

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1181

THREE OR FOUR-STRAND MANILA AND SISAL ROPES

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 1181, *Three or four-strand manila and sisal ropes*, was drawn up by Technical Committee ISO/TC 38, *Textiles*, the Secretariat of which is held by the British Standards Institution (BSI).

Work on this question led to the adoption of Draft ISO Recommendation No. 1345, which was circulated to all ISO Member Bodies for enquiry in April 1968. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Australia	Italy	Spain
Belgium	Netherlands	Sweden
Czechoslovakia	New Zealand	Switzerland
Denmark	Norway	Turkey
France	Philippines	U.A.R.
Germany	Poland	United Kingdom
Hungary	Portugal	U.S.S.R.
Iran	Romania	
Ireland	South Africa, Rep. of	

One Member Body opposed the approval of the Draft :

Brazil

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in February 1970, to accept it as an ISO RECOMMENDATION.

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THREE OR FOUR-STRAND MANILA AND SISAL ROPES

1. SCOPE

This ISO Recommendation specifies the essential characteristics of three or four-strand manila and sisal ropes whose net mass per metre is between 50 and 6500 g and whose diameters are from 8 to 96 mm inclusive.

2. CLASSIFICATION

Three or four-strand manila ropes are classified in three qualities designated as follows in decreasing order of quality :

Quality SP — Quality 1 — Quality 2

Sisal ropes are manufactured in a single quality only, identical with Quality 2 of manila ropes.

3. MANUFACTURE

Manila and sisal ropes, unless otherwise specified, should be made of strands twisted together with a Z lay, these strands themselves being made of spun yarn assembled with an S lay.

Manila ropes should be made solely from new manila (*Musa textilis née*) and sisal ropes from new sisal (*Agavé sisalana Perrine*), East African or an equivalent.

The minimum number of yarns in each strand is fixed for each nominal diameter. This number is calculated on the basis of single yarns having a linear density of 4600 tex. If finer yarns are used the number of them should be increased proportionately.

INFORMATORY NOTE.— The amount of lubricant used for dressing the fibres and for preserving the rope is usually less than 15 % of the mass of the treated rope.

4. REQUIRED CHARACTERISTICS AND TOLERANCES

4.1 The characteristics of three-strand ropes should be as given in Table 1.

4.2 The characteristics of four-strand ropes should be as given in Table 1 amended as follows :

- (a) Reduction of 10 % of the minimum breaking forces.
- (b) The minimum number of yarns per strand should be

$$\frac{3N \times 0.9}{4}$$

where N is the minimum number of yarns per strand in the three-strand ropes.

4.3 The pitch of manila or sisal ropes should be between 2.5 and 3.3 D for the three-strand ropes and between 2.7 and 3.5 D for the four-strand ropes (D being the diameter of the rope concerned).

4.4 Four-strand ropes usually include a central core.

5. METHODS OF TEST

The characteristics given in section 4 should be measured under the conditions indicated in ISO Recommendation R . . . *, *Testing of ropes*.

6. MARKING AND PACKING

6.1 Marking

For identification of the quality, the ropes should include a black yarn in one or more strands depending on the quality concerned :

Manila	}	Quality SP – a black yarn in each of three strands of the rope.
		Quality 1 – a black yarn in each of two strands of the rope.
		Quality 2 – a black yarn in one strand.
Sisal		No marker yarn.

Other identification marking may be included by arrangement between the purchaser and supplier.

6.2 Packing

As manila and sisal ropes are invoiced on the gross mass basis, including packing, the mass of the packing should not be more than 1.5 % of the gross mass of the ropes.

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* In preparation.