

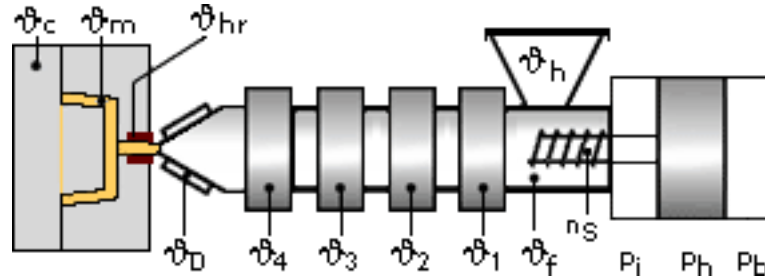
## CELSTRAN® TPU-GF50-01-US | TPU | Glass Reinforced

### Description

50% long strand fiber glass reinforced thermoplastic polyurethane

Physical properties	Value	Unit	Test Standard
Specific gravity	1.63	-	ASTM D792
Mold shrinkage - flow direction	.0005-.001	mm/mm	ASTM D955
Mold shrinkage - transverse direction	.0005-.001	mm/mm	ASTM D955
Mechanical properties	Value	Unit	Test Standard
Elongation @ break (73°F)	2.1	%	ASTM D638
Tensile modulus (73°F)	2.18E6	psi	ASTM D638
Tensile strength @ break (73°F)	35900	psi	ASTM D638
Thermal properties	Value	Unit	Test Standard
Heat deflection temperature @264 psi	96.1	°C	ASTM D648

### Typical injection moulding processing conditions



#### Pre Drying:

#### Necessary low maximum residual moisture content: 0.05%

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

Drying time: 4 h

Drying temperature: 80 - 80 °C

#### Temperature:

	$\vartheta_{\text{Manifold}}$	$\vartheta_{\text{Mold}}$	$\vartheta_{\text{Melt}}$	$\vartheta_{\text{Nozzle}}$	$\vartheta_{\text{Zone4}}$	$\vartheta_{\text{Zone3}}$	$\vartheta_{\text{Zone2}}$	$\vartheta_{\text{Zone1}}$	$\vartheta_{\text{Feed}}$	$\vartheta_{\text{Hopper}}$
min (°C)	250	70	245	245	245	245	245	240	20	70
max (°C)	260	90	260	260	260	260	255	250	50	80



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### **Injection Molding**

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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: 260-265°C.  
Mold Temp: 70- 75°C.