

## Datasheet

### Description:

AKROMID® B3 GF 10 1 black (3658) is a 10% glass fibre reinforced, heat stabilised polyamide 6 with medium stiffness and strength, UL listed.

### Applications

Applications are mainly components in mechanical engineering and in the automotive industry

Typical values	Test specification	Method	Unit	Value	
				d.a.m.	moist.*
<b>Mechanical Properties</b>					
Tensile modulus	1 mm/min	ISO 527-2	MPa	4800	2700
Stress at break	5 mm/min	ISO 527-2	MPa	105	55
Strain at break	5 mm/min	ISO 527-2	%	3	17
Flexural modulus	2 mm/min	ISO 178	MPa	3500	
Flexural strength	2 mm/min	ISO 178	MPa	150	
Charpy impact strength	23°C	ISO 179-1/1eU	kJ/m <sup>2</sup>	47	115
Charpy impact strength	-30°C	ISO 179-1/1eU	kJ/m <sup>2</sup>	41	
Charpy notched impact strength	23°C	ISO 179-1/1eA	kJ/m <sup>2</sup>	5	8
Charpy notched impact strength	-30°C	ISO 179-1/1eA	kJ/m <sup>2</sup>	5	

### Thermal Properties

Melting temperature	DSC, 10K/min	DIN EN 11357-1	°C	220
Temp. of deflection under load HDT/A	1,8 MPa	ISO 75	°C	200
Temp. of deflection under load HDT/B	0,45 MPa	ISO 75	°C	220

### Flammability

Wall thickness			mm	0,4	0,8	1,6	2,0	3,2
Flammability		UL 94	class		HB			
Burning rate (< 100 mm/min)	> 1 mm thickness	FMVSS 302						+

### General Properties

Density	23°C	ISO 1183	g/cm <sup>3</sup>	1,2
Content reinforcement/Content Filler		ISO 1172	%	10
Humidity absorption	70°C, 62% r.h.	ISO 1110	%	2,6 - 3,4
Water absorption	23°C, saturated	ISO 62	%	8,5 - 9,0

### Processing

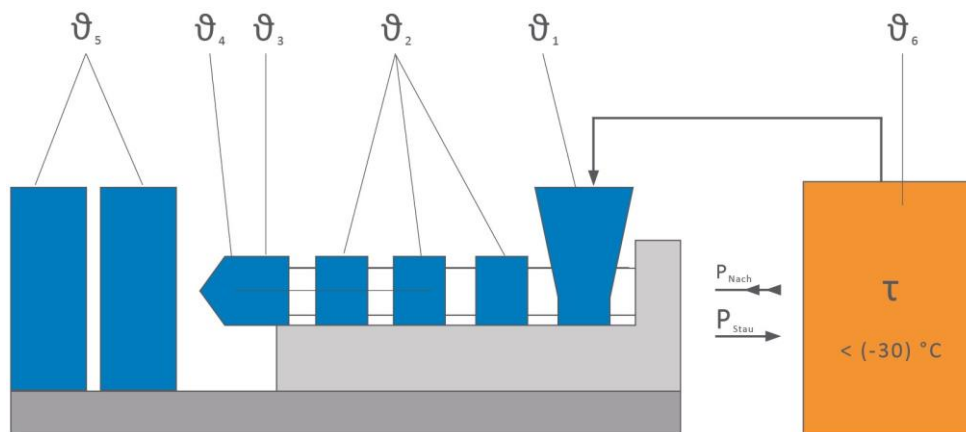
Flowability	7 x 3,5 mm & **	AKRO	mm	950
Molding shrinkage	flow	ISO 294-4	%	0,4
Molding shrinkage	transverse	ISO 294-4	%	0,7

\* = specimen acc. ISO 1110 stored

\*\* = mould temperature: 80°C, melt temperature: 270°C, injection pressure: 750 bar

#### Continuation

#### Processing recommendations



$\vartheta_6$	Drying time	h	0 - 4
$\vartheta_6$	Drying temperature	°C	80
	Processing moisture	%	0,02 - 0,1
$\vartheta_1$	Feed section	°C	60 - 80
$\vartheta_2$	Section 1 - Section 4	°C	240 - 290
$\vartheta_3$	Nozzle	°C	260 - 300
$\vartheta_4$	Melt	°C	270 - 290
$\vartheta_5$	Mould	°C	80 - 100
$P_{Nach}$	Holding pressure, spec.	bar	300 - 800
$P_{Stau}$	Back pressure, spez.	bar	50 - 150
	Injection speed		medium to high
	Screw speed	m/min	8 - 15

The listed values are recommendations. Higher values should be used for higher glass loadings. We recommend only de-humidifying or vacuum dryers. Extensive drying can cause filling problems and surface defects.