

CELSTRAN® PP-GF30-0551 Black

Celstran PP-Gf30-0553 is a 30% long glass fiber low emission polypropylene copolymer. Material code according to ISO 1043-1: PP Polypropylene copolymer reinforced with 30weight percent long glass fibers. Low emission. The fibers are chemically coupled to the polypropylene matrix. 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/m ² | ISO 179/1eU |
| Charpy impact strength, -30 °C | 80 kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength, 23°C | 30 kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength, -30 °C | 29 kJ/m ² | ISO 179/1eA |
| Izod impact strength, 23°C | 55 kJ/m ² | ISO 180/1U |

Thermal properties

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

Other properties

| | | |
|---------|------------------------|----------|
| Density | 1120 kg/m ³ | ISO 1183 |
|---------|------------------------|----------|

VDA Properties

| | | |
|--|-----------|---------|
| Emission of organic compounds | 30 µgC/g | VDA 277 |
| Thermal desorption analysis of organic emissions | 140 µg/g | VDA 278 |
| Odour | 3.5 class | VDA 270 |

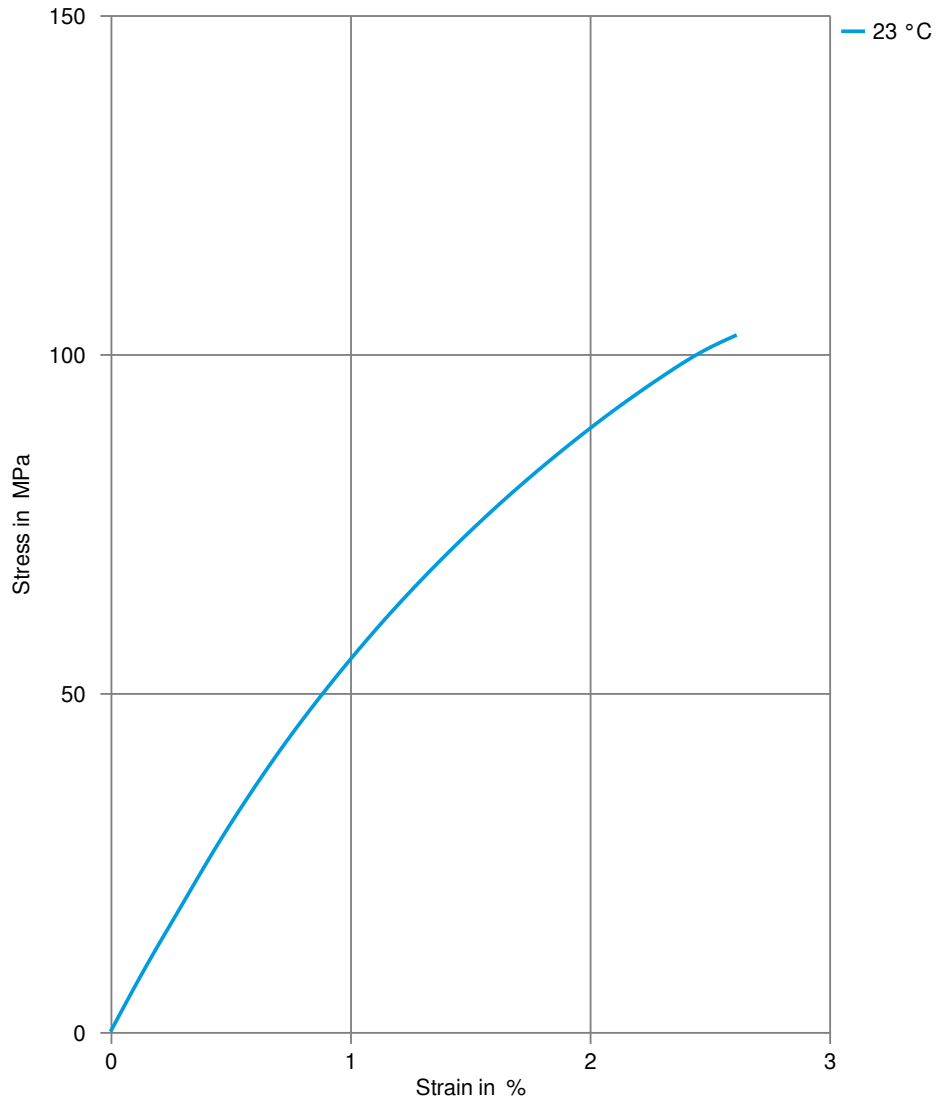
Injection

| | |
|---------------------------------|-------------|
| 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 |



