

# Pre-Impregnated – Towpreg

TENRON®

## Product description

Towpreg is a specialized material where individual fibres are pre-impregnated with resin along their length. Designed for enhanced control and precision in creating composite parts, especially in applications with fine-tuned fibre placement and minimal waste.

## Article reference

### Towpreg, EX.:

TOW MEDR BSB3\_1600-80(10).60.IS65T.CS01E

- Strand type (Single or Multi-End Direct roving) \_\_\_\_\_
- Batch composition's reference \_\_\_\_\_
- Linear density in TEX (gr/km), see below \_\_\_\_\_
- Linear density in TEX of constituent single-end roving \_\_\_\_\_
- Diameter of virgin (elementary) filaments (µm.) \_\_\_\_\_
- Resin content (%) \_\_\_\_\_
- Sizing reference(\*) \_\_\_\_\_
- Cardboard sleeve : • with felt surface or embossed- texture for external discharges \_\_\_\_\_  
• without cardboard sleeve for internal discharges

## Physical properties

### Volume density (ASTM C693)

2.600 g/cm³

### Poisson ratio

0,24

## Thermal properties (according to DIN ISO 7884)

Linear coefficient of thermal expansion 20°...300°C,  
CTE (ASTM D696): 3,72 ... 4,9 \* 10<sup>-6</sup> /°C

### Melting point

1.560 °C

### Transition temperature

730 °C

### Softening point

940 °C

## Thermal resistance (% of residual values after 24h ageing)

From -200°C up to 850°C

## Sizing

### Content, % weight (loss of ignition, LOI)

0,4 – 1,5 % (according to customer's request)

### Moisture content, % weight

Less than 0,1 %

## Mechanical properties

### Sized and dried roving

(according to ISO 3341:2000)

- Tensile strength: 66 ... 80 cN/tex  
(depending on the sizing formulation):  
1.580 ... 2.000 MPa
- Elongation at break: 2,10%
- Tensile modulus (Young or E-modulus):  
90 ... 100 GPa

### Impregnated strand (according to ASTM D2343 or ISO 9163:2005: )

- Tensile strength: 3.400 ... 3.600 MPa
- Tensile modulus (Young or E-modulus):  
86 ... 97 Gpa

### Towpreg (according to ISO 527-4 )

- Depending on the impregnated woven fabric (available upon request)

### Resin (matrix) compatibility

Epoxy, polyester, vinylester.

### Fibre volume fraction

50 – 70%

(\*) see Isomatex Sales department for more information

## Standard Packaging

Standard packaging includes cylindrical bobbins with felt- or embossed surface sleeves.

Bobbins are individually labelled and wrapped with stretched plastic film for protection and improved handling.

### Height of cardboard sleeve (mm)

From 260 to 300mm

### Inner diameter of cardboard sleeve (mm)

76mm

## Benefits of TENRON in end-applications

Please see our website, under "applications".

## Storage and usage conditions

ISOMATEX S.A. recommends storage in a cool and dry warehouse into the original packaging. For an optimal processing we recommend to use the product in ambient conditions (20 - 23 °C, 60 - 65% relative humidity). TENRON roving need to be kept in the workshop at least 24 hours prior to usage.

## Sustainability

- ISOMATEX S.A. respects the environmental directives of the **European Union** and is **REACH compliant** (Regulation, Evaluation, Authorisation and Restriction of Chemicals) .
- TENRON is fully and easily recyclable. For more information on **sustainability** and our **LCA**, please see our website and / or contact us.

For more detailed information, please contact the Isomatex Sales Department at **info@isomatex.com** or by phone at the following number: **+32 (0)81.72.86.86**

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