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# CELSTRAN® PA66-GF50-02 P7

## CELSTRAN® Long Fibre

Material code according to ISO 1043-1: PA66

Heat stabilized Nylon 66 reinforced by 50 weight percent long glass fibers. The pellets are cylindrical and normally as well as the embedded fibers 7 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.

Can be used for substituting die cast metal with the advantage of Weight reduction, no corrosion problems, no post treatment.

## Product information

| | | |
|---|---|---|
| Resin Identification | PA66-LGF50 | ISO 1043 |
| Part Marking Code | >PA66-LGF50< | ISO 11469 |

## Rheological properties

| | | | |
|---|---|---|---|
| Viscosity number | 136 | $cm^3/g$ | ISO 307, 1628 |

## Typical mechanical properties

| | | | |
|---|---|---|---|
| Tensile modulus | 16600 | MPa | ISO 527-1/-2 |
| Tensile stress at break, 5mm/min | 265 | MPa | ISO 527-1/-2 |
| Tensile strain at break, 5mm/min | 2 | % | ISO 527-1/-2 |
| Flexural modulus | 15000 | MPa | ISO 178 |
| Flexural strength | 420 | MPa | ISO 178 |
| Charpy notched impact strength, 23°C | 50 | $kJ/m^2$ | ISO 179/1eA |
| Poisson's ratio | 0.33[C] | | |

[C]: Calculated

## Thermal properties

| | | | |
|---|---|---|---|
| Melting temperature, 10°C/min | 260 | °C | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa | 260 | °C | ISO 75-1/-2 |

## Physical/Other properties

| | | | |
|---|---|---|---|
| Density | 1560 | $kg/m^3$ | ISO 1183 |

## Injection

| | | |
|---|---|---|
| Drying Recommended | yes | |
| Drying Temperature | 80 | °C |
| Drying Time, Dehumidified Dryer | 2 - 4 | h |
| Processing Moisture Content | ≤0.2 | % |
| Melt Temperature Optimum | 295 | °C |
| Min. melt temperature | 285 | °C |
| Max. melt temperature | 305 | °C |
| Screw tangential speed | ≤0.2 | m/s |
| Mold Temperature Optimum | 100 | °C |
| Min. mould temperature | 70 | °C |

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| | | |
|---|---|---|
| Max. mould temperature | 120 | °C |
| Hold pressure range | 50 - 100 | MPa |
| Back pressure | 3 | MPa |

## Characteristics

| | |
|---|---|
| Processing | Injection Moulding |
| Delivery form | Pellets |
| Special characteristics | Heat stabilised or stable to heat |



Revised: 2024-01-23 Source: Celanese Materials Database