

AKROMID®

A3 GF 30 3 black (21005)

PA66 GF30

AKROMID® A3 GF 30 3 black (21005) is a 30% glass fiber reinforced polyamide 6.6. It is characterised by high stiffness and strength. Furthermore, the material is nucleated and anorganic heat stabilised and therefore perfectly suitable for technical parts in industrial engineering and in the automotive industry which are exposed to higher temperatures.

Features

heat stabilised 160 nucleated

Properties

Modulus

10.000 MPa

Strength

170 MPa

Impact

55 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

10000 MPa

1 mm/min | conditioned

7000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

170 MPa

5 mm/min | conditioned

100 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,5 %

5 mm/min | conditioned

5 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

8800 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

55 kJ/m²

23°C | conditioned

65 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

8 kJ/m²

23°C | conditioned

11 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	255 °C
Temperature of deflection under load HDT/B ISO 75	0,45 MPa	260 °C
Melting temperature ISO 11357-3	DSC, 10K/min	262 °C
Vicat softening temperature B50 ISO 306	50°C/50N	> 230 °C

Flammability

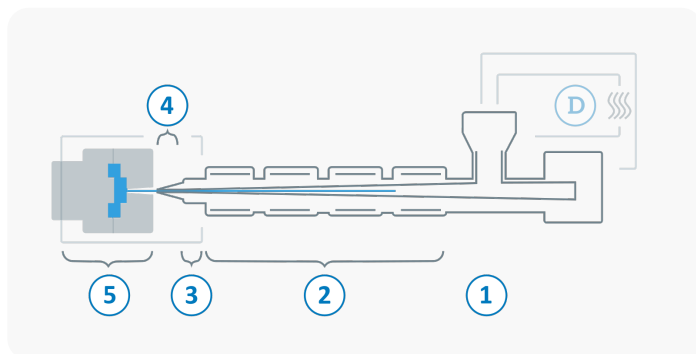
Flammability UL 94	1,6 mm Wall thickness	HB Class
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

Density ISO 1183	23°C	1,37 g/cm³
Humidity absorption ISO 1110	70°C, 62% r.H.	1,9 - 2,1 %
Molding shrinkage ISO 294-4	flow	0,1 - 0,3 %
	transverse	0,7 - 0,9 %

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 ($\tau \leq -30^{\circ}\text{C}$)	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

Diagrams

