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AKRO COMPOUNDS

Compound No.: **6680**

# AKROMID®
# C3 GF 35 5 XTC black (6680)

PA66+PA6 GF35

AKROMID® C3 GF 35 5 XTC black (6680) is a 35% glass fiber reinforced, high heat stabilised polyamide 6.6/6 blend. It is characterised by high stiffness and strength as well as by excellent temperature resistance. It is therefore perfectly suitable for parts in industrial engineering and in the automotive industry, which are exposed to high temperatures. This product version was optimised for laser marking.

**Features**

heat stabilised 230 | laser markable

**Properties**

| Modulus | Strength | Impact |
|---|---|---|
| **11.500** MPa | **200** MPa | **105** kJ/m² |

## Mechanical Properties

| | | |
|---|---|---|
| **Tensile modulus**<br>ISO 527-2 | 1 mm/min \| d.a.m.<br>1 mm/min \| conditioned | **11500 MPa**<br>**8000 MPa** |
| **Tensile stress at break**<br>ISO 527-2 | 5 mm/min \| d.a.m.<br>5 mm/min \| conditioned | **200 MPa**<br>**135 MPa** |
| **Tensile strain at break**<br>ISO 527-2 | 5 mm/min \| d.a.m.<br>5 mm/min \| conditioned | **3,5 %**<br>**6,5 %** |
| **Charpy impact strength**<br>ISO 179-1/1eU | 23°C \| d.a.m.<br>23°C \| conditioned | **105 kJ/m²**<br>**100 kJ/m²** |
| **Charpy notched impact strength**<br>ISO 179-1/1eA | 23°C \| d.a.m.<br>23°C \| conditioned | **18 kJ/m²**<br>**18 kJ/m²** |

## Thermal Properties

| | | |
|---|---|---|
| **Temperature of deflection under load HDT/A**<br>ISO 75 | 1,8 MPa | **230 °C** |

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| | | |
|---|---|---|
| **Melting temperature**<br>ISO 11357-3 | DSC, 10K/min | **245 °C** |
| **Coefficient of linear thermal expansion**<br>ISO 11359-1/2 | 23°C to 80°C \| parallel<br>23°C to 80°C \| transverse | **0,15 $10^{-4}$/K**<br>**1,12 $10^{-4}$/K** |
| **Temperature index for 50% loss of tensile strength**<br>IEC 60216 | 5.000 h | **210 - 230 °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 | **1,4 g/cm³** |
| **Humidity absorption**<br>ISO 1110 | 70°C, 62% r.H. | **1,9 - 2,1 %** |
| **Molding shrinkage**<br>ISO 294-4 | flow<br>transverse | **0,1 - 0,3 %**<br>**0,4 - 0,6 %** |

## Electrical Properties

| | | |
|---|---|---|
| **Comparative tracking index**<br>IEC 60112 | Test liquid A | **600 V** |

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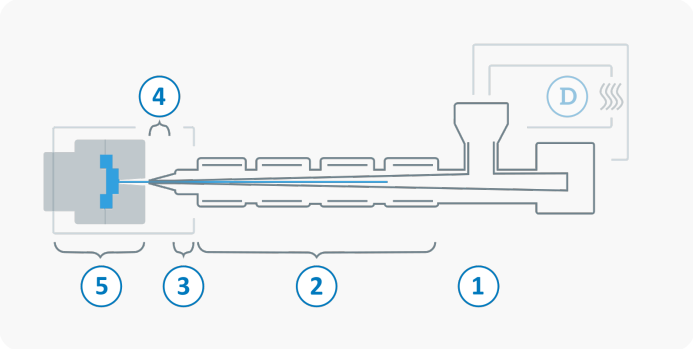
## Processing

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 | 0 - 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 - 300 °C |
| 4 | Melt temperature | 270 - 300 °C |
| 5 | Mold temperature | 80 - 100 °C |
| → | Holding pressure, spec. | 300 - 800 bar |
| ← | Back pressure, spec. | 50 - 150 bar |
| | Injection speed | medium to high |
| | Screw speed | 8 - 15 m/min |

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## Diagrams