HK:+852-69575415 China GuangDong:+13538586433 ShangHai:+18816996168

Ticona
Engineering Polymers

CELSTRAN® PP-GF30-04 | PP | Glass Reinforced

Description

Material code according to ISO 1043-1: PP

Heat stabilized polypropylene reinforced with 30 weight percent long glass fibers. 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.

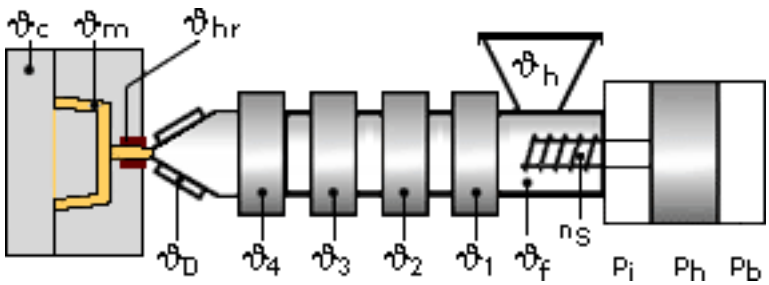
Complex parts can be manufactured with high reproducibility by injection molding.

Application field: Functionial/structural parts for automotive

Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	**6600**	MPa	ISO 527-2/1A
Tensile stress at break (5mm/min)	**95**	MPa	ISO 527-2/1A
Tensile strain at break (5mm/min)	**2.3**	%	ISO 527-2/1A
Flexural modulus (23°C)	**7000**	MPa	ISO 178
Flexural strength (23°C)	**160**	MPa	ISO 178
Charpy impact strength @ 23°C	**48**	kJ/m²	ISO 179/1eU
Charpy impact strength @ -30°C	**44**	kJ/m²	ISO 179/1eU
Charpy notched impact strength @ 23°C	**18**	kJ/m²	ISO 179/1eA
Charpy notched impact strength @ -30°C	**20**	kJ/m²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
DTUL @ 1.8 MPa	**148**	°C	ISO 75-1/-2
DTUL @ 8.0 MPa	**122**	°C	ISO 75-1/-2

Typical injection moulding processing conditions



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Maximum residual moisture content: 0.2000%

Processing Temperatures:

	ϑ Cavity	ϑ Melt	ϑ Hot Runner	ϑ Die	ϑ 4	ϑ 3	ϑ 2	ϑ 1	ϑ Feeding	ϑ Hopper
min (°C)	30	240	240	240	260	250	240	230	20	N/A
max (°C)	70	270	270	270	270	260	250	240	50	N/A

Processing Pressures:

	Injection Pressure	Holding Pressure	Back Pressure
min (bar)	600	400	0
max (bar)	1200	800	30

Injection speed: langsam

Screw speed:

Screw diameter (mm)	40	55	75
Screw speed (rpm)	50	35	25

Pre-drying conditions:

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. A circulating air drying cabinet can be used for this purpose if the gran

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

Drying time: 4 h

Drying temperature: 90 - 100 °C

Special information:

Celstran TPU:

Melt temperature < 275 °C (527 °F)!