

Fibres

– Direct Roving SE / ME

TENRON®

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 100 up to 5000 _____
- Nominal linear density in TEX of constituent SE roving (from 110 up to 220) _____
- Diameter of virgin (elementary) filaments (9; 10; 11µm.) _____
- 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)

Melting point

1.560 °C

Transition temperature

730 °C

Softening point

940 °C

(according to CTE (ASTMD696))

Linear coefficient of thermal expansion

20°...300°C, 3,72 ... 4,9 * 10⁻⁶ /°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

(*) 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

Nominal weight for commercially available bobbins (kg)

Range from 2kg up to 10kg

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**

DISCLAIMER OF LIABILITY

The data presented above is provided solely as a guide in the selection of fibre reinforcement. The information mentioned in this leaflet is based on actual ISOMATEX laboratory data and field test experience. Due to numerous factors in downstream processability that may affect results, we consider this information reliable but do not guarantee its applicability to the user's process or assume any liability arising from its use or performance. The end-user, by accepting the products described herein, assumes the responsibility for thoroughly testing any application to determine its compliance before committing to production. It is important for the end-user to determine the properties of their own commercial compounds when using this or any other fibre reinforcement.

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