

CELSTRAN® PP-GF30-05CN05 Black - PP

Description

Material code according to ISO 1043-1: PP Polypropylene reinforced with 30 weight percent long glass fibers, Black copolymer, low emission. 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

Physical properties	Value	Unit	Test Standard
Density	1100	kg/m³	ISO 1183
Mechanical properties	Value	Unit	Test Standard
Tensile modulus	6300	MPa	ISO 527-2/1A
Tensile stress at break, 5mm/min	102	MPa	ISO 527-2/1A
Tensile strain at break, 5mm/min	2.5	%	ISO 527-2/1A
Flexural modulus, 23°C	6400	MPa	ISO 178
Flexural strength, 23°C	170	MPa	ISO 178
Charpy impact strength, 23°C	68	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	26	kJ/m²	ISO 179/1eA
Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	165	°C	ISO 11357-1/-3
DTUL at 1.8 MPa	156	°C	ISO 75-1, -2
DTUL at 8.0 MPa	130	°C	ISO 75-1, -2

Typical injection moulding processing conditions

Pre Drying	Value	Unit	Test Standard
Necessary low maximum residual moisture content	0.2	%	-
Drying time	2	h	-
Drying temperature	90 - 100	°C	-
Temperature	Value	Unit	Test Standard
Feeding zone temperature	20 - 50	°C	-
Zone1 temperature	200 - 220	°C	-
Zone2 temperature	200 - 220	°C	-
Zone3 temperature	220 - 250	°C	-
Zone4 temperature	220 - 250	°C	-
Nozzle temperature	220 - 250	°C	-
Melt temperature	220 - 250	°C	-
Mold temperature	30 - 70	°C	-
Hot runner temperature	230 - 270	°C	-
Pressure	Value	Unit	Test Standard
Back pressure max.	30	bar	-
Speed	Value	Unit	Test Standard
Injection speed	slow	-	-
Screw Speed	Value	Unit	Test Standard
Screw speed diameter, 40mm	50	RPM	-
Screw speed diameter, 55mm	35	RPM	-
Screw speed diameter, 75mm	25	RPM	-

Other text information

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.

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Longer pre-drying times/storage

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

Characteristics

Product Categories	Delivery Form
Low emission, Glass reinforced	Pellets