

AKROMID®

A3 1 natural (2416)

PA66

AKROMID® A3 1 natural (2416) is a heat stabilised, unreinforced polyamide 6.6 with light inherent color.

Features

heat stabilised 130

Properties

Modulus

3.200 MPa

Strength

85 MPa

Impact

180 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

3200 MPa

1 mm/min | conditioned

1100 MPa

Tensile stress at yield

ISO 527-2

50 mm/min | d.a.m.

85 MPa

50 mm/min | conditioned

50 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.

2800 MPa

2 mm/min | conditioned

1100 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

110 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

-30°C | conditioned

no break

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

5 kJ/m²

23°C | conditioned

13 kJ/m²

-30°C | d.a.m.

2 kJ/m²

-30°C | conditioned

3 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	75 °C
Temperature of deflection under load HDT/B ISO 75	0,45 MPa	215 °C
Melting temperature ISO 11357-3	DSC, 10K/min	262 °C
Coefficient of linear thermal expansion ISO 11359-1/2	23°C to 80°C parallel 23°C to 80°C transverse	0,71 10⁻⁴/K 1,1 10⁻⁴/K
Temperature index for 50% loss of tensile strength IEC 60216	5.000 h 20.000 h	115 - 145 °C 100 - 120 °C

Flammability

Flammability UL 94	0,8 mm Wall thickness	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
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

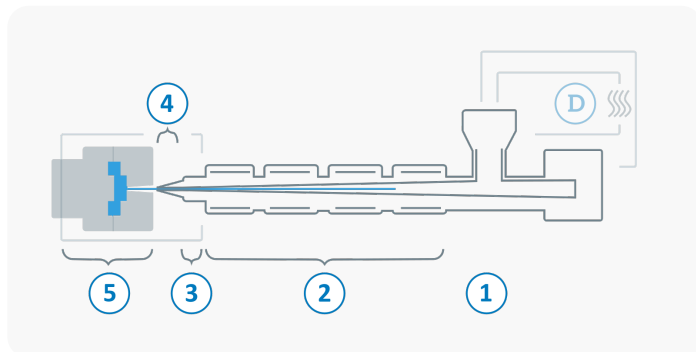
Density ISO 1183	23°C	1,14 g/cm³
Humidity absorption ISO 1110	70°C, 62% r.H.	2,9 - 3,1 %
Water absorption ISO 62	23°C, saturated	8,0 - 9,0 %
Molding shrinkage ISO 294-4	flow transverse	1,3 - 1,5 % 1,5 - 1,7 %

Electrical Properties

Volume resistivity IEC 62631-3-1	d.a.m. conditioned	$10^{13} \Omega \times \text{cm}$ $10^{10} \Omega \times \text{cm}$
Surface resistivity IEC 62631-3-2	d.a.m. conditioned	$10^{13} \Omega$ $10^{10} \Omega$
Comparative tracking index IEC 60112	Test liquid A	600 V

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	2 - 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	260 - 300 °C
3	Nozzle temperature	270 - 310 °C
4	Melt temperature	270 - 300 °C
5	Mold temperature	40 - 90 °C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 - 150 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min

Diagrams

