

CELSTRAN® PA66-GF40-02-NATURAL

CELSTRAN® Long Fibre

40% Long glass fiber reinforced, heat stabilized, Nylon 6/6

Product information

Resin Identification	PA66-LGF40	ISO 1043
Part Marking Code	>PA66-LGF40<	ISO 11469

Typical mechanical properties

Tensile modulus	13400 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	225 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2 %	ISO 527-1/-2
Flexural modulus	11600 MPa	ISO 178
Flexural strength	360 MPa	ISO 178
Flexural strain at failure	4.1 %	ISO 178
Charpy impact strength, 23°C	95 kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	46 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	39 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	26 kJ/m ²	ISO 179/1eA
Puncture energy, 23°C	8 J	ISO 6603-2
Puncture energy, -30°C	17.8 J	ISO 6603-2
Izod notched impact strength, 23°C	37 kJ/m ²	ISO 180/1A
Izod impact strength, 23°C	47 kJ/m ²	ISO 180/1U
Izod impact strength, -30°C	43 kJ/m ²	ISO 180/1U
Izod impact strength, -40°C	39.5 kJ/m ²	ISO 180/1U
Poisson's ratio	0.33 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	261 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	255 °C	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	240 °C	ISO 75-1/-2

Physical/Other properties

Density	1450 kg/m ³	ISO 1183
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Injection

Drying Recommended	yes
Drying Temperature	80 °C
Drying Time, Dehumidified Dryer	2 - 4 h
Processing Moisture Content	≤0.2 %
Melt Temperature Optimum	295 °C
Min. melt temperature	285 °C
Max. melt temperature	305 °C
Screw tangential speed	≤0.2 m/s
Mold Temperature Optimum	100 °C
Min. mould temperature	70 °C
Max. mould temperature	120 °C
Hold pressure range	50 - 100 MPa

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Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Heat stabilised or stable to heat

Additional information

Injection molding

Preprocessing

PA6&PA66 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: 295-300° C.
Mold Temp: 85- 95° C.

Processing Notes

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.

Storage

Note: Material can be over dried and may discolor.