

CELSTRAN® PA6-GF50-01 AF3001 Natural - PA6

Description

50% long strand fiber glass reinforced nylon 6
50% long strand fiber glass reinforced nylon 6 Natural

Physical properties	Value	Unit	Test Standard
Density	97.4	lb/ft ³	ISO 1183

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	2.32E6	psi	ISO 527-1, -2
Tensile stress at break, 5mm/min	35500	psi	ISO 527-1, -2
Tensile strain at break, 5mm/min	2.1	%	ISO 527-1, -2
Flexural modulus, 23°C	2.1E6	psi	ISO 178
Flexural strength, 23°C	57300	psi	ISO 178
Charpy notched impact strength, 23°C	22.4	ft-lb/in ²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
DTUL at 1.8 MPa	419	°F	ISO 75-1, -2

Typical injection moulding processing conditions

Pre Drying	Value	Unit
Necessary low maximum residual moisture content	0.18	%
Drying time	2 - 4	h
Drying temperature	158 - 176	°F

Temperature	Value	Unit
Hopper temperature	158 - 176	°F
Feeding zone temperature	68 - 122	°F
Zone1 temperature	509 - 527	°F
Zone2 temperature	518 - 527	°F
Zone3 temperature	527 - 536	°F
Zone4 temperature	527 - 536	°F
Nozzle temperature	527 - 536	°F
Melt temperature	518 - 536	°F
Mold temperature	176 - 212	°F

Other text information

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.

Longer pre-drying times/storage

Note: Material can be over dried and may discolor.

Injection molding

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: 285-295°C.

Mold Temp: 85- 95°C.

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Characteristics

Special Characteristics	Chemical resistant, Fuel resistant
Product Categories	Glass reinforced, Tribological
Delivery Form	Pellets

General Disclaimer

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values. Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products. The products mentioned herein are not intended for use in medical or dental implants.

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