

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 ²	ISO 179/1eA
Izod notched impact strength, 23°C	39 kJ/m ²	ISO 180/1A
Izod notched impact strength, -30°C	33.5 kJ/m ²	ISO 180/1A
Poisson's ratio	0.33 ^[C]	

[C]: Calculated

Thermal properties

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

Density	1520 kg/m ³	ISO 1183
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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

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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