

Datasheet

Description:

AKROMID® A3 GF 30 4 black (3571) is a 30% glass fibre reinforced, hydrolysis-/chemical stabilised polyamide 6.6 with high stiffness and strength

Applications

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	11500	6800
Stress at break	5 mm/min	ISO 527-2	MPa	210	140
Strain at break	5 mm/min	ISO 527-2	%	3,5	7
Flexural modulus	2 mm/min	ISO 178	MPa	10000	
Flexural strength	2 mm/min	ISO 178	MPa	310	
Flexural strain at break	2 mm/min	ISO 178	%	4,5	
Charpy impact strength	23°C	ISO 179-1/1eU	kJ/m ²	80	100
Charpy impact strength	-30°C	ISO 179-1/1eU	kJ/m ²	65	
Charpy notched impact strength	23°C	ISO 179-1/1eA	kJ/m ²	12	20
Charpy notched impact strength	-30°C	ISO 179-1/1eA	kJ/m ²	9	

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	250
Temp. of deflection under load HDT/B	0,45 MPa	ISO 75	°C	260
Temp. of deflection under load HDT/C	8 MPa	ISO 75	°C	205

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	1,37
Content reinforcement/Content Filler		ISO 1172	%	30

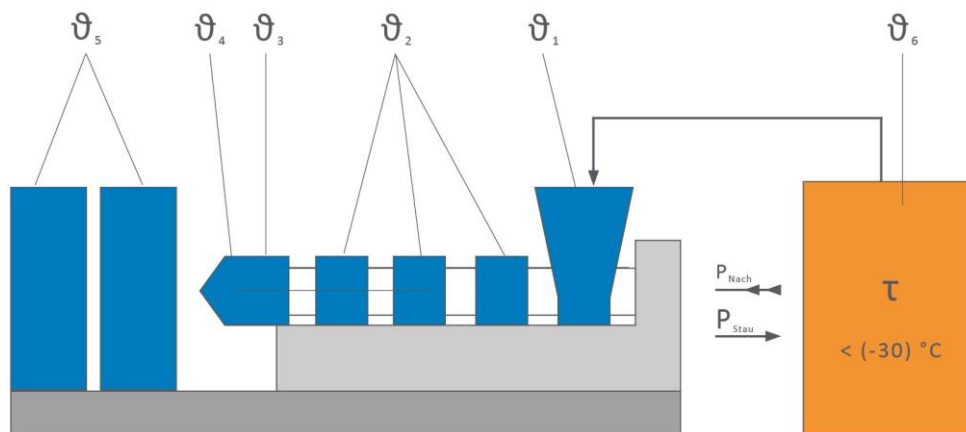
Processing

Molding shrinkage	flow	ISO 294-4	%	0,1 - 0,3
Molding shrinkage	transverse	ISO 294-4	%	0,7 - 0,9

* = specimen acc. ISO 1110 stored

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.