

# Fibres

## – Direct Roving SE / ME

T E N R O N<sup>®</sup>

### Product description

Direct roving consists of continuous filaments made out of an aggregation of minerals. Direct roving are treated with a sizing, which allows an easy downstream treatment, and which is in compliance with the final application.



### Article reference

#### Multi-End (assembled) direct roving, EX.:

**MEDR BSB3 1600-100(11) IS65T CS02E**

- Strand type (Single or Multi-End Direct roving)
- Batch composition's reference
- Nominal linear density in TEX (gr/km) from 70 up to 7200
- Nominal linear density in TEX of constituent SE roving (from 70 up to 300)
- Diameter of virgin (elementary) filaments (µm.)
- 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/cm<sup>3</sup>

#### Poisson ratio

0,24

### Thermal properties

(according to DIN ISO 7884)

#### Melting point

1.560 °C

#### Transition temperature

730 °C

#### Softening point

940 °C

(according to CTE (ASTM D696)

#### Linear coefficient of thermal expansion

20°...300°C, 3,72 ... 4,9 \* 10<sup>-6</sup> /°C

### Sizing

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

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

#### Moisture content, % weight

Less than 0,1 %

#### Resin (matrix) compatibility:

Epoxy, polyester, vinylester, PA, PP, PEEK, BMI, etc..

### 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
- Elongation at break: 3,5 ... 4,5%
- Tensile modulus (Young or E-modulus):  
86 ... 97 GPa

## 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

From 260 to 300mm

### Inner diameter of cardboard sleeve

76mm

### Nominal weight for commercially available bobbins

Range from 2kg up to 10kg



## Benefits of Tenron in end-applications

Please see our website, under “applications”.

## Storage and usage conditions

TENRON 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

-  TENRON 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 Tenron Sales Department at **info@tenron.com** or by phone at the following number: **+32 (0)81.72.86.86**

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