

CELSTRAN® PA6-GF40-01 | PA6 | Glass Reinforced

Description

40% long strand glass fiber reinforced nylon 6 Natural

Physical properties	Value	Unit	Test Standard
Specific gravity	1.45	-	ASTM D792
Mold shrinkage - flow direction	.0005-.001	in/in	ASTM D955
Mold shrinkage - transverse direction	.0025-.003	in/in	ASTM D955

Mechanical properties	Value	Unit	Test Standard
Elongation @ break (250°F)	3	%	ASTM D638
Elongation @ break (-40°F)	2.6	%	ASTM D638
Elongation @ break (73°F)	2.5	%	ASTM D638
Tensile modulus (-40°F)	1.71E6	psi	ASTM D638
Tensile modulus (73°F)	1.95E6	psi	ASTM D638
Tensile modulus (250°F)	1.06E6	psi	ASTM D638
Tensile strength @ break (-40°F)	40800	psi	ASTM D638
Tensile strength @ break (73°F)	34400	psi	ASTM D638
Tensile strength @ break (250°F)	15400	psi	ASTM D638

Thermal properties	Value	Unit	Test Standard
Heat deflection temperature @264 psi	410	°F	ASTM D648

Typical injection moulding processing conditions



Pre Drying:

Necessary low maximum residual moisture content: 0.18%

CELSTRAN PA 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.

Note: Material can be over dried and may discolor.

Drying time: 2 - 4 h

Drying temperature: 158 - 176 °F

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Temperature:

	ϕ _{Mold}	ϕ _{Melt}	ϕ _{Nozzle}	ϕ _{Zone4}	ϕ _{Zone3}	ϕ _{Zone2}	ϕ _{Zone1}	ϕ _{Feed}	ϕ _{Hopper}
min (°F)	176	518	527	527	527	518	509	68	158
max (°F)	212	536	536	536	536	527	527	122	176

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: 275–285°C.

Mold Temp: 85– 95°C.

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