

CELSTRAN® PP-GF30-0501 P8/13 - PP

Description

PP with 30% ash content - impact modified

Material code according to ISO 1043-1: PP High impact modified polypropylene reinforced with 30 weight percent long glass fibers. Black. The fibers are chemically coupled to the polypropylene matrix. The impact properties are enhanced. The pellets are cylindrical and normally as well as the embedded fibers 8 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	69.9	lb/ft³	ISO 1183
Mechanical properties	Value	Unit	Test Standard
Tensile modulus	928243	psi	ISO 527-1, -2
Tensile stress at break, 5mm/min	13800	psi	ISO 527-1, -2
Tensile strain at break, 5mm/min	2.6	%	ISO 527-1, -2
Flexural modulus, 23°C	798000	psi	ISO 178
Flexural strength, 23°C	20300	psi	ISO 178
Charpy impact strength, 23°C	33.3	ft-lb/in²	ISO 179/1eU
Charpy impact strength, -30°C	38.1	ft-lb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	13.8	ft-lb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	13.3	ft-lb/in²	ISO 179/1eA
Thermal properties	Value	Unit	Test Standard
DTUL at 1.8 MPa	316	°F	ISO 75-1, -2
DTUL at 8.0 MPa	252	°F	ISO 75-1, -2

Typical injection moulding processing conditions

Pre Drying	Value	Unit
Necessary low maximum residual moisture content	0.2	%
Drying time	2	h
Drying temperature	194 - 212	°F
Temperature	Value	Unit
Feeding zone temperature	68 - 122	°F
Zone1 temperature	392 - 428	°F
Zone2 temperature	392 - 428	°F
Zone3 temperature	428 - 482	°F
Zone4 temperature	428 - 482	°F
Nozzle temperature	428 - 482	°F
Melt temperature	428 - 482	°F
Mold temperature	86 - 158	°F
Hot runner temperature	446 - 518	°F
Pressure	Value	Unit
Back pressure max.	30	bar
Speed	Value	
Injection speed	slow	

Screw Speed	Value	Unit
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.

Longer pre-drying times/storage

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

Characteristics

Product Categories Glass reinforced

Delivery Form Pellets

General Disclaimer

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