Celanese
The chemistry inside innovation™

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/m²	ISO 179/1eU
Charpy impact strength, -30°C	46	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	39	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	26	kJ/m²	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/m²	ISO 180/1A
Izod impact strength, 23°C	47	kJ/m²	ISO 180/1U
Izod impact strength, -30°C	43	kJ/m²	ISO 180/1U
Izod impact strength, -40°C	39.5	kJ/m²	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/m³	ISO 1183

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.

Revised: 2024-04-15 Source: Celanese Materials Database