

Datasheet

Description:

AKROMID® B3 GF 50 4 RM-M black (3221) is a 50% glass fibre reinforced, chemical stabilised polyamide 6 with low humidity absorption and very good surface finish.

Applications

Applications are housings and other dimensional stable parts in the automotive and electronic industry demanding high resistance against CaCl₂-solvents, as well as a very good surface.

Typical values	Test specification	Method	Unit	Value	
				d.a.m.	moist.*

Mechanical Properties

Tensile modulus	1 mm/min	ISO 527-2	MPa	16500	13000
Stress at break	5 mm/min	ISO 527-2	MPa	210	160
Strain at break	5 mm/min	ISO 527-2	%	2	2,7
Flexural modulus	2 mm/min	ISO 178	MPa	16800	
Flexural strength	2 mm/min	ISO 178	MPa	320	
Charpy impact strength	23°C	ISO 179-1/1eU	kJ/m ²	75	75
Charpy impact strength	-30°C	ISO 179-1/1eU	kJ/m ²	60	60
Charpy notched impact strength	23°C	ISO 179-1/1eA	kJ/m ²	20	20
Charpy notched impact strength	-30°C	ISO 179-1/1eA	kJ/m ²	16	20
Ball indentation hardness	961/30	ISO 2039-1	MPa	280	

Electrical Properties

Surface resistivity		b.o. IEC 60093	Ohm	1,0E+12	
Comparative tracking index	test solution A	IEC 60112		600	

Thermal Properties

Melting temperature	DSC, 10K/min	DIN EN 11357-1	°C	225	
Temp. of deflection under load HDT/A	1,8 MPa	ISO 75	°C	205	
Temp. of deflection under load HDT/C	8 MPa	ISO 75	°C	165	

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 ³	1,6	
Content reinforcement/Content Filler		ISO 1172	%	50	
Humidity absorption	70°C, 62% r.h.	ISO 1110	%	1,2	

Processing

Flowability	7 x 3,5 mm & **	AKRO	mm	500	
Molding shrinkage	flow	ISO 294-4	%	0,3	
Molding shrinkage	transverse	ISO 294-4	%	0,7	

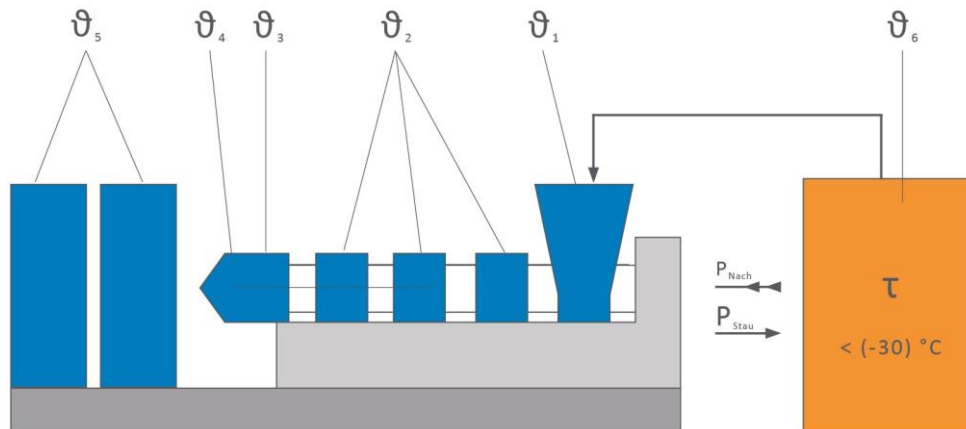
b.o.: based on

* = specimen acc. ISO 1110 stored

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

Continuation

Processing recommendations



ϑ_6 Drying time	h	0 - 4
ϑ_6 Drying temperature	°C	80
Processing moisture	%	0,02 - 0,1
ϑ_1 Feed section	°C	60 - 80
ϑ_2 Section 1 - Section 4	°C	220 - 290
ϑ_3 Nozzle	°C	240 - 300
ϑ_4 Melt	°C	240 - 290
ϑ_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.