

## AKROLOY® PA GF 50 natural (6414)

PA66+PA6I/6T GF50

AKROLOY® PA GF 50 natural (6414) is a 50% glass fibre reinforced, semi-aromatic polyamide blend with very high stiffness and strength, even in conditioned state.

### Features

reduced moisture    metal substitution

### Properties

| Modulus    | Strength | Impact                |
|------------|----------|-----------------------|
| 17.000 MPa | 275 MPa  | 110 kJ/m <sup>2</sup> |

## Mechanical Properties

|   |                   |                       |
|---|-------------------|-----------------------|
| Tensile modulus<br>ISO 527-2            | 1 mm/min   d.a.m. | 17000 MPa             |
| Tensile stress at break<br>ISO 527-2    | 5 mm/min   d.a.m. | 275 MPa               |
| Tensile strain at break<br>ISO 527-2    | 5 mm/min   d.a.m. | 2,8 %                 |
| Charpy impact strength<br>ISO 179-1/1eU | 23°C   d.a.m.     | 110 kJ/m <sup>2</sup> |

## Thermal Properties

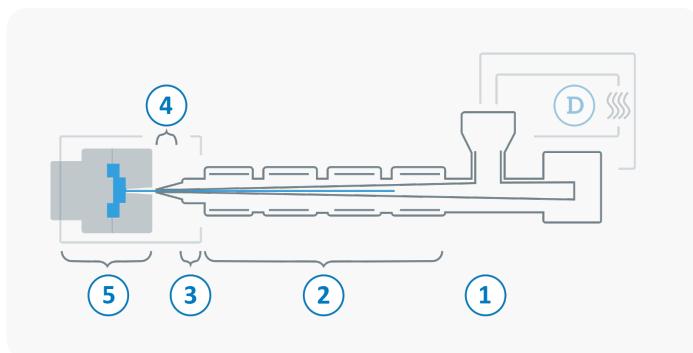
|  |              |        |
|--|--------------|--------|
| Temperature of deflection under load HDT/A<br>ISO 75 | 1,8 MPa      | 245 °C |
| Temperature of deflection under load HDT/C<br>ISO 75 | 8 MPa        | 185 °C |
| Melting temperature<br>ISO 11357-3                   | DSC, 10K/min | 255 °C |

## General Properties

|                                       |                    |                            |
|---------------------------------------|--------------------|----------------------------|
| <b>Density</b><br>ISO 1183            | 23°C               | 1,56 g/cm <sup>3</sup>     |
| <b>Molding shrinkage</b><br>ISO 294-4 | flow<br>transverse | 0,1 - 0,3 %<br>0,3 - 0,5 % |

## 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 ( $\tau \leq -30^\circ\text{C}$ ) | 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                                     | 280 - 300 °C   |
| (5) | Mold temperature                                     | 90 - 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   |

## Diagrams

