/m²**

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Charpy notched impact strength ISO 179-1/1eA	23°C | d.a.m. 23°C | conditioned	**22 kJ/m²** **22 kJ/m²**

Thermal Properties

Melting temperature ISO 11357-3	DSC, 10K/min	**238 °C**

Flammability

Flammability UL 94	1,6 mm Wall thickness	**HB Class**

General Properties

Density ISO 1183	23°C	**1,65 g/cm³**

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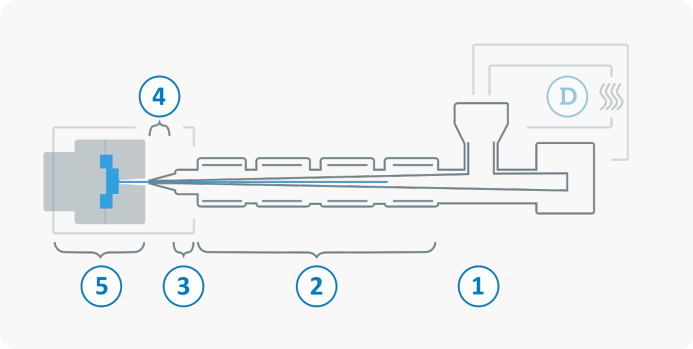
Processing

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	4 - 12 h
	Drying temperature (τ <= -30°C)	80 - 90 °C
	Processing moisture	0,02 - 0,1 %
1	Feed section	60 - 80 °C
2	Temperature Zone 1 - Zone 4	250 - 300 °C
3	Nozzle temperature	270 - 300 °C
4	Melt temperature	270 - 300 °C
5	Mold temperature	120 - 160 °C
→	Holding pressure, spec.	300 - 1500 bar
←	Back pressure, spec.	50 -150 bar
	Injection speed	high
	Screw speed	8 - 10 m/min

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Diagrams