

Preliminary Datasheet

Description:

AKROMID® T5 GF 50 black (6247) is a 50% glass fibre reinforced polyphthalamide with very high rigidity and strength, as well as high temperature and chemical resistance

Applications

Parts with tight dimensional tolerances even under high mechanical load.

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

Mechanical Properties

Tensile modulus	1 mm/min	ISO 527-2	MPa	21000	21000
Stress at break	5 mm/min	ISO 527-2	MPa	280	280
Strain at break	5 mm/min	ISO 527-2	%	2,1	2,1
Poisson's ratio	0,05 % - 0,25 %	ISO 527-2		0,42	
Flexural modulus	2 mm/min	ISO 178	MPa	19000	
Flexural strength	2 mm/min	ISO 178	MPa	440	
Flexural strain at break	2 mm/min	ISO 178	%	2,6	
Charpy impact strength	23°C	ISO 179-1/1eU	kJ/m ²	90	83
Charpy impact strength	-30°C	ISO 179-1/1eU	kJ/m ²	75	
Charpy impact strength	-40°C	ISO 179-1/1eU	kJ/m ²	70	
Charpy notched impact strength	23°C	ISO 179-1/1eA	kJ/m ²	13	
Charpy notched impact strength	-30°C	ISO 179-1/1eA	kJ/m ²	12	
Charpy notched impact strength	-40°C	ISO 179-1/1eA	kJ/m ²	12	

Thermal Properties

Melting temperature	DSC, 10K/min	DIN EN 11357-1	°C	325	
Temp. of deflection under load HDT/A	1,8 MPa	ISO 75	°C	280	
Temp. of deflection under load HDT/C	8 MPa	ISO 75	°C	237	

General Properties

Density	23°C	ISO 1183	g/cm ³	1,65	
Content reinforcement/Content Filler		ISO 1172	%	50	
Humidity absorption	70°C, 62% r.h.	ISO 1110	%	0,71	

Processing

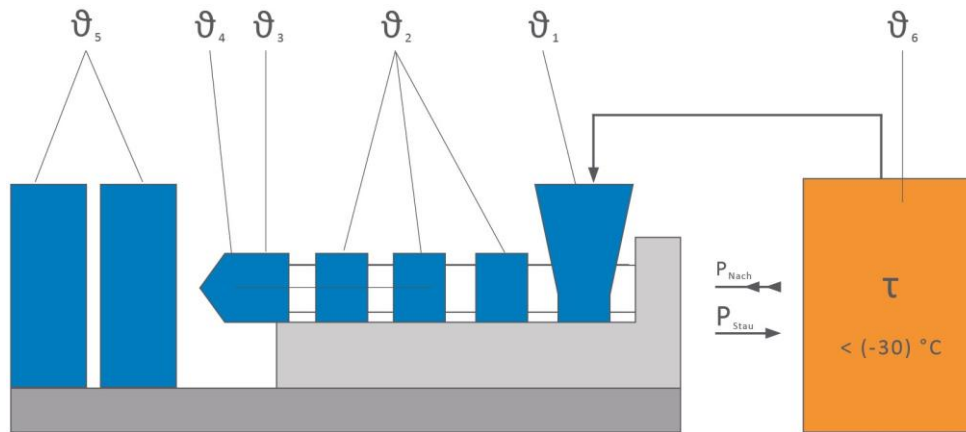
Flowability	8,4 x 1 mm & **	AKRO	mm	100	
Flowability	8,4 x 2 mm & **	AKRO	mm	280	
Molding shrinkage	flow	ISO 294-4	%	0,5	
Molding shrinkage	transverse	ISO 294-4	%	0,7	

* = specimen acc. ISO 1110 stored

** = mould temperature: 130°C, melt temperature: 340°C, injection pressure: 750 bar

Continuation

Processing recommendations



ϑ_6	Drying time	h	0 - 4
ϑ_6	Drying temperature	°C	120
	Processing moisture	%	0,02 - 0,1
ϑ_1	Feed section	°C	60 - 90
ϑ_2	Section 1 - Section 4	°C	320 - 350
ϑ_3	Nozzle	°C	330 - 350
ϑ_4	Melt	°C	330 - 350
ϑ_5	Mould	°C	120 - 160
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.