

# INTERNATIONAL STANDARD

**ISO**