

Datasheet

Description:

AKROMID® A3 GF 30 1 L black (4436) is a 30% glass fibre reinforced and heat stabilised polyamide-blend with a reduced density compared to standard PA6.6 GF 30

Applications

Technical components in the automotive and electronic industry, where a weight and cost reduction is required

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

Mechanical Properties

Tensile modulus	1 mm/min	ISO 527-2	MPa	8400	6700
Stress at break	5 mm/min	ISO 527-2	MPa	150	110
Strain at break	5 mm/min	ISO 527-2	%	3	4,4
Flexural modulus	2 mm/min	ISO 178	MPa	8200	7000
Flexural strength	2 mm/min	ISO 178	MPa	220	175
Flexural strain at break	2 mm/min	ISO 178	%	3,2	4
Charpy impact strength	23°C	ISO 179-1/1eU	kJ/m ²	77	70
Charpy impact strength	-30°C	ISO 179-1/1eU	kJ/m ²	73	
Charpy notched impact strength	23°C	ISO 179-1/1eA	kJ/m ²	15	16
Charpy notched impact strength	-30°C	ISO 179-1/1eA	kJ/m ²	13	

Electrical Properties

Comparative tracking index	test solution A	IEC 60112		600
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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	246
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	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			
GWIT		IEC 60695-2-13	°C		675			
Burning rate (< 100 mm/min)	> 1 mm thickness	FMVSS 302						+

General Properties

Density	23°C	ISO 1183	g/cm ³	1,26
Content reinforcement/Content Filler		ISO 1172	%	30
Humidity absorption	70°C, 62% r.h.	ISO 1110	%	1,2

Rheological Properties

MVR	275/5	ISO 1133	cm ³ /10min	10
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Processing

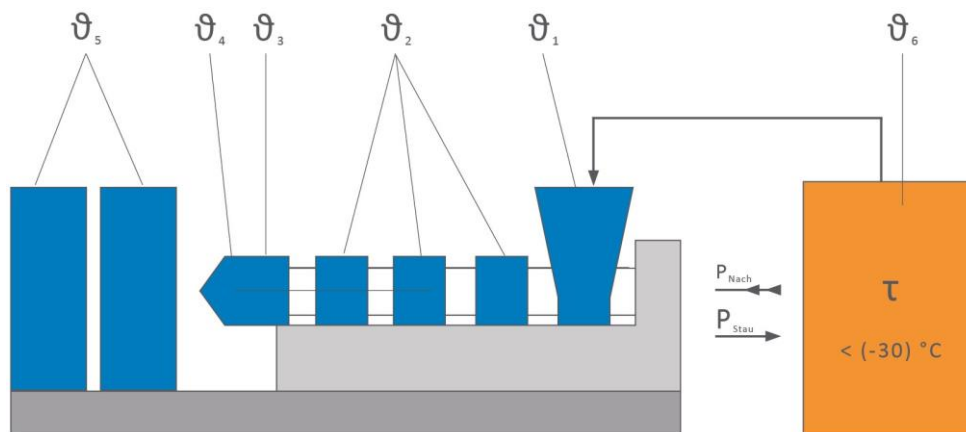
Flowability	7 x 3,5 mm & **	AKRO	mm	1010
Molding shrinkage	flow	ISO 294-4	%	0,1 - 0,3
Molding shrinkage	transverse	ISO 294-4	%	0,7 - 0,9

* = specimen acc. ISO 1110 stored

** = 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 - 300
ϑ_4 Melt	°C	270 - 300
ϑ_5 Mould	°C	70 - 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	5 - 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.