## Substrates – Non-Crimp Quadriaxial

## TENRON®

#### **Product description**

Non crimped (NCF) Quadriaxial fabric is made of TENRON's continuous filament with 4 layers of unidirectionally placed direct rovings respectively suitable for structural composites whilst absorbing the highest possible loads. The layers are stitched together by a polyester yarn.



#### **Article reference**

NCF (NON-CRIMP FABRIC), EX.:	NCF QX BSB3 _210. +45.100.1,27.1565
- Batch composition's reference -	
<ul><li>Specific surface weight (gr/m²)</li></ul>	
- Construction Pattern (fibres orientation)	
- Length of roll (m)	
- Width of roll (m)	
- Sizing reference <sup>(*)</sup>	

#### **Physical properties**

Volume density of constituent yarns (according to ASTM C693)

2.600 gr/cm<sup>3</sup>

Specific surface weight

From 400 up to 1.200  $gr/m^2$ 

**Thickness** 

From 0,5 to 3,5 mm

**Standard Construction** 

-45°; 0°; +45°; 90°

# Thermal properties (according to DIN ISO 7884)

**Melting point** 

1.560 °C

**Transition temperature** 

730 °C

**Softening point** 

940°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

Ceramic matrix materials, 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
- Tensile modulus (Young or E-modulus):86 ... 97 GPa

# Operating thermal range (continuous)

From -200°C up to 850°C

#### Standard Packaging

The rolls are individually labeled and wrapped with stretched plastic film for protection and improved handling.

Standard width (m)

1,27 m

Length (m)

From 100 to 500 m

Weight (kg)

Depending on length and surface weight

Inner diameter of cardboard sleeve (cm)

15 cm (by default)

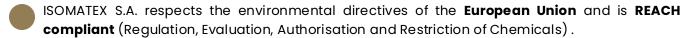
### Benefits of TENRON in end-applications

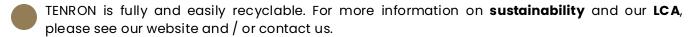
Please see our website, under "applications".

#### 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





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**

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Strong by Nature

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