

# JTB – Carbon fiber cloth reinforcement

## 碳纤维布加固



# 产 品 说 明 书

## Product Manual

### 产品简介

#### Product

#### introduction

碳纤维布加固技术是利用专用结构胶将碳纤维布粘贴在混凝土表面，形成复合结构，CFRP 通过与混凝土之间协同工作，对构件或结构起到加固及改善受力性能的作用。通过碳纤维布加固，能有效改善结构状态（减少变形、降低原有结构应力、减少裂缝）。

Carbon fiber cloth reinforcement technology involves using specialized structural adhesives to adhere carbon fiber cloth to the surface of concrete, forming a composite structure. CFRP works in coordination with concrete to reinforce components or structures and improve their load-bearing performance. Reinforcement with carbon fiber cloth can effectively improve the structural condition (reduce deformation, lower the stress of the original structure, and decrease cracks).

### 产品特点

#### Product

#### features

- 单向抗拉强度高
- 质量轻、施工速度快、周期短
- 弹性模量高
- 性能稳定、抗腐蚀、耐酸碱
- 适应能力强



- High unidirectional tensile strength
- Light in weight, fast in construction speed and short in cycle
- High elastic modulus
- Stable performance, corrosion-resistant and acid and alkali resistant
- Strong adaptability

### 适用范围

#### Scope of

#### application

- 建筑物梁、柱、楼板结构补强；
- 桥梁、桥墩、桥面结构补强；
- 隧道、烟囱结构补强；
- 海滩建筑物防腐补强；
- 民用建筑、工业建筑、市政道路桥梁、水利工程、电力工程等。

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<b>适用范围</b>	<ul style="list-style-type: none"><li>● Reinforcement of building beam, column and floor slab structures;</li></ul>
<b>Scope of application</b>	<ul style="list-style-type: none"><li>● Reinforcement of bridge, pier and deck structures;</li><li>● Reinforcement of tunnel and chimney structures;</li><li>● Anti-corrosion and reinforcement of beach buildings;</li><li>● Civil buildings, industrial buildings, municipal roads and Bridges, water conservancy projects, power projects, etc.</li></ul>

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<b>技术要点</b>	<ul style="list-style-type: none"><li>● 受弯加固时，纤维方向应与加固的受力方向一致；</li><li>● 受剪加固、抗震加固时，纤维方向宜与构件轴向垂直；</li><li>● 受弯加固和受剪加固时，混凝土强度等级应不低于 C15；</li><li>● 采用封闭粘结碳纤维加固混凝土柱时，混凝土强度等级应不低于 C10；</li><li>● 碳纤维加固的效果主要取决于纤维的粘贴工艺，应由专业施工队伍负责施工。</li></ul>
<b>Technical key points</b>	<ul style="list-style-type: none"><li>● When reinforcing under bending, the direction of the fibers should be consistent with the force direction of the reinforcement.</li><li>● When conducting shear reinforcement and seismic reinforcement, the fiber direction should be perpendicular to the axial direction of the component.</li><li>● When reinforced by bending and shear, the strength grade of concrete should not be lower than C15.</li><li>● When using closed-bond carbon fiber to reinforce concrete columns, the strength grade of the concrete should not be lower than C10.</li><li>● The effect of carbon fiber reinforcement mainly depends on the fiber bonding process and should be carried out by a professional construction team.</li></ul>

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### 注意事项

### Precautions

- 碳纤维布为导电材料，放置和施工时都应远离电气设备及电源和采取可靠的防护措施；
- 存放、运输、施工过程中都应避免碳布的弯折；
- 碳纤维布配套树脂应密封储存，远离火源，避免阳光直接照射和有高温源的地方；
- 树脂的配制和使用场所，应保持通风良好；
- Carbon fiber cloth is a conductive material. When placed and installed, it should be kept away from electrical equipment and power sources, and reliable protective measures should be taken.
- During storage, transportation and construction, the bending of carbon cloth should be avoided.
- The resin used in conjunction with carbon fiber cloth should be stored in a sealed container, away from fire sources, direct sunlight and places with high-temperature sources.
- The place where resin is prepared and used should be well-ventilated.

### 碳纤维布

### 规格

### Specifications

### of carbon fiber

### cloth

专用建筑加固的碳布，一般平方克重有 200g 和 300g，对应的厚度为 0.111MM 和 0.167MM；

宽幅一般有 100MM、150MM、200MM、250MM、300MM、500MM，其他宽幅可定制；

碳纤维布配套环氧树脂又名碳纤维胶一起用于建筑加固补强。配套的理论比例为 0.6-0.9kg/m<sup>2</sup>，也就是一平方米碳纤维布需要配套碳纤维胶 0.6kg — 0.9kg。

Specialized carbon cloth for building reinforcement usually has a square gram weight of 200g and 300g, with corresponding thicknesses of 0.111MM and 0.167MM.

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### 碳纤维布

The widths are generally 100MM, 150MM, 200MM, 250MM, 300MM and 500MM. Other widths can be customized.

### 规格

Carbon fiber cloth in combination with epoxy resin, also known as

### Specifications

carbon fiber adhesive, is used for building reinforcement and

### of carbon fiber

strengthening. The theoretical proportion of the matching is 0.6-0.9kg/

### cloth

m<sup>2</sup>, which means that 0.6-0.9kg of carbon fiber adhesive is needed for one square meter of carbon fiber cloth.

### 安全规范

施工时应佩戴好口罩、护目镜和手套；

如果接触到皮肤或眼睛，立即用大量清水冲洗，情况特别严重时应及时就医。

### Safety

When working, masks, goggles and gloves should be worn properly.

### specification

If it comes into contact with the skin or eyes, rinse immediately with plenty of water. If the situation is particularly serious, do so promptly

Seek medical attention.

### 主要

### 技术指标

### Main technical

### indicators

产品型号 Product model	强度级别 Strength level	克重 (g/m <sup>2</sup> ) Gram weight	理论厚度 (mm) Theoretical thickness	抗拉强度 (MPa) Tensile strength	弹性模量 (GPa) Elastic model	伸长率 (%) Elongation
CFS-1-200	高强I级 High Strength Level I	200	0.111	≥3400	≥240	≥1.7
CFS-1-300	高强I级 High Strength Level I	300	0.167	≥3400	≥240	≥1.7
CFS-1-200	高强II级 High Strength Level II	200	0.111	≥3000	≥210	≥1.5
CFS-1-300	高强II级 High Strength Level II	300	0.167	≥3000	≥210	≥1.5



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