Celanese
The chemistry inside innovation™

CELSTRAN® PA66-GF40-01

Celstran PA66
Material code according to ISO 1043-1: PA66
Nylon 66 reinforced by 40 weight percent long glass fibers. The pellets are cylindrical and normally as well as the embedded fibers 10 mm long.
Parts molded of CELSTRAN have outstanding mechanical properties such as high strength and stiffness combined with high heat deflection. The notched impact strength is increased at elevated and low temperatures due to the fiber skeleton built in the parts. The long fiber reinforcement reduces creep significantly.
The very isotropic shrinkage in the molded parts minimizes the warpage.
Complex parts can be manufactured with high reproducibility by injection molding.
Can be used for substituting die cast metal with the advantage of Weight reduction, no corrosion problems, no post treatment.

Typical mechanical properties

	dry/cond.		
Flexural Modulus	11100 / 8600	MPa	ISO 178
Flexural Strength	300 / 245	MPa	ISO 178
Charpy impact strength, 23 °C	91 / 91	kJ/m²	ISO 179/1eU
Charpy impact strength, -30 °C	65 / 65	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23 °C	36 / 36	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30 °C	36 / 37	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23 °C	66 / -	kJ/m²	ISO 180/1A
Izod notched impact strength, -30 °C	64	kJ/m²	ISO 180/1A

Other properties

Density	1460	kg/m³	ISO 1183

Injection

Drying Temperature	70 - 80	°C
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	0.15	%
Screw tangential speed	0.1	m/s
Max. mould temperature	90 - 120	°C
Back pressure	3	MPa
Injection speed	medium	

Processing Texts

Pre-drying	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 =< -30° C. The time between drying and processing should be as short as possible.

Printed: 2023-09-22