# CELSTRAN® PP-GF30-0501P10/13

PP-GF with 30% chemically coupled long glass fibers - impact modified
Material code according to ISO 1043-1: PP Heat stabilized 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 11 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

## Typical mechanical properties

| | | | |
|---|---|---|---|
| Tensile Modulus | 6200 | MPa | ISO 527-1/-2 |
| Stress at break, 5mm/min | 100 | MPa | ISO 527-1/-2 |
| Strain at break, 5mm/min | 2.5 | % | ISO 527-1/-2 |
| Flexural Modulus | 6000 | MPa | ISO 178 |
| Flexural Strength | 150 | MPa | ISO 178 |
| Charpy impact strength, 23°C | 70 | kJ/m² | ISO 179/1eU |
| Charpy impact strength, -30°C | 80 | kJ/m² | ISO 179/1eU |
| Charpy notched impact strength, 23°C | 30 | kJ/m² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 29 | kJ/m² | ISO 179/1eA |
| Izod impact strength, 23°C | 55 | kJ/m² | ISO 180/1U |

## Thermal properties

| | | | |
|---|---|---|---|
| Temp. of deflection under load, 1.8 MPa | 158 | °C | ISO 75-1/-2 |
| Temp. of deflection under load, 8 MPa | 122 | °C | ISO 75-1/-2 |

## Flammability

| | | | |
|---|---|---|---|
| Burning Behav. at thickness h | HB | class | UL 94 |
| Thickness tested | 1.00 | mm | UL 94 |

## Other properties

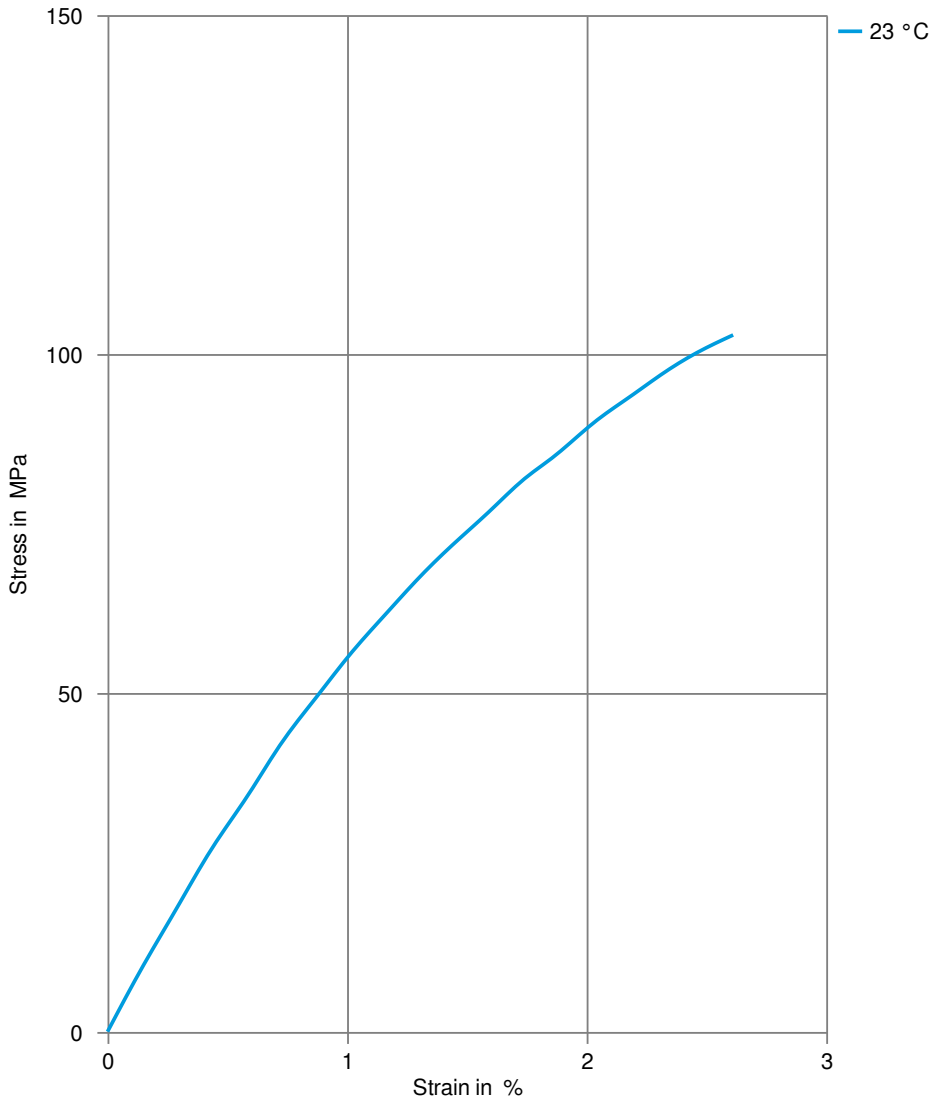
| | | | |
|---|---|---|---|
| Density | 1120 | kg/m³ | ISO 1183 |

