

Specification for

Fibre rope cargo nets

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted by the Textiles and Clothing Standards Committee (TCM/-) to Technical Committee TCM/45 upon which the following bodies were represented:

Association of Metropolitan Authorities	Federation of Wire Rope Manufacturers of Great Britain
Associated Offices Technical Committee	GMC County Fire Service
British Tugowners' Association	Health and Safety Executive
Chief and Assistant Chief Fire Officers' Association	Her Majesty's Stationery Office
Cordage Manufacturers' Institute	The Institute of Fire Engineers
Department of Agriculture and Fisheries for Scotland	Made-up Textiles Association
Department of the Environment (Property Services Agency)	Ministry of Defence
Department of Trade (National Engineering Laboratory)	National Caving Association
	National Federation of Master Steeplejacks and Lightning Conductor Engineers

The following bodies were also represented in the drafting of the standard, through subcommittees:

Association of Webbing Load (Restraint Equipment) Manufacturers	International Cargo Handling Coordination Association
British Narrow Fabrics Association	Metropolitan Police
Civil Aviation Authority	Man-made Fibres Producers' Committee
Department of Transport (Highways)	National Joint Council for the Building Industry
English Net Manufacturers' Association	Road Hauliers' Association
Federation of Civil Engineering Contractors	Scottish Net Manufacturers' Association
Freight Transport Association	
Institution of Civil Engineers	

This British Standard, having been prepared under the direction of the Textiles and Clothing Standards Committee, was published under the authority of the Board of BSI and comes into effect on 31 December 1986

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Foreword

This British Standard has been prepared under the direction of the Textiles and Clothing Standards Committee following a request from the Health and Safety Executive and the interest of others in the cargo handling field.

The standard gives the requirements for cargo nets made from natural or man-made fibre ropes for handling loose cargo in stevedoring operations. A method of test for the static strength of cargo nets is described in Appendix A. Appendix B gives recommendations for selection, use and inspection of cargo nets.

It is recommended that users of rope cargo nets should study the information and recommendations in the standard and that such recommendations should be regarded as the minimum standards to be observed in the usage and care of fibre rope cargo nets. It is the responsibility of the user to ensure that the load lifted does not exceed the safe working load, taking into account all the circumstances of use.

It is anticipated that a second Part to this standard covering webbing cargo nets will be prepared.

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.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

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 gives requirements for nets, made from natural and man-made fibre ropes as cargo nets in stevedoring and similar operations, e.g. underslinging from helicopters.

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

2 Definitions

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

2.1

man-made fibre rope

a rope complying with BS 4928

2.2

natural fibre rope

a rope complying with BS 2052

2.3

border rope

an endless rope fitted to the net close to the edges on all sides and determining the overall dimensions of the net

2.4

mesh rope

the rope from which the mesh of the net is constructed

3 Construction

3.1 Materials

Cargo nets shall be made in a single material from natural fibre ropes or man-made fibre ropes of three-strand construction.

NOTE The choice of material is determined by the performance required and the conditions of use of the nets. Attention is drawn to the guidance on selection, use, inspection and storage given in Appendix B.

3.2 Design

The net shall be formed with loops or eyes appropriately placed for attachment to a lifting device, e.g. a crane hook or multi-leg sling unless the border rope is designed to be used for this purpose.

The net shall be provided with a border rope of at least the same construction and material as the net mesh.

The connections of the border rope with the net meshes and the intersections of mesh ropes shall be made so that slippage at these points cannot occur.

NOTE If the border rope is intended to be used for attachment of a lifting device it may be provided with sheathing or other protection at the lifting points.

3.3 Splicing (of 3-strand ropes)

An eye or loop splice made in any part of a cargo net shall be made with not less than four full tucks for polyamide (nylon), polyester fibre and polypropylene monofilament ropes and not less than three full tucks for polypropylene fibrillated film and staple fibre ropes.

Splices made with the minimum of four tucks shall be completed by either a further two tapered tucks or a further full tuck.

All splices shall be made against the lay of the rope and the length of protruding strand material shall not be less than three times the nominal diameter of the rope.

NOTE 1 Provided that the performance of the splice is unaffected, binding, glueing or heat sealing may be used to contain the protruding parts to improve the appearance of the finished splice.

Methods known as “long-splicing” and “Liverpool splicing” shall not be used (see BS 3724).

NOTE 2 The rope supplier should be consulted for information on the splicing of 8-strand plaited ropes.

4 Dimensions

4.1 Overall dimensions

The overall dimensions of the net shall be measured at the border rope when the net is laid flat without tension.

NOTE The area of a net should be selected so as to allow some free space above a load when the net is in the lifting position (see Appendix B).

4.2 Mesh and mesh rope size

The net shall have meshes with all four sides of the same length (measured as the untensioned length from centre to centre of adjacent intersections) within the range 100 mm to 300 mm. The mesh rope shall have a diameter of 6 mm to 24 mm.

5 Safe working load (SWL)

The safe working load of a cargo net L_1 (in tonnes) shall be specified by the manufacturer for each net and it shall be based on the breaking load of the rope according to BS 2052 or BS 4928 as appropriate, and the total number of mesh ropes in length and width directions using the following equation:

$$L_1 = \frac{N B_1}{24}$$

where

L_1 is the safe working load (in tonnes)

N is the total number of mesh ropes