

Carbon UD IM 194 gsm

Type of material:

Carbon fiber Tenax-E IMS65 E23.



Description:

Unidirectional non-crimp carbon fiber mat with an areal weight of 194 g/m².

Tenax-E IMS65 E23 is an intermediate modulus carbon fiber made from a precursor of PAN.

The spread warp yarns are held by very few and very thin threads.

Warp (0°): Tenax®-E IMS65 E23, 830 tex

Weft (90°): Copolyamide 20 tex

Warp x weft (thr./cm): 2.31 x 0.8

E23 = Type with ca. 1,3 % sizing based on epoxy resin.

Width: 127 cm.

Processing:

This fiber mat can be used with any of the productions methods available in Komposit-lab.

Thickness:

~0,2 mm

Price:

245 DKK/m²



Material properties:

| Property | Units | Value |
|----------------------------------|---------------------------------|-------|
| Tensile Strength | MPa | 6000 |
| Tensile Modulus | GPa | 290 |
| Tensile Strain at Failure | % | 1,9 |
| Coefficient of Thermal Expansion | $\mu\text{m}/\text{m}/\text{K}$ | -0,1 |
| Resistivity@23°C | $\mu\Omega\cdot\text{m}$ | 1,45 |
| Filament Diameter | μm | 5 |
| Density | g/cm^3 | 1,78 |

Table 1: Tenax-E HTS45 E23 properties.

www.tohotenax.com

www.composite-oracle.com

See additional info on the following page.



| | | |
|--------------------------------------|--------|-----------------------------|
| Brand name | | Tenax® |
| Production site | | E |
| Product designation | | IMS65 E23 24K 830tex |
| Sizing properties | | E23 |
| Number of filaments | | 24.000 |
| Nominal linear density ¹⁾ | [tex] | 830 |
| Twist | [t/m] | 0 |
| Running length per kg | [m/kg] | 1200 |

1) without sizing

Characteristics (typical values)

| | | |
|--------------------------------|----------------------|-------------------------|
| Filament diameter | [µm] | 5 |
| Density | [g/cm ³] | 1.78 |
| Tensile strength | [MPa] | 6000 |
| Tensile modulus | [GPa] | 290 |
| Elongation at break | [%] | 1.9 |
| Specific electrical resistance | [Ω cm] | 1.45 x 10 ⁻³ |

Sizing properties for fiber family IMS

IMS (Intermediate Modulus) is tailored to suit applications where strength and stiffness are of ultimate priority.

E23 = Type with ca. 1.3 % sizing based on epoxy resin

Please contact our sales team any time for choosing the right type. The stated numbers are typical values. For design purposes please request fiber specification.

Please note the application (aerospace or industry & sports) on your order.