

PA6 – Polyamide 6 PA6 FR(30)

AKROMID® B3 1 FR orange (7806)

Tensile modulus

3600 MPa

1 mm/min

ISO 527-2

Stress at yield

73 MPa

50 mm/min

ISO 527-2

Charpy impact strength

23°C

ISO 179-1/1eU

AKROMID® B3 1 FR orange (7806) is an unreinforced, heat stabilised and halogen free flame retardant polyamide 6 listed at UL in all colors. The material is colored RAL 2003

Typical applications

High voltage components in e-mobility

Regulatory



Mechanical Properties

Tensile modulus (1 mm/min | ISO 527-2)

d.a.m.

3600 MPa

conditioned

1400 MPa

Stress at yield (50 mm/min | ISO 527-2)

d.a.m.

73 MPa

conditioned

40 MPa

Strain at break (50 mm/min | ISO 527-2)

d.a.m.

>6 %

conditioned

>50 %

Charpy notched impact strength (23°C | ISO 179-1/1eA)

d.a.m.

4,5 kJ/m²

conditioned

13 kJ/m²

Thermal Properties

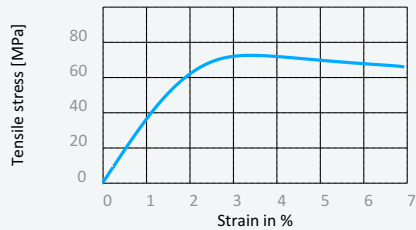
Melt temperature (DSC, 10K/min | DIN EN 11357-1)

220 °C

Disclaimer:

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Stress strain chart at 23°C

**Flammability****Burning rate (UL 94)**

0,4mm Wall thickness
0,8mm Wall thickness
1,6mm Wall thickness
3,2mm Wall thickness

V-0 Class
V-0 Class
V-0 Class
V-0 Class

GWFI (IEC 60695-2-12)

0,4mm Wall thickness
0,8mm Wall thickness
1,6mm Wall thickness
3,2mm Wall thickness

960 °C
960 °C
960 °C
960 °C

GWIT (IEC 60695-2-13)

0,4mm Wall thickness
0,8mm Wall thickness
1,6mm Wall thickness
3,2mm Wall thickness

775 °C
750 °C
750 °C
775 °C

HWI (UL 746A)

0,4mm Wall thickness
0,8mm Wall thickness
1,6mm Wall thickness
3,2mm Wall thickness

4 PLC
4 PLC
0 PLC
0 PLC

HAI (UL 746A)

0,4mm Wall thickness
0,8mm Wall thickness
1,6mm Wall thickness
3,2mm Wall thickness

0 PLC
0 PLC
0 PLC
0 PLC

Oxygen index (ISO 4589-2)

>32 %

**General properties**

Density (23°C | ISO 1183)

1,19 g/cm³

Molding shrinkage (flow | ISO 294-4)

0,9-1,1 %

Molding shrinkage (transverse | ISO 294-4)

1,0-1,2 %

**Electrical Properties**

Comparative tracking index (Test liquid A | IEC 60112)

>600 V

Dielectric strength (3 mm | IEC 60243)

10 kV/mm

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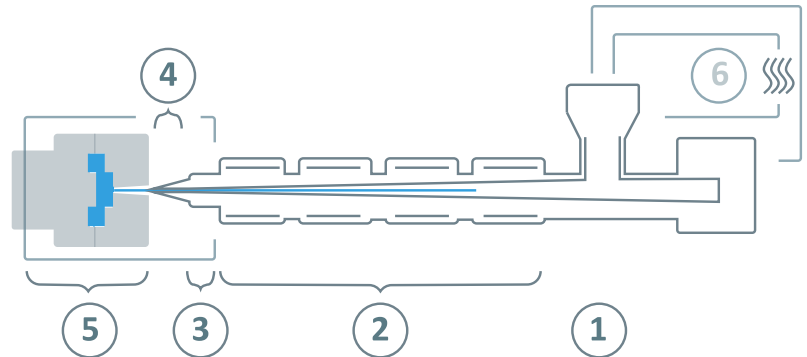
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Processing information

The listed values are recommendations. Higher values should be used for higher glass loadings. We recommend only dehumidifying or vacuum dryers. Extensive drying can cause filling problems and surface defects.



⑥	Drying time	2 - 4 h
	Drying temperature ($\tau \leq -30^{\circ}\text{C}$)	80°C
	Processing moisture	0,02 - 0,08%
①	Feed section	60 - 80°C
②	Temperature zone 1 - Zone 4	220 - 260°C
③	Nozzle temperature	230 - 270°C
④	Melt temperature	240 - 270°C
⑤	Mold temperature	60 - 80°C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	30 - 100 bar
	Injection speed	medium
	Screw speed	5 - 10 m/min

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