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**NATIONAL STANDARD OF THE  
PEOPLE'S REPUBLIC OF CHINA**

**GB/T 46727-2025**

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**Textile slings - Lifting slings for general purpose lifting  
operations made from fibre ropes - High modulus polyethylene  
(HMPE)**

纺织吊索 一般吊装作业用纤维吊索 高模量聚乙烯 (HMPE)

**(English Translation)**

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## Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is modified to adopt ISO 18264:2022 "Textile slings - Fiber slings for general lifting operations - High modulus polyethylene".

(HMPE)

The technical differences between this document and ISO 18264:2022, and the reasons therefor, are as follows.

---The range has been changed; the applicable range has been changed from 12~72 to 6~136, and a provision for the range of ring slings up to 300 has been added (see section 1).

(Chapter), to adapt to the actual production needs of our country;

---The normatively referenced GB/T 8834 has replaced ISO 2307 (see 5.1, 7.1, 7.3.2, 7.4.4) to adapt to my country's production technology.

Technical requirements;

---The normative standard GB/T 16825.1 has replaced ISO 7500-1 (see 7.1, 7.3.1) to adapt to my country's production technology.

Require;

---The normatively referenced GB/T 21328 has replaced ISO 9554 (see 5.1) to adapt to my country's production technology requirements;

---The normatively referenced GB/T 24813 has replaced ISO 7597 (see 6.2.3) to adapt to my country's production technology requirements;

---The normatively referenced GB/T 25852 has replaced ISO 8539 (see 6.2.3) to adapt to my country's production technology requirements;

---The normatively referenced GB/T 25854 has replaced ISO 2415 (see 6.2.3) to adapt to my country's production technology requirements;

---The normatively referenced GB/T 40273 has replaced ISO 1968 (see Chapter 3) to adapt to my country's production technology requirements;

---Added a definition for indentation (see 3.29) to harmonize with other terms at the same level;

---The following has been removed. "The fiber rope material covered in this document for sling assemblies is high-modulus polyethylene as defined in ISO 2076." (HMPE) fiber. (See 5.1 of ISO 19264:2022) for practical application of the standard;

--- An additional structural type for forming a ring-shaped suspension cable by endless winding has been added (see 6.1) to meet the actual production needs in my country;

---A provision regarding spare parts "or as determined by mutual agreement" has been added (see 6.2.3) to adapt to the actual production needs of our country;

---A design factor of 6 for China has been added (see 6.4) to comply with Chinese regulations and facilitate use by both producers and consumers;

---Added relevant requirements for the verification load of the main lifting ring (see 7.3.3) to adapt to the actual production needs in my country.

The following editorial changes have been made to this document.

---Correcting errors in international standards.

- The representation of the inner length in Figure 8 has been changed (see Figure 8);

- The correspondence between the references [10] and the bibliography in the text has

been modified (see Table 2);

- Change Note 2 in 6.5.1 and Table 2 in the following paragraph to Table 3 (see 6.5.1);

- The formula for the downgrade factor has been changed (4) (see Table 4).

---The relevant international standard description in the "Note" has been changed (see 7.3.3);

---ISO 12480-1 (see B.3) has been replaced by GB/T 23723.1 (reference standard);

---ISO 2076 has been deleted, and FZ/T 54027 has been added (see references).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China National Textile and Apparel Council.

This document is under the jurisdiction of the National Technical Committee on Standardization of Industrial Textiles (SAC/TC606).

## 1 Scope

This document specifies safety-related requirements, including rating and testing methods for sling components made of fiber rope.

This document applies to slings made of high-modulus polyethylene (HMPE) fibers, sling codes 6 to 136, with the ring sling code being the lowest.

Up to 300.

The fiber slings covered in this document are only applicable to general lifting operations, i.e., for lifting operations that do not require deviation from requirements, design factors, or specified limits.

The object, material, or cargo that serves as a load.

This document does not apply to lifting of personnel or of potentially hazardous materials such as molten metal, acid, glass plates, fissile materials, or nuclear reactors.

This type of sling is not suitable for special (unconventional and engineering) lifting operations. This document is for HMPE fiber slings used in special lifting operations.

Reference materials.

## 2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this

document; for undated references, the latest version (including all amendments) applies.

This document.

GB/T 8834 Determination of physical and mechanical properties of fiber ropes (GB/T 8834-2016, ISO 2307:2005, IDT) GB/T 16825.1 Inspection and calibration of static uniaxial testing machines for metallic materials - Part 1: Tensile and/or compressive testing machines Inspection and calibration of force measurement systems (GB/T 16825.1-2022, ISO 7500-1:2018, IDT) GB/T 21328 General requirements for fiber ropes GB/T 21328-2024 General requirements for fiber ropes (ISO 9554:2019, IDT) GB/T 24813 Grade 8 steel forged lifting hooks with safety interlocking devices (GB/T 24813-2018, ISO 7597:2013) IDT) GB/T 25852 Grade 8 steel forged lifting components (GB/T 25852-2017, ISO 8539:2009, IDT) GB/T 25854 D-type and bow-shaped forged shackles for general lifting purposes (GB/T 25854-2010, ISO 2415:2004 IDT) GB/T 40273 Fiber Rope Terminology (GB/T 40273-2021, ISO 1968:2004, MOD) Specification) ISO 10325 Fiber ropes - High modulus polyethylene 8-strand, 12-strand braided and compounded ropes ISO 12100 Safety of machinery - General design principles. risk assessment and risk reduction ISO 12100:2010 General design principles for equipment safety - Risk assessment and risk reduction.

### 3 Terms and Definitions

The terms and definitions defined in GB/T 40273, as well as the following terms and definitions, apply to this document.