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# AKROMID®
# A3 1 S3 15 natural (2892)

PA66-I

AKROMID® A3 1 S3 15 natural (2892) is an unreinforced, impact modified Polyamide 6.6. It is characterised by a medium dry impact strength whilst maintaining good flowability. Furthermore, the material is heat stabilised and therefore perfectly suitable for connecting and fixing systems which are used at elevated temperatures in the automotive and electro industry. Its good flowability qualifies the material for processing in multi-cavity moulds. The material has a light inherent color.

**Features**

heat stabilised 130 | impact modified

**Properties**

| Modulus | Strength | Impact |
|---|---|---|
| **2.700** MPa | **63** MPa | **180** kJ/m² |

## Mechanical Properties

| | | |
|---|---|---|
| **Tensile modulus**<br>ISO 527-2 | 1 mm/min \| d.a.m.<br>1 mm/min \| conditioned | **2700 MPa**<br>**1300 MPa** |
| **Tensile stress at yield**<br>ISO 527-2 | 50 mm/min \| d.a.m.<br>50 mm/min \| conditioned | **63 MPa**<br>**45 MPa** |
| **Tensile strain at yield**<br>ISO 527-2 | 50 mm/min \| d.a.m. | **7 %** |
| **Tensile strain at break**<br>ISO 527-2 | 50 mm/min \| d.a.m.<br>50 mm/min \| conditioned | **> 35 %**<br>**> 100 %** |
| **Charpy impact strength**<br>ISO 179-1/1eU | 23°C \| d.a.m.<br>23°C \| conditioned | **no break**<br>**no break** |
| **Charpy notched impact strength**<br>ISO 179-1/1eA | 23°C \| d.a.m.<br>23°C \| conditioned<br>-30°C \| d.a.m. | **15 kJ/m²**<br>**95 kJ/m²**<br>**10 kJ/m²** |

| | | |
|---|---|---|
| **Izod notched impact strength**<br>ISO 180/1A | 23°C \| d.a.m.<br>-20°C \| d.a.m.<br>-40°C \| d.a.m. | **15 kJ/m²**<br>**12 kJ/m²**<br>**12 kJ/m²** |
| **Ball indentation hardness**<br>ISO 2039-1 | 358N/30s \| d.a.m. | **93 MPa** |

## Thermal Properties

| | | |
|---|---|---|
| **Temperature of deflection under load HDT/A**<br>ISO 75 | 1,8 MPa | **70 °C** |
| **Temperature of deflection under load HDT/B**<br>ISO 75 | 0,45 MPa | **213 °C** |
| **Melting temperature**<br>ISO 11357-3 | DSC, 10K/min | **262 °C** |

## Flammability

| | | |
|---|---|---|
| **Flammability**<br>UL 94 | 1,6 mm Wall thickness | **HB Class** |
| **Burning rate (<100 mm/min)**<br>FMVSS 302 | > 1 mm Thickness | **+** |

## General Properties

| | | |
|---|---|---|
| **Density**<br>ISO 1183 | 23°C | **1,1 g/cm³** |
| **Humidity absorption**<br>ISO 1110 | 70°C, 62% r.H. | **2,1 %** |
| **Molding shrinkage**<br>ISO 294-4 | flow<br>transverse | **1,3 - 1,5 %**<br>**1,5 - 1,7 %** |

## Electrical Properties

| | | |
|---|---|---|
| **Volume resistivity**<br>IEC 62631-3-1 | d.a.m. | **$10^{15}$ Ω x cm** |

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| | | |
|---|---|---|
| **Surface resistivity**<br>IEC 62631-3-2 | d.a.m. | **$10^{14}$ Ω** |
| **Comparative tracking index**<br>IEC 60112 | Test liquid A | **600 V** |

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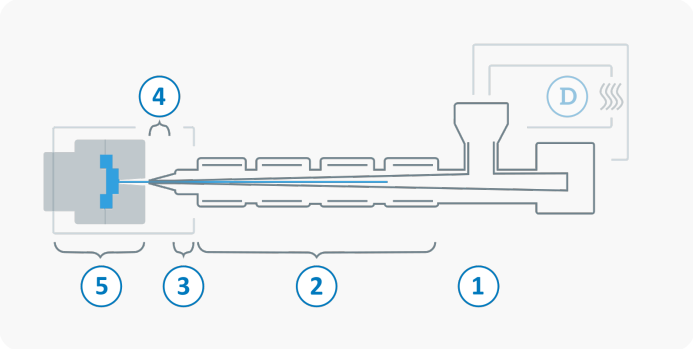
## Processing

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 (τ <= -30°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 |