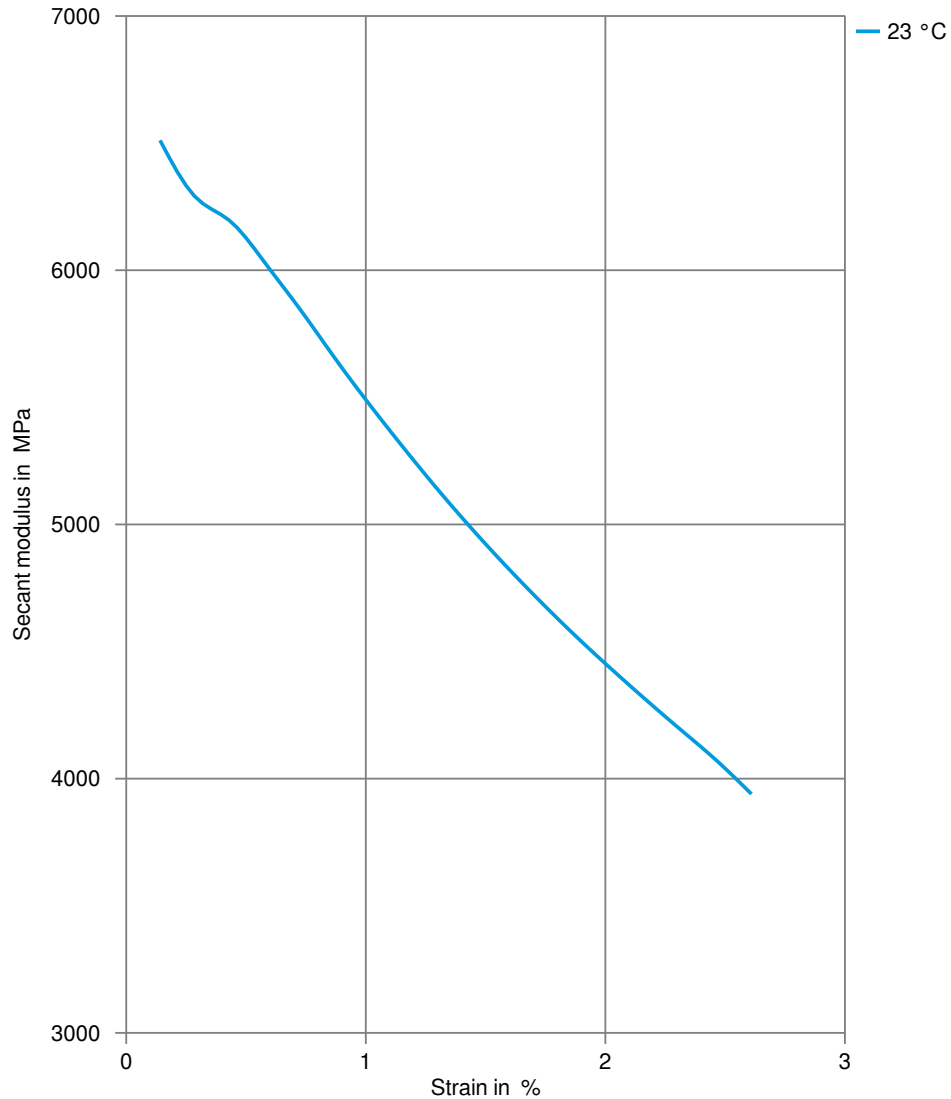
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Stress-strain



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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.

Other Approvals

Other Approvals

| OEM | Specification | Additional Information |
|-------------------------------|--------------------|------------------------|
| GM | GMW15890P-PP-GF30E | Black |
| Mercedes-Benz Group (Daimler) | DBL 5404 | |

