

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

Description

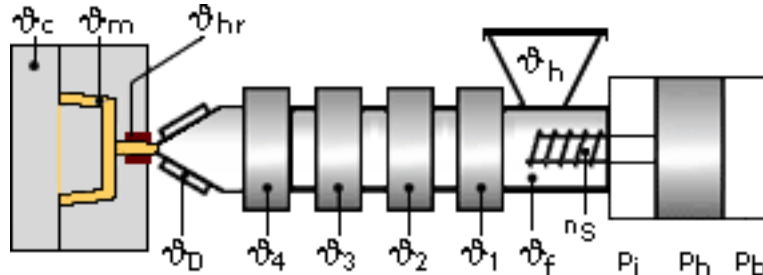
50% long strand fiber glass reinforced thermoplastic polyurethane

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:

	T_{Manifold}	T_{Mold}	T_{Melt}	T_{Nozzle}	T_{Zone4}	T_{Zone3}	T_{Zone2}	T_{Zone1}	T_{Feed}	T_{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

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.