

AKROMID®

B3 1 natural (2499)

PA6

AKROMID® B3 1 natural (2499) is an unreinforced, heat stabilised polyamide 6 with light inherent color

Features

heat stabilised 130

Properties

Modulus

3.600 MPa

Strength

85 MPa

Impact

180 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

3600 MPa

1 mm/min | conditioned

1200 MPa

Tensile stress at yield

ISO 527-2

50 mm/min | d.a.m.

85 MPa

50 mm/min | conditioned

45 MPa

Tensile strain at break

ISO 527-2

50 mm/min | d.a.m.

20 %

50 mm/min | conditioned

> 50 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

3100 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

120 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

no break

23°C | conditioned

no break

-30°C | d.a.m.

no break

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

5 kJ/m²

23°C | conditioned

16 kJ/m²

-30°C | d.a.m.

2 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	60 °C
Temperature of deflection under load HDT/B ISO 75	0,45 MPa	180 °C
Melting temperature ISO 11357-3	DSC, 10K/min	220 °C
Temperature index for 50% loss of tensile strength IEC 60216	5.000 h 20.000 h	100 - 140 °C 90 - 120 °C

Flammability

Flammability UL 94	- UL 0,8 mm Wall thickness - UL 1,6 mm Wall thickness - UL 3,2 mm Wall thickness	HB Class HB Class V-2 Class
GWFI IEC 60695-2-12	1,6 mm Wall thickness	750 °C
GWIT IEC 60695-2-13	1,6 mm Wall thickness	675 °C
HWI UL 746A	- UL 0,8 mm Wall thickness - UL 1,6 mm Wall thickness - UL 3,2 mm Wall thickness	4 PLC 3 PLC 3 PLC
HAI UL 746A	- UL 0,8 mm Wall thickness - UL 1,6 mm Wall thickness - UL 3,2 mm Wall thickness	1 PLC 1 PLC 0 PLC
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

Density ISO 1183	23°C	1,13 g/cm ³
Humidity absorption ISO 1110	70°C, 62% r.H.	2,6 - 3,4 %

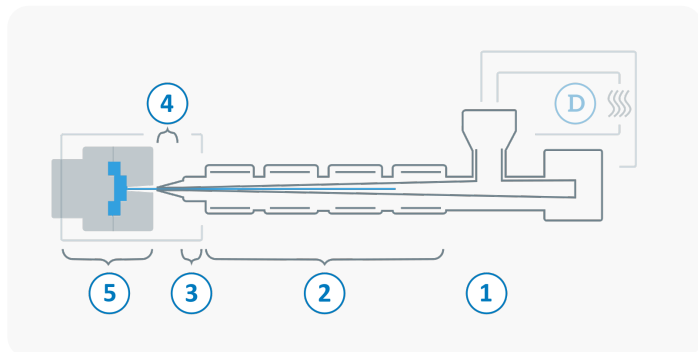
Water absorption ISO 62	23°C, saturated	9,0 - 10,0 %
Molding shrinkage ISO 294-4	flow	1,0 - 1,2 %
	transverse	1,1 - 1,3 %

Electrical Properties

Volume resistivity IEC 62631-3-1	d.a.m.	10¹³ Ω x cm
	conditioned	10¹⁰ Ω x cm
Surface resistivity IEC 62631-3-2	d.a.m.	10¹² Ω
	conditioned	10¹⁰ Ω
Comparative tracking index IEC 60112	UL Test liquid A	600 V
Comparative tracking index ASTM D3638	UL	0 PLC

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 ($\tau \leq -30^{\circ}\text{C}$)	80 °C
Processing moisture	0,02 - 0,1 %
(1) Feed section	60 - 80 °C
(2) Temperature Zone 1 - Zone 4	220 - 270 °C
(3) Nozzle temperature	230 - 300 °C
(4) Melt temperature	240 - 270 °C
(5) Mold temperature	40 - 80 °C
(→) Holding pressure, spec.	300 - 800 bar
(←) Back pressure, spec.	50 - 150 bar
Injection speed	medium to high
Screw speed	8 - 15 m/min