

**TECHNICAL DATA SHEET**

# Engineering plastic type DG/DL

**General notes:**

- » **POM/GF30** acetal resin reinforced with 30 wt% glass fibre
- » good tensile and flexural strength, fatigue and creep resistance
- » low friction, good wear and abrasion resistance
- » low moisture absorption
- » good chemical resistance (oils, grease, fuels, organic solvents); not resistant to strong acids, alkalis and oxidizing agents; good hydrolytic resistance (hot water)
- » insulating
- » typical applications include handling of very scratch sensitive components (ceramic and glass devices, wafers, capillary)

## Mechanical properties

Flexural modulus +23°C	<b>8000 MPa</b>	<i>ASTM D 790</i>
Flexural modulus +60°C	<b>5700 MPa</b>	<i>ASTM D 790</i>
Flexural modulus +90°C	<b>4500 MPa</b>	<i>ASTM D 790</i>
Flexural modulus +120°C	<b>3800 MPa</b>	<i>ASTM D 790</i>
Tensile strength +23°C	<b>83 MPa</b>	<i>ISO 527</i>
Tensile strength +60°C	<b>60 MPa</b>	<i>ISO 527</i>
Tensile strength +90°C	<b>53 MPa</b>	<i>ISO 527</i>
Tensile strength +120°C	<b>45MPa</b>	<i>ISO 527</i>
Rockwell hardness M	<b>85</b>	<i>ASTM D 785</i>
Izod-Impact strength (notched) +23°C	<b>55 J/m</b>	<i>ASTM D 256</i>
Charpy-Impact strength (unnotched) +23°C	<b>20 kJ/m<sup>2</sup></b>	<i>DIN 53453</i>

## Thermal properties

Temp. of defl. under load (1.80 MPa)	<b>162 °C</b>	<i>ASTM D648</i>
Temp. of defl. under load (0.45 MPa)	<b>165 °C</b>	<i>ASTM D648</i>
Vicat softening temperature (50°C/h 50N)	<b>156 °C</b>	<i>ISO 306</i>
Coef. of lin. therm expansion, normal	<b>4.50 E-5/°C</b>	<i>ASTM D 696</i>
Continuous Use Temperature	<b>85°C</b>	<i>20'000 h</i>
Short Time Temperature	<b>120°C</b>	

## Electrical properties

Comparative tracking index	<b>&gt;600 Volts</b>	<i>IEC 112</i>
Electric strength (2mm)	<b>23.0 kV/mm</b>	<i>IEC 243-1</i>

This document contains information based on average values as obtained from the results of laboratory tests and observations made on the material. Ideal-tek SA declines all responsibility from an improper use of the product described in this document.

## Other properties

Density	<b>1.59 g/ccm</b>	<i>ISO 1183</i>
Color	<b>DG white</b> <b>DL black</b>	
Water absorption in water 23°C (24h)	<b>0.20%</b>	<i>ISO 62</i>