INTERNATIONAL STANDARD

ISO 1181

Second edition
1990-11-01

Ropes — Manila and sisal — Specification

Cordages — Abaca (manille) et sisal — Spécifications

Reference number
ISO 1181:1990(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 1181 was prepared by Technical Committee ISO/TC 38, *Textiles*.

This second edition cancels and replaces the first edition (ISO 1181:1973), of which it constitutes a technical revision.

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Ropes — Manila and sisal — Specification

1 Scope

This International Standard specifies the main characteristics of 3- and 4-strand laid ropes made of manila or sisal and gives rules for their designation.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 1968:1973, *Ropes and cordage — Vocabulary*.

ISO 2307:1990, *Ropes — Determination of certain physical and mechanical properties*.

ISO 9554:1990[1], *Fibre ropes — General specification*.

3 Definitions

For the purposes of this International Standard, the definitions given in ISO 1968 apply.

4 Designation

A rope shall be designated by

— the word "rope";

— the reference number of this International Standard;

— the type of rope (type A or B);

— its reference number;

— its nature and quality.

Example of designation:

A quality 1, 3-strand manila rope, reference number 52 (linear density 1 870 ktex), is designated as follows:

Rope, ISO 1181, type A, 52, manila 1

5 Types

Manila ropes and sisal ropes are classified in two types:

Type A: 3-strand hawser-laid rope;

Type B: 4-strand shroud-laid rope.

Manila ropes shall be additionally classified with their quality:

Quality 1

Quality 2

6 Characteristics

6.1 Main characteristics

The main characteristics shall be as given in table 1 (see also ISO 9554, clause 7).

6.2 Other characteristics

Other characteristics, concerning construction, manufacture, lay, labelling, packaging, invoicing and delivery lengths, shall comply with ISO 9554.

1) To be published.

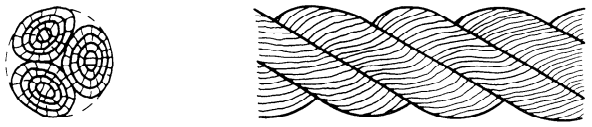

Figure 1 — Shape of a 3-strand hawser-laid rope (type A)

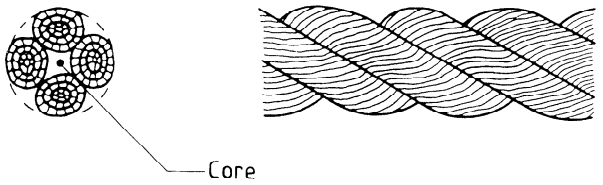

Figure 2 — Shape of a 4-strand shroud-laid rope (type B)

Table 1 — Main characteristics of 3- and 4-strand manila ropes and sisal ropes

Ropes		Reference number[1]	Linear density[2] [3]		Minimum breaking force daN		
Type A	Type B		nominal ktex	tolerance	Manila Quality 1	Manila Quality 2	Sisal
3-Strand		6	29	± 10 %	280	255	255
		8	54		534	473	473
		10	68	± 8 %	691	622	622
	4-Strand	12	105		1 050	936	936
		14	140		1 430	1 260	1 260
		16	190	± 5 %	1 990	1 770	1 770
		18	220		2 400	2 100	2 100
		20	275		3 190	2 790	2 790
		22	330		3 590	3 340	3 340
		24	400		4 480	3 990	3 990
		26	470		5 230	4 640	4 640
		28	530		5 980	5 220	5 220
		30	625		6 730	5 980	5 980
		32	700		7 720	6 730	6 730
		36	890		9 460	8 530	8 530
		40	1 100		11 800	10 300	10 300
		44	1 340		14 000	12 500	12 500
		48	1 580		16 500	14 500	14 500
		52	1 870		19 200	17 000	17 000
		56	2 150		22 000	19 500	19 500
		60	2 480		24 900	22 200	22 200
		64	2 880		28 500	25 200	25 200
		68	3 180		31 400	28 000	28 000
		72	3 620		35 100	32 100	32 100
		76	4 000		38 800	34 300	34 300
		80	4 400		42 700	38 000	38 000
		88	5 350		50 500	45 900	45 900
		96	6 400		58 800	52 500	52 500

1) The reference number corresponds to the approximate diameter in millimetres.

2) The linear density (in kilotex) corresponds to the net mass per metre (in grams per metre) or to the mass of rope (in kilograms) per thousand metres.

3) The linear density (net mass per metre) is measured under tensile loading for measurement "F_c" as given in ISO 2307.

7 Marking

The identification of the material, quality and origin of a rope conforming to this International Standard shall be marked using a yarn or tape yarn of easily identifiable colour placed within the article, so as to remain recognizable despite soiling, soaking and discoloration during use.

Manila ropes shall be marked as follows:

quality 1: with a black yarn or tape yarn in each of two strands of the rope;

quality 2: with a black yarn or tape yarn in one strand.

Sisal ropes shall be marked with a red yarn or tape yarn.

7.1 Ropes of reference number <12

A black (for manila) (see above) or red (for sisal) yarn or tape yarn shall be incorporated into a strand.

7.2 Ropes of reference number $\geqslant 12$

A black (for manila) (see above) or red (for sisal) tape yarn at least 3 mm wide, printed with the reference number of this International Standard and a reference identifying the manufacturer shall be incorporated into a strand.

The maximum distance between two consecutive markings shall be 1 m.

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