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AKRO COMPOUNDS

Compound No.: **6695**

# AKROMID®
# B3 ICF 20 LF black (6695)

PA6 CF20

AKROMID® B3 ICF 20 LF black (6695) is a high performance Polyamide 6 with 20% carbon fiber reinforcement, offering medium stiffness and flexural strength. Compared to glass fiber-reinforced PA 6, it provides an optimized strength-to-weight ratio. Due to its low surface resistivity, the material is particularly suitable for applications where conductivity is needed.

**Features**

recycled content | reduced density | antistatic/conductive | tribological modified | Sports & leisure | lightweight construction

**Properties**

| Modulus | Strength | Impact |
|---|---|---|
| **15.000** MPa | **175** MPa | **50** kJ/m² |

## Sustainability

| | |
|---|---|
| **Recycled content** | **20 %** |

## Mechanical Properties

| | | |
|---|---|---|
| **Tensile modulus**<br>ISO 527-2 | 1 mm/min \| d.a.m. | **15000 MPa** |
| **Tensile stress at break**<br>ISO 527-2 | 5 mm/min \| d.a.m. | **175 MPa** |
| **Tensile strain at break**<br>ISO 527-2 | 5 mm/min \| d.a.m. | **2,5 %** |
| **Charpy impact strength**<br>ISO 179-1/1eU | 23°C \| d.a.m.<br>23°C \| conditioned | **50 kJ/m²**<br>**65 kJ/m²** |
| **Charpy notched impact strength**<br>ISO 179-1/1eA | 23°C \| d.a.m.<br>23°C \| conditioned | **7 kJ/m²**<br>**12 kJ/m²** |

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## Thermal Properties

| | | |
|---|---|---|
| **Melting temperature**<br>ISO 11357-3 | DSC, 10K/min | **220 °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 | **1,24 g/cm³** |
| **Humidity absorption**<br>ISO 1110 | 70°C, 62% r.H. | **2,2 %** |
| **Molding shrinkage**<br>ISO 294-4 | flow<br>transverse | **0,1 - 0,3 %**<br>**0,4 - 0,6 %** |

## Electrical Properties

| | | |
|---|---|---|
| **Surface resistivity**<br>IEC 62631-3-2 | d.a.m. | **$10^4$ Ω** |

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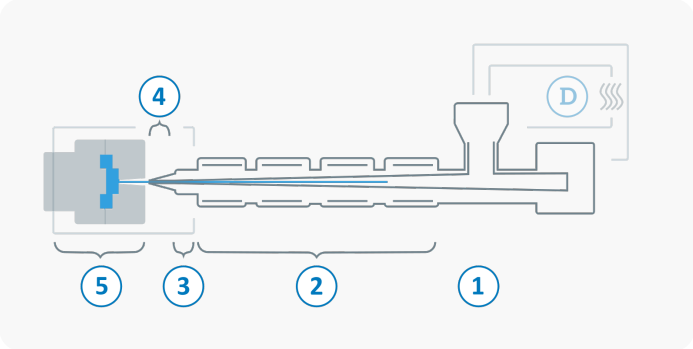
## Processing

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 | 240 - 300 °C |
| 3 | Nozzle temperature | 270 - 300 °C |
| 4 | Melt temperature | 270 - 300 °C |
| 5 | Mold temperature | 80 - 130 °C |
| → | Holding pressure, spec. | 300 - 800 bar |
| ← | Back pressure, spec. | 50 - 150 bar |
| | Injection speed | medium to high |
| | Screw speed | 8 - 15 m/min |