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# AKROMID® PRELIMINARY
# T9 GF 15 S1 black (7820)

PPA-I GF15

AKROMID® T9 GF 15 S1 black (7820) is a 15% glass fibre reinforced, cold impact strength polyphthalamide with medium stiffness and strength, as well as high chemical resistance. The compound is based on PA9T and has lower moisture uptake than conventional PA6T variants. This leads to a significantly higher consistency of the glass transition temperature and higher strength at elevated temperatures especially in conditioned state.

**Features**

heat stabilised 160

**Properties**

| Modulus | Strength | Impact |
|---|---|---|
| **5.000** MPa | **120** MPa | **73** kJ/m² |

## Mechanical Properties

| | | |
|---|---|---|
| **Tensile modulus**<br>ISO 527-2 | 1 mm/min \| d.a.m. | **5000 MPa** |
| **Tensile stress at break**<br>ISO 527-2 | 5 mm/min \| d.a.m. | **120 MPa** |
| **Tensile strain at break**<br>ISO 527-2 | 5 mm/min \| d.a.m. | **4 %** |
| **Charpy impact strength**<br>ISO 179-1/1eU | 23°C \| d.a.m.<br>-30°C \| d.a.m. | **73 kJ/m²**<br>**55 kJ/m²** |
| **Charpy notched impact strength**<br>ISO 179-1/1eA | 23°C \| d.a.m.<br>-30°C \| d.a.m. | **11 kJ/m²**<br>**5 kJ/m²** |

## Thermal Properties

| | | |
|---|---|---|
| **Temperature of deflection under load HDT/A**<br>ISO 75 | 1,8 MPa | **249 °C** |

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| | | |
|---|---|---|
| **Temperature of deflection under load HDT/C**<br>ISO 75 | 8 MPa | **122 °C** |
| **Glass transition temperature**<br>ISO 11357-2 | DSC, 2nd heating | **125 °C** |
| **Melting temperature**<br>ISO 11357-3 | DSC, 10K/min | **305 °C** |

## Flammability

| | | |
|---|---|---|
| **Flammability**<br>UL 94 | 1,6 mm Wall thickness | **HB Class** |

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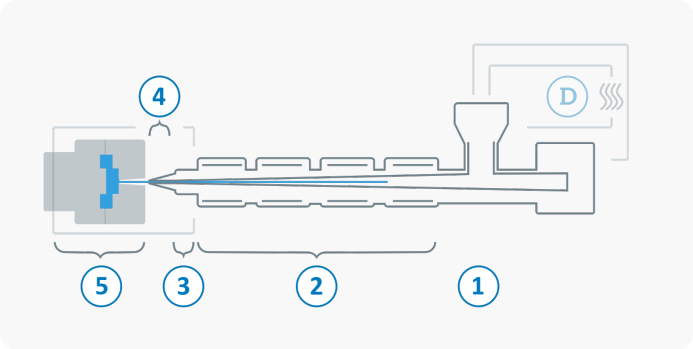
## Processing

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) | 120 °C |
| | Processing moisture | <0,05 % |
| 1 | Feed section | 60 - 90 °C |
| 2 | Temperature Zone 1 - Zone 4 | 300 - 340 °C |
| 3 | Nozzle temperature | 310 - 350 °C |
| 4 | Melt temperature | 310 - 340 °C |
| 5 | Mold temperature | >135 °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