## Injection

| | | |
|---|---|---|
| Drying Temperature | 90 - 100 | °C |
| Drying Time, Dehumidified Dryer | 2 | h |
| Processing Moisture Content | 0.2 | % |
| Screw tangential speed | 0.1 | m/s |
| Max. mould temperature | 30 - 70 | °C |
| Back pressure | 3 | MPa |
| Injection speed | slow | |

# CELSTRAN® PP-GF30-0501P10/13

## Stress-strain



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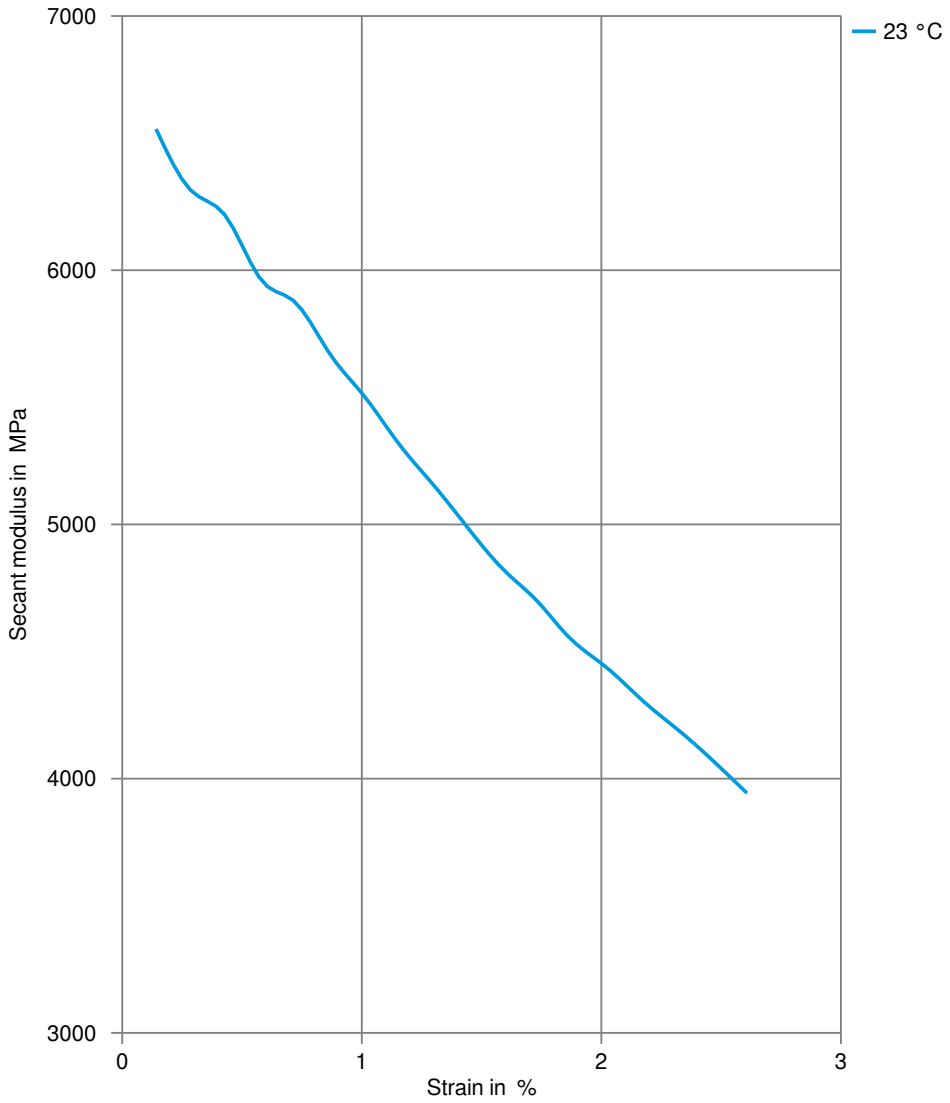
## Secant modulus-strain



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## Processing Texts

| | |
|---|---|
| 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. |