# CELSTRAN® PP-GF40-0453 BLACK

## CELSTRAN® Long Fibre

Material code according to ISO 1043-1: PP Heat stabilized polypropylene reinforced with 40 weight percent long glass fibers, low emission grade. 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 | 1.33E6 | psi | ISO 527-1/-2 |
| Tensile stress at break, 5mm/min | 18900 | psi | ISO 527-1/-2 |
| Tensile strain at break, 5mm/min | 2 | % | ISO 527-1/-2 |
| Flexural modulus | 1.31E6 | psi | ISO 178 |
| Flexural strength | 29000 | psi | ISO 178 |
| Charpy impact strength, 23°C | 29.5 | ftlb/in² | ISO 179/1eU |
| Charpy impact strength, -30°C | 28.5 | ftlb/in² | ISO 179/1eU |
| Charpy notched impact strength, 23°C | 11.9 | ftlb/in² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 14.3 | ftlb/in² | ISO 179/1eA |
| Charpy notched impact strength, -40°C | 19 | ftlb/in² | ISO 179/1eA |

### Thermal properties

| | | | |
|---|---|---|---|
| Melting temperature, 10°C/min | 331 | °F | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa | 316 | °F | ISO 75-1/-2 |
| Temperature of deflection under load, 8 MPa | 273 | °F | ISO 75-1/-2 |

### Physical/Other properties

| | | | |
|---|---|---|---|
| Density | 0.0437 | lb/in³ | ISO 1183 |

### Emissions

| | | | |
|---|---|---|---|
| Emission of organic compounds | 30 | µgC/g | VDA 277 |
| Thermal desorption analysis of organic emissions | 56 | µg/g | VDA 278 |
| Odor test | 3.5 | class | VDA 270 |

### Injection

| | | |
|---|---|---|
| Drying Recommended | yes | |
| Drying Temperature | 194 | °F |
| Drying Time, Dehumidified Dryer | 2 - 3 | h |
| Processing Moisture Content | ≤0.2 | % |
| Melt Temperature Optimum | 482 | °F |
| Min. melt temperature | 446 | °F |
| Max. melt temperature | 518 | °F |
| Max. screw tangential speed | ≤0.1 | m/s |
| Mold Temperature Optimum | 140 | °F |

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| | | |
|---|---|---|
| Min. mold temperature | 104 | °F |
| Max. mold temperature | 158 | °F |
| Back pressure | 435 | psi |
| Ejection temperature | 239 | °F |

## Extrusion

| | | |
|---|---|---|
| Drying Temperature | 176 - 212 | °F |
| Drying Time, Dehumidified Dryer | 2 - 4 | h |
| Processing Moisture Content | ≤0.2 | % |
| Melt Temperature Optimum | 482 | °F |
| Melt Temperature Range | 446 - 518 | °F |

## Automotive

| OEM | STANDARD | ADDITIONAL INFORMATION |
|---|---|---|
| Dongfeng Motor | SLCLBG2016018 | |
| Ford | WSS-M4D865-B1 | |
| General Motors | GMW15890P-PP-GF40 | Black |
| Great Wall Motor | MP01-LG-03 | Black |
| Li Auto | Q/LiA5310050 | 2021 (V2) |
| Stellantis | MS-DB-21 / PP-H.LGF40.5000F.15C.HS | CPN5167 |
| Stellantis - Chrysler | MS-DB-21 / CPN-5167 | |

## Characteristics

| | |
|---|---|
| Processing | Injection Molding, Extrusion, Sheet Extrusion, Other Extrusion, Transfer Molding |
| Special characteristics | Low emissions |

## Additional information

Processing Notes

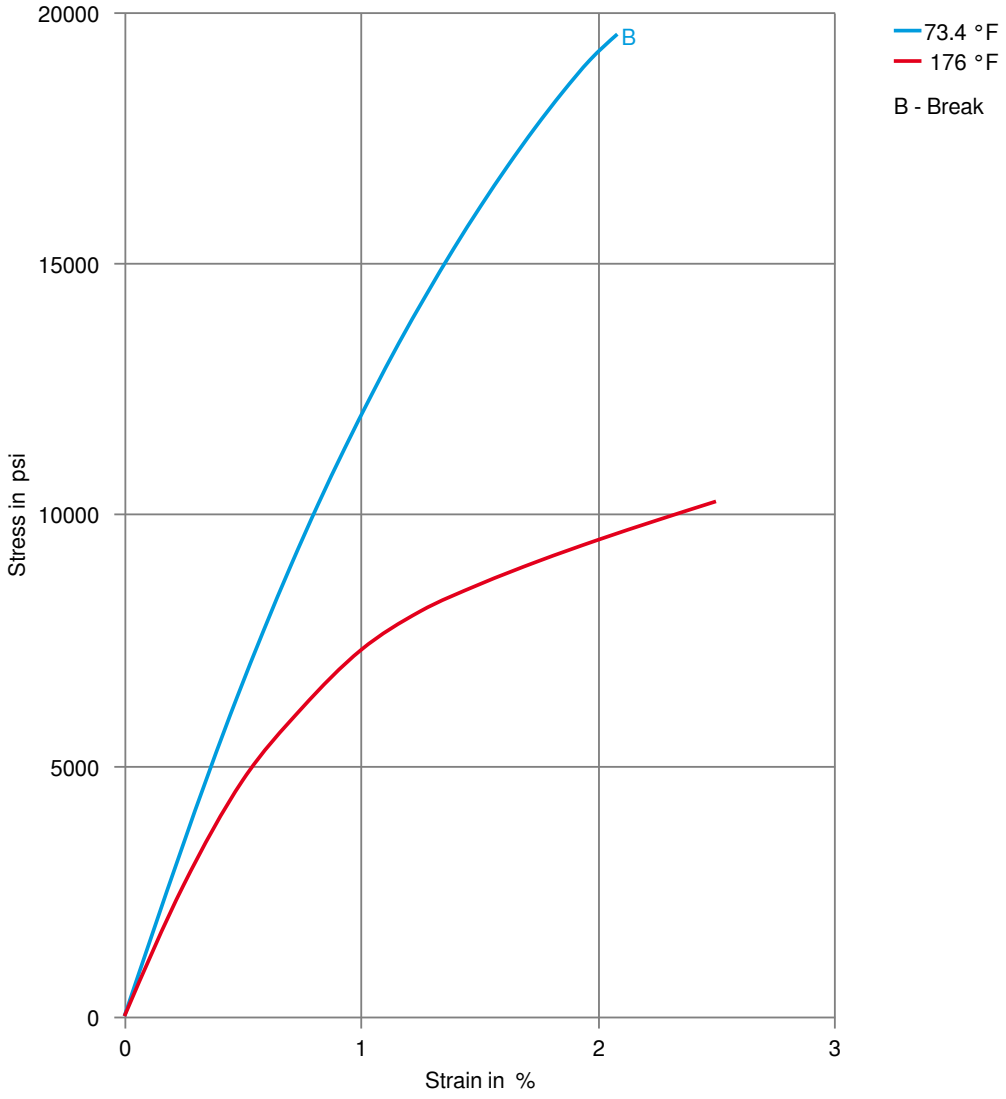
### Pre-Drying

It is normally not necessary to dry CELSTRAN PP

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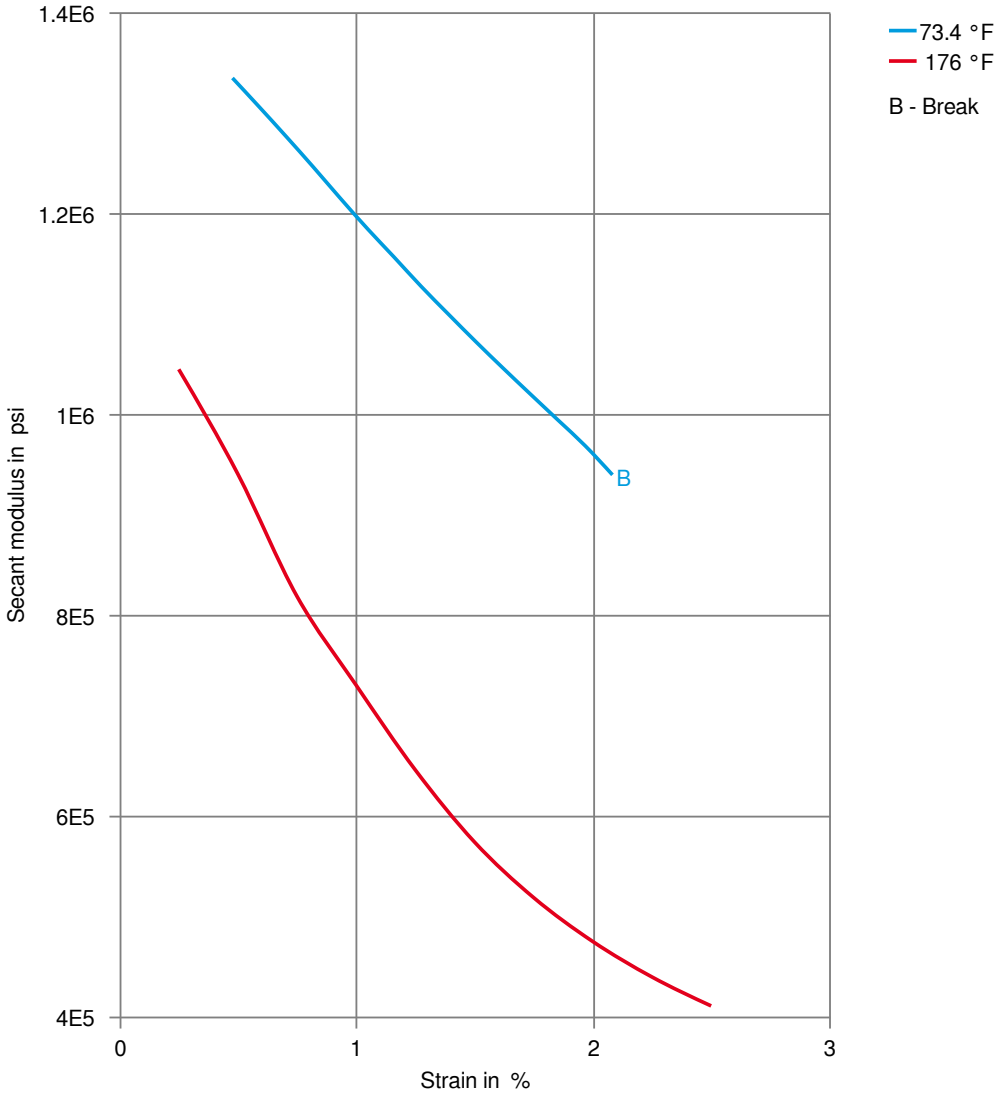
## Stress-strain



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## Secant modulus-strain






Revised: 2026-05-11 Source: Celanese Materials Database

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