

# AKROMID®

## B3 3 S3 10 natural (1808)

PA6-I

AKROMID® B3 3 S3 10 natural (1808) is an unreinforced, impact modified Polyamide 6. Furthermore, the material is nucleated. It is suitable for handles and fittings for power tools as well as for the furniture industry. It has a light inherent color.

### Features

impact modified    nucleated

### Properties

#### Modulus

2.700 MPa

#### Strength

70 MPa

#### Impact

180 kJ/m²

## Mechanical Properties

### Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

2700 MPa

1 mm/min | conditioned

955 MPa

### Tensile stress at yield

ISO 527-2

50 mm/min | d.a.m.

70 MPa

50 mm/min | conditioned

40 MPa

### Tensile strain at yield

ISO 527-2

50 mm/min | d.a.m.

4,3 %

50 mm/min | conditioned

15 %

### Tensile strain at break

ISO 527-2

50 mm/min | d.a.m.

> 45 %

50 mm/min | conditioned

> 100 %

### Flexural modulus

ISO 178

2 mm/min | d.a.m.

2600 MPa

2 mm/min | conditioned

950 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.

10 kJ/m<sup>2</sup>

23°C | conditioned

28 kJ/m<sup>2</sup>

-30°C | d.a.m.

8 kJ/m<sup>2</sup>

-30°C | conditioned

10 kJ/m<sup>2</sup>

### Ball indentation hardness

ISO 2039-1

358N/30s | d.a.m.

102 MPa

## 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

162 °C

### Melting temperature

ISO 11357-3

DSC, 10K/min

222 °C

## Flammability

### Flammability

UL 94

1,6 mm Wall thickness

HB Class

### Burning rate (<100 mm/min)

FMVSS 302

> 1 mm Thickness

+

## General Properties

### Density

ISO 1183

23°C

1,1 g/cm<sup>3</sup>

### Humidity absorption

ISO 1110

70°C, 62% r.H.

2,6 %

### Molding shrinkage

ISO 294-4

flow

1,0 - 1,2 %

transverse

1,1 - 1,3 %

## 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.



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