

AKROMID® PRELIMINARY

T91 GF 30 FR black (8184)

PPA GF30 FR(40)

AKROMID® T91 GF 30 FR black (8184) is an easy flow, flame retardant and 30% glass fiber reinforced Polyamide 9T with high stiffness and strength. This material is based on the latest flame retardant technology, that is free of red phosphorous, melamine, PFAS and halogenes. This product is characterised by very high flowability for thin walled parts. Due its high melting point and low water uptake it is a perfect candidate for SMT devices. This grade is colored in black and lasermarkable.

Features

heat stabilised 130 hydrolysis / chemically stabilised electrically neutral flame retardant laser markable
reduced moisture easy flow process improved E&E metal substitution E-Mobility

Properties

Modulus

11.000 MPa

Strength

140 MPa

Impact

40 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

11000 MPa

1 mm/min | conditioned

11000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

140 MPa

5 mm/min | conditioned

135 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2 %

5 mm/min | conditioned

1,9 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

40 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

9 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	265 °C
Temperature of deflection under load HDT/B ISO 75	0,45 MPa	> 280 °C
Melting temperature ISO 11357-3	DSC, 10K/min	305 °C

Flammability

Flammability UL 94	0,4 mm Wall thickness	V-0 Class
	0,8 mm Wall thickness	V-0 Class
	1,6 mm Wall thickness	V-0 Class
	3,2 mm Wall thickness	V-0 Class
GWFI IEC 60695-2-12	0,8 mm Wall thickness	960 °C
	1,6 mm Wall thickness	960 °C
	3,2 mm Wall thickness	960 °C
GWIT IEC 60695-2-13	0,8 mm Wall thickness	800 °C
	1,6 mm Wall thickness	825 °C
	3,2 mm Wall thickness	850 °C

General Properties

Density ISO 1183	23°C	1,40 g/cm ³
Humidity absorption ISO 1110	70°C, 62% r.H.	0,6 - 0,7 %
Molding shrinkage ISO 294-4	flow	0,2 - 0,4 %
	transverse	0,8 - 1,0 %

Electrical Properties

Comparative tracking index IEC 60112	Test liquid A	600 V
Dielectric strength IEC 60243	1 mm	37 kV/mm

Rheological Properties

Flowability

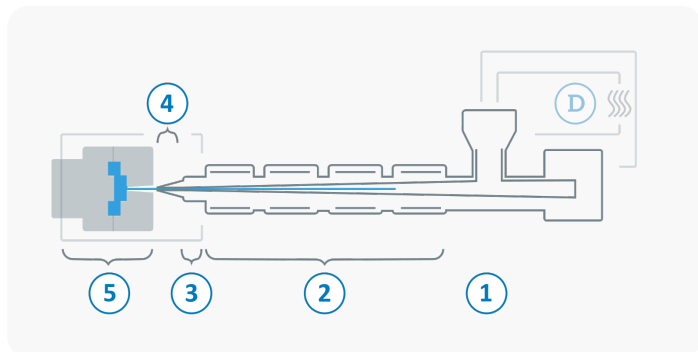
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2 mm Thickness

600 mm

Processing

The values mentioned are recommendations. We only recommend desiccant / dry air dryers or vacuum dryers. Too long a drying time and the resulting residual moisture content below the lower limit can lead to filling problems and surface defects. The specified drying time refers to closed and undamaged bagged material. When processing from previously opened bags or from octabins with polyolefin inliners, a longer drying time may be necessary. It is recommended to check the residual moisture content after the drying process.



(D) Drying time	0 - 4 h
Drying temperature ($\tau \leq -30^{\circ}\text{C}$)	120 °C
Processing moisture	<0,05 %
(1) Feed section	60 - 90 °C
(2) Temperature Zone 1 - Zone 4	305 - 325 °C
(3) Nozzle temperature	310 - 340 °C
(4) Melt temperature	310 - 325 °C
(5) Mold temperature	>135 °C
(→) Holding pressure, spec.	300 - 800 bar
(←) Back pressure, spec.	50 - 150 bar
Injection speed	medium to high
Screw speed	8 - 15 m/min