

Datasheet**Description:**

AKROMID® A3 black (3706) is an unreinforced, heat stabilised polyamide 6.6.

Applications

Components with thin walls and long flow paths

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

Mechanical Properties

Tensile modulus	1 mm/min	ISO 527-2	MPa	3000	1400
Stress at yield	50 mm/min	ISO 527-2	MPa	80	55
Strain at yield	50 mm/min	ISO 527-2	%	> 5	
Strain at break	50 mm/min	ISO 527-2	%	> 15	> 50
Flexural modulus	2 mm/min	ISO 178	MPa	2800	1400
Flexural strength	2 mm/min	ISO 178	MPa	110	50
Flexural strain at break	2 mm/min	ISO 178	%	7	9
Charpy impact strength	23°C	ISO 179-1/1eU	kJ/m ²	n.b.	
Charpy notched impact strength	23°C	ISO 179-1/1eA	kJ/m ²	7	
Charpy notched impact strength	-30°C	ISO 179-1/1eA	kJ/m ²	6,5	
Izod notched impact strength	23°C	ISO 180/1A	kJ/m ²	8	
Izod notched impact strength	-30°C	ISO 180/1A	kJ/m ²	7	
Izod notched impact strength	-40°C	ISO 180/1A	kJ/m ²	7	
Ball indentation hardness	358/30	ISO 2039-1	MPa	144	87

Thermal Properties

Melting temperature	DSC, 10K/min	DIN EN 11357-1	°C	260
Temp. of deflection under load HDT/A	1,8 MPa	ISO 75	°C	65
Temp. of deflection under load HDT/B	0,45 MPa	ISO 75	°C	209
Temp. of deflection under load HDT/C	8 MPa	ISO 75	°C	47

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	1,14
Humidity absorption	70°C, 62% r.h.	ISO 1110	%	2,9

Processing

Flowability	7 x 3,5 mm & **	AKRO	mm	1040
Molding shrinkage	flow	ISO 294-4	%	1,3 - 1,5
Molding shrinkage	transverse	ISO 294-4	%	1,5 - 1,7

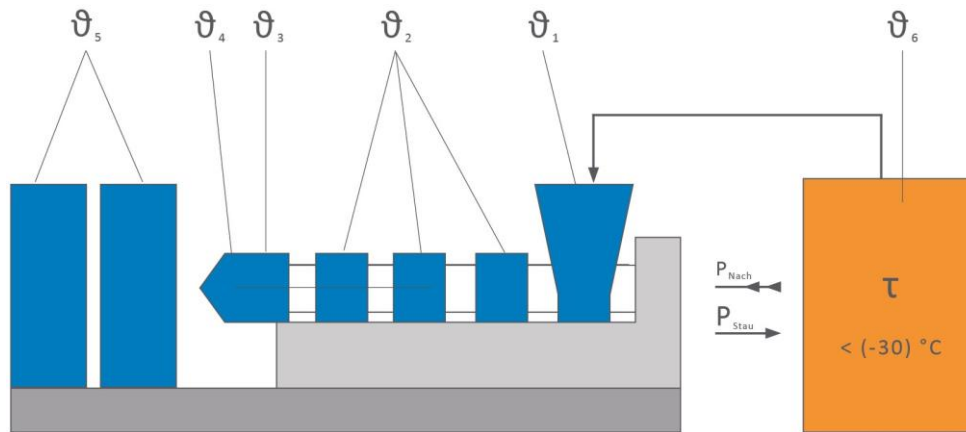
n.b. = not broken

* = 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	40 - 80
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.