

# CELSTRAN® PP-GF40-0403 BLACK

## CELSTRAN® Long Fibre

Material code according to ISO 1043-1: PP Heat stabilized polypropylene reinforced with 40 weight percent long glass fibers, Black. 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

### Product information

Resin Identification	PP-LGF40	ISO 1043
Part Marking Code	>PP-LGF40<	ISO 11469

### Typical mechanical properties

Tensile modulus	9200 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	130 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2 %	ISO 527-1/-2
Flexural modulus	9600 MPa	ISO 178
Flexural strength	220 MPa	ISO 178
Charpy impact strength, 23°C	62 kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	60 kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	30 kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	30 kJ/m <sup>2</sup>	ISO 179/1eA
Poisson's ratio	0.34 <sup>[C]</sup>	

[C]: Calculated

### Thermal properties

Melting temperature, 10°C/min	166 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	158 °C	ISO 75-1/-2

### Physical/Other properties

Density	1210 kg/m <sup>3</sup>	ISO 1183
---------	------------------------	----------

### Injection

Drying Temperature	100 °C
Drying Time, Dehumidified Dryer	2 h
Processing Moisture Content	≤0.2 %
Melt Temperature Optimum	225 °C
Min. melt temperature	215 °C
Max. melt temperature	235 °C
Screw tangential speed	≤0.0982 m/s
Mold Temperature Optimum	70 °C
Min. mould temperature	60 °C
Max. mould temperature	80 °C
Hold pressure range	40 - 80 MPa
Back pressure	3 MPa
Ejection temperature	115 °C

# CELSTRAN® PP-GF40-0403 BLACK

## CELSTRAN® Long Fibre

### Characteristics

Processing	Injection Moulding, Extrusion, Sheet Extrusion, Other Extrusion, Transfer Moulding
Delivery form	Pellets

### Additional information

Processing Notes

#### Pre-Drying

It is normally not necessary to dry CELSTRAN PP