Celanese
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# CELSTRAN® PA66-GF50-02-NATURAL

## CELSTRAN® Long Fibre

50 % Long glass fiber reinforced, heat stabilized, Nylon 6/6

## Product information

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

## Typical mechanical properties

| | | | |
|---|---|---|---|
| Tensile modulus | 16500 | MPa | ISO 527-1/-2 |
| Tensile stress at break, 5mm/min | 260 | MPa | ISO 527-1/-2 |
| Tensile strain at break, 5mm/min | 2 | % | ISO 527-1/-2 |
| Flexural modulus | 14700 | MPa | ISO 178 |
| Flexural strength | 420 | MPa | ISO 178 |
| Flexural strain at failure | 3.8 | % | ISO 178 |
| Charpy impact strength, 23°C | 95 | kJ/m² | ISO 179/1eU |
| Charpy impact strength, -30°C | 80 | kJ/m² | ISO 179/1eU |
| Charpy notched impact strength, 23°C | 49 | kJ/m² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 34 | kJ/m² | ISO 179/1eA |
| Izod notched impact strength, 23°C | 61 | kJ/m² | ISO 180/1A |
| Izod impact strength, -40°C | 61.9 | kJ/m² | ISO 180/1U |
| Poisson's ratio | 0.33[C] | | |

[C]: Calculated

## Thermal properties

| | | | |
|---|---|---|---|
| Melting temperature, 10°C/min | 261 | °C | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa | 256 | °C | ISO 75-1/-2 |
| Temperature of deflection under load, 8 MPa | 249 | °C | ISO 75-1/-2 |

## Physical/Other properties

| | | | |
|---|---|---|---|
| Density | 1560 | kg/m³ | 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 |
| Max. mould temperature | 120 | °C |
| Hold pressure range | 50 - 100 | MPa |

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## Characteristics

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

## Additional information

Injection molding

### Preprocessing

PA6&PA66 drying requirements: 4 hrs. @80° C.
A dehumidifier or desiccant dryer is recommended.

### Processing

Celstran can be processed on a standard injection molding unit.
A general purpose metering screw is recommended with a zone distribution of 40% feed, 40% transition, and 20% metering.
A free flowing check ring assembly is recommended.

Melt Temp: 300-310°C.
Mold Temp: 90-100°C.

Processing Notes

### Pre-Drying

CELSTRAN PA should in principle be predried. Because of the necessary low maximum residual moisture content the use of dry air dryers is recommended. The dew point should be =< -30°C. The time between drying and processing should be as short as possible.

### Storage

Note: Material can be over dried and may discolor.



Revised: 2024-04-15 Source: Celanese Materials Database