

Datasheet

Description:

AKROMID® A3 GF 15 1 black (2382) is a 15% glass fibre reinforced, heat stabilised polyamide 6.6 with medium stiffness and strength and HB-listed at UL.

Applications

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

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

Mechanical Properties

Tensile modulus	1 mm/min	ISO 527-2	MPa	6400	3700
Stress at break	5 mm/min	ISO 527-2	MPa	140	80
Strain at break	5 mm/min	ISO 527-2	%	3,5	12
Flexural modulus	2 mm/min	ISO 178	MPa	6100	
Flexural strength	2 mm/min	ISO 178	MPa	200	
Charpy impact strength	23°C	ISO 179-1/1eU	kJ/m ²	45	90
Charpy impact strength	-30°C	ISO 179-1/1eU	kJ/m ²	43	
Charpy notched impact strength	23°C	ISO 179-1/1eA	kJ/m ²	7	10
Charpy notched impact strength	-30°C	ISO 179-1/1eA	kJ/m ²	6	
Ball indentation hardness	961/30	ISO 2039-1	MPa	200	

Electrical Properties

Volume resistivity		IEC 60093	Ohm x cm	1,0E+13	1,0E+10
Surface resistivity		b.o. IEC 60093	Ohm	1,0E+12	1,0E+10
Comparative tracking index	test solution A	IEC 60112		600	

Thermal Properties

Melting temperature	DSC, 10K/min	DIN EN 11357-1	°C	262	
Temp. of deflection under load HDT/A	1,8 MPa	ISO 75	°C	245	
Temp. of deflection under load HDT/B	0,45 MPa	ISO 75	°C	260	
Coeff. of linear therm. expansion, parallel	23°C - 80°C	ISO 11359-1/2	1,0E-4/K	0,34	
Coeff. of linear therm. expansion, normal	23°C - 80°C	ISO 11359-1/2	1,0E-4/K	1,11	
Temp. index for 50% loss of tens. strength	5.000 Std.	IEC 60216	°C	160 - 175	
Temp. index for 50% loss of tens. strength	20.000 Std.	IEC 60216	°C	130 - 150	

Flammability

Wall thickness			mm	0,4	0,8	1,6	2,0	3,2
Flammability		UL 94	class		HB			
GWFI		IEC 60695-2-12	°C			650		
Burning rate (< 100 mm/min)	> 1 mm thickness	FMVSS 302						+

General Properties

Density	23°C	ISO 1183	g/cm ³	1,24	
Content reinforcement/Content Filler		ISO 1172	%	15	
Humidity absorption	70°C, 62% r.h.	ISO 1110	%	2,5 - 2,7	
Water absorption	23°C, saturated	ISO 62	%	6,7 - 7,3	

Continuation

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

Processing

Flowability	7 x 3,5 mm & **	AKRO	mm	990
Molding shrinkage	flow	ISO 294-4	%	0,4
Molding shrinkage	transverse	ISO 294-4	%	1,4

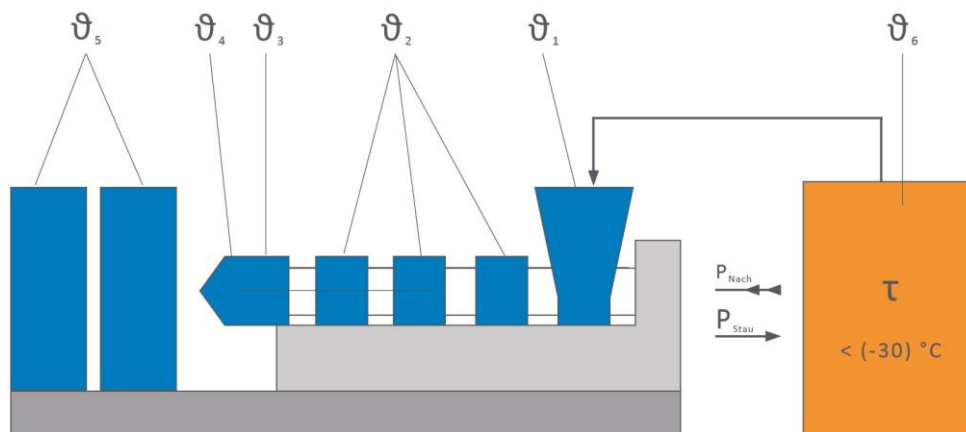
b.o.: based on

* = specimen acc. ISO 1110 stored

** = mould temperature: 100°C, melt temperature: 320°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	260 - 300
ϑ_3 Nozzle	°C	270 - 310
ϑ_4 Melt	°C	280 - 300
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.