

Specification for

Natural fibre cords, lines and twines

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The Ropes, Cordage and Netting Standards Committee, under whose direction this British Standard was prepared, consists of representatives from the following:

- British Railways Board
- British Tugowners' Association
- Chain Testers' Association of Great Britain
- Cordage Manufacturers' Institute*
- Department of Industry (Laboratory of the Government Chemist)
- Department of Trade (Marine Division)
- Federation of Soft Fibre Associations*
- Health and Safety Executive
- Ministry of Agriculture, Fisheries and Food
- Ministry of Defence*

The organizations marked with an asterisk in the above list, together with the following, were directly represented on the Technical Committee entrusted with the preparation of this British Standard:

- British Man-made Fibres Federation
- Federation of Civil Engineering Contractors
- Her Majesty's Stationery Office
- Linen Sewing Thread Manufacturers' Association
- National Association of Rope and Twine Merchants
- Scottish Net Manufacturers' Association
- Co-opted members

This British Standard, having been prepared under the direction of the Ropes, Cordage and Netting Standards Committee, was published under the authority of the Executive Board and comes into effect on 31 August 1981

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The following BSI references relate to the work on this standard:
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Foreword

This British Standard has been prepared under the direction of the Ropes, Cordage and Netting Standards Committee. It comprises both the revision and combination of BS 2018 “*Plaited cords made from flax or hemp*”, BS 2019 “*Lines made from cotton and hemp*” and BS 2570 “*Natural fibre twines*”, which are all withdrawn on publication of this standard. In this revision rationalization of the number of some products has been undertaken to simplify the standard by removal of obsolete or very little used items.

Requirements for supply of cords, lines and twines to HM Services and Government departments are given in Appendix A; pattern numbers for Services’ use are given in the detailed tables for lines and twines (Table 2 to Table 8).

Requirements for agricultural twines are specified in Parts 1 and 2 of BS 3543 and those for polypropylene twines, in BS 4881.

Throughout the tables in this standard minimum breaking strength is expressed in decanewtons. The SI unit for force is the newton. A force of 1 decanewton (daN) corresponds to that exerted by a mass of 1.02 kg.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 8, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

1 Scope

This British Standard specifies requirements for the manufacture and subsequent finishing treatments of plaited cords made from flax and hemp, lines made from cotton, hemp or flax, and twines made from jute, flax, hemp, sisal and cotton to meet Government, HM Services' and general commercial needs.

2 References

The titles of the publications referred to in this standard are listed on the inside back cover.

3 Definitions

For the purposes of this British Standard the following definitions apply.

NOTE Definitions of cords, lines and twines for specific uses are given in BS 3724.

3.1

yarn

an assembly of fibres spun into a continuous length

3.2

strand

an intermediate fibre assembly made by twisting together two or more yarns, used for the production of cords or lines

3.3

cord

a fibre assembly having two or more yarn or strand components which may be twisted or plaited together

3.4

line

three or more strands laid or cabled together

3.5

twine

the product obtained by combining, in one or more twisting operations, at least two yarn components

3.6

package

the unit of packaging in which cords, lines or twines are supplied and which may be a coil, ball, hank, skein or spool

4 Materials

The fibre used shall be of such a quality and fineness as is necessary to produce products having the characteristics required and specified in Table 1 to Table 9. The fibres used shall be virgin material, with the exception of the cotton, which may be the short waste fibres from textile processing and may contain up to 15 % of other fibres. All fibres shall be free from defect and true to type as follows.

Jute (*Corchorus capsularis* L, *Corchorus olitorius* L or equivalent).

Flax *Linum usitatissimum* L or equivalent).

Hemp (*Cannabis sativa* L or equivalent).

Sisal (*Agave sisalana* Perrine or equivalent).

Cotton (*Gossypium*).

Attention is drawn to Statutory Instrument No. 2124, 1973, Trade Descriptions — The Textile Products (Indications of Fibre Content) Regulations.

5 Manufacture

5.1 Construction. Yarns shall be evenly spun; for plaited cords they shall be not coarser than 550 tex. Strands shall be well formed and free from grooves and sunken yarns. Plaited cords shall comply with the requirements of Table 1. Lines shall comply with the requirements of Table 2 to Table 4. Twines shall comply with the requirements of Table 5 to Table 9.

NOTE Tex is the international textile unit of linear density corresponding to mass in grams per kilometre. The tex value is obtained by dividing 10⁶ by runnage (m/kg).

5.2 Direction of twist. The direction of twist shall be as follows.

Single yarns for cords: "Z" twist.

Lines: right-hand or "Z" laid.

Twines: left-hand or "S" twist unless otherwise stated.

5.3 Diameter. Diameters, when given in the appropriate tables, shall be determined in accordance with the requirements of BS 5053.

5.4 Mass per unit length. The mass per 100 m of each product shall be as specified in the appropriate tables, when determined in accordance with 8.3. It shall be subject to a tolerance of $\pm 5\%$.

5.5 Mass of package. A tolerance of $+10\%$, -5% shall be allowed on the mass of any package.