

CELSTRAN® +PP-GF30-04CN02/10

CELSTRAN® Long Fibre

Material code according to ISO 1043-1: PP Polypropylene with 30 weight percent ash content, long glass fibers reinforced, Black. The fibers are chemically coupled to the polypropylene matrix. 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. Application field: Functional/structural parts for automotive

Product information

Resin Identification	PP-LGF30	ISO 1043
Part Marking Code	>PP-LGF30<	ISO 11469

Typical mechanical properties

Tensile modulus	6800 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	110 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.2 %	ISO 527-1/-2
Flexural modulus	6600 MPa	ISO 178
Flexural strength	160 MPa	ISO 178
Flexural strain at failure	3 %	ISO 178
Charpy impact strength, 23 °C	50 kJ/m ²	ISO 179/1eU
Charpy impact strength, -30 °C	38 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23 °C	20 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30 °C	25 kJ/m ²	ISO 179/1eA
Poisson's ratio	0.35 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10 °C/min	166 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	156 °C	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	122 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	24.9 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	126 E-6/K	ISO 11359-1/-2

Flammability

Burning Behav. at thickness h	HB ^[1] class	IEC 60695-11-10
Thickness tested	1 mm	IEC 60695-11-10

[1]: 22.7 mm/min

Physical/Other properties

Density	1130 kg/m ³	ISO 1183
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Injection

Back pressure	3 MPa
Ejection temperature	105 °C

Additional information

Injection molding

Preprocessing

PP&PE drying requirements: 2 hrs. @94° 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: 210-270°C.
Mold Temp: 30- 70°C.

Processing Notes

Pre-Drying

It is normally not necessary to dry CELSTRAN PP. However, should there be surface moisture (condensate) on the molding compound as a result of incorrect storage, drying is required.

Storage

The product can then be stored in standard conditions until processed.

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Specific volume-temperature (pvT)

