

# CELSTRAN® PA66-GF50-02-Natural

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

## Typical mechanical properties

|                                       |                      |              |
|---------------------------------------|----------------------|--------------|
| Tensile Modulus                       | 16500 MPa            | ISO 527-1/-2 |
| Stress at break, 5mm/min              | 260 MPa              | ISO 527-1/-2 |
| Strain at break, 5mm/min              | 2 %                  | ISO 527-1/-2 |
| Flexural Modulus                      | 14700 MPa            | ISO 178      |
| Flexural Strength                     | 425 MPa              | ISO 178      |
| Charpy impact strength, 23°C          | 95 kJ/m <sup>2</sup> | ISO 179/1eU  |
| Charpy impact strength, -30°C         | 80 kJ/m <sup>2</sup> | ISO 179/1eU  |
| Charpy notched impact strength, 23°C  | 49 kJ/m <sup>2</sup> | ISO 179/1eA  |
| Charpy notched impact strength, -30°C | 34 kJ/m <sup>2</sup> | ISO 179/1eA  |

## Thermal properties

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

## Other properties

|         |                        |          |
|---------|------------------------|----------|
| Density | 1560 kg/m <sup>3</sup> | ISO 1183 |
|---------|------------------------|----------|

## Injection

|                                 |             |
|---------------------------------|-------------|
| Drying Temperature              | 70 - 80 °C  |
| Drying Time, Dehumidified Dryer | 2 - 4 h     |
| Processing Moisture Content     | 0.15 %      |
| Max. mould temperature          | 80 - 100 °C |

## Additional information

|                   |                                                                                                                                                                                                                                                                                                                  |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Injection molding | <p>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.</p> <p>Melt Temp: 300-310°C.<br/>         Mold Temp: 90-100°C.</p> |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## Processing Texts

|            |                                                                                                                                                                                                                                                                      |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre-drying | <p>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.</p> |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Longer pre-drying times/storage      Note: Material can be over dried and may discolor.



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Injection molding



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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.

## Injection molding Preprocessing

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

