

# CELSTRAN® TPU-GF40-01 AD3002 BLACK

## CELSTRAN® Long Fibre

40% long strand glass fiber reinforced thermoplastic polyurethane

### Product information

Resin Identification	TPU-LGF40	ISO 1043
Part Marking Code	>TPU-LGF40<	ISO 11469

### Typical mechanical properties

Tensile modulus	11300 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	171 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.9 %	ISO 527-1/-2
Flexural modulus	10400 MPa	ISO 178
Flexural strength	270 MPa	ISO 178
Charpy notched impact strength, 23°C	35.1 kJ/m <sup>2</sup>	ISO 179/1eA
Izod notched impact strength, 23°C	39 kJ/m <sup>2</sup>	ISO 180/1A
Izod notched impact strength, -30°C	33.5 kJ/m <sup>2</sup>	ISO 180/1A
Poisson's ratio	0.33 <sup>[C]</sup>	

[C]: Calculated

### Thermal properties

Temperature of deflection under load, 1.8 MPa	113 °C	ISO 75-1/-2
---	--------	-------------

### Physical/Other properties

Density	1520 kg/m <sup>3</sup>	ISO 1183
---------	------------------------	----------

### Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Low Warpage

### Additional information

Injection molding

#### Preprocessing

Polyurethane material drying requirements: 4 hrs. @80° C.  
A dehumidifier or desiccant dryer is recommended.

#### Processing

Celstran can be processed on a standard injection molding unit.  
A general purpose metering screw is recommended with a zone distribution of 40% feed, 40% transition, and 20% metering.  
A free flowing check ring assembly is recommended.

Melt Temp: 245-255°C.  
Mold Temp: 70- 75°C.

Processing Notes

#### Pre-Drying

# CELSTRAN® TPU-GF40-01 AD3002 BLACK

## CELSTRAN® Long Fibre

CELSTRAN TPU should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be  $\leq -30^{\circ}\text{C}$ . The time between drying and processing should be as short as possible