

Datasheet

Description:

AKROMID® A3 GF 30 4 6 black 950058 (1369) is a 30% glass fibre reinforced, high heat stabilised, hydrolysis- and chemical resistant polyamide 6.6 with high stiffness and strength

Applications

Applications are functional parts in the heating- and cooling system 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	10000	6700
Stress at break	5 mm/min	ISO 527-2	MPa	200	130
Strain at break	5 mm/min	ISO 527-2	%	3,5	7
Flexural modulus	2 mm/min	ISO 178	MPa	9500	
Flexural strength	2 mm/min	ISO 178	MPa	300	
Charpy impact strength	23°C	ISO 179-1/1eU	kJ/m ²	86	95
Charpy impact strength	-40°C	ISO 179-1/1eU	kJ/m ²	73	
Charpy notched impact strength	23°C	ISO 179-1/1eA	kJ/m ²	12	17
Charpy notched impact strength	-40°C	ISO 179-1/1eA	kJ/m ²	10	

Electrical Properties

Volume resistivity		IEC 60093	Ohm x cm	1,0E+15
Surface resistivity		b.o. IEC 60093	Ohm	1,0E+13
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	253
Temp. of deflection under load HDT/B	0,45 MPa	ISO 75	°C	265
Temp. of deflection under load HDT/C	8 MPa	ISO 75	°C	210
Coeff. of linear therm. expansion, parallel	23°C - 80°C	ISO 11359-1/2	1,0E-4/K	0,19
Coeff. of linear therm. expansion, normal	23°C - 80°C	ISO 11359-1/2	1,0E-4/K	0,95

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	1,36
Content reinforcement/Content Filler		ISO 1172	%	30
Humidity absorption	70°C, 62% r.h.	ISO 1110	%	1,9
Water absorption	23°C, saturated	ISO 62	%	4,5

Processing

Flowability	7 x 3,5 mm & **	AKRO	mm	760
Molding shrinkage	flow	ISO 294-4	%	0,3
Molding shrinkage	transverse	ISO 294-4	%	1,1

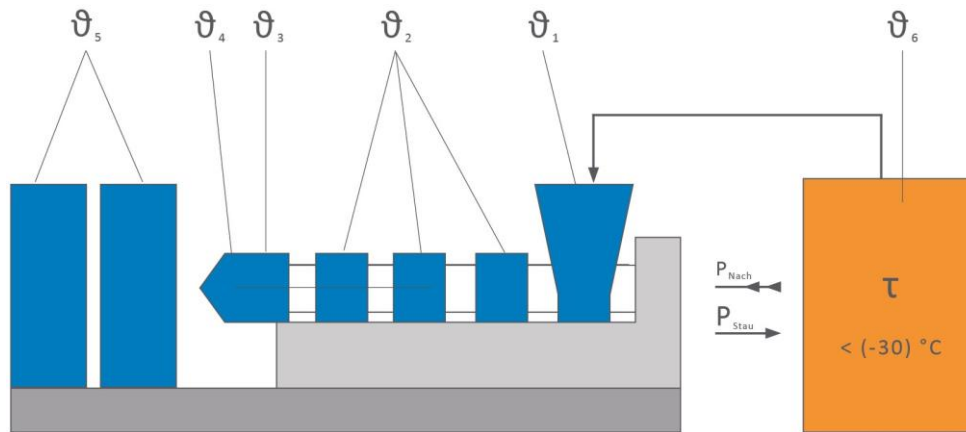
b.o.: based on

* = 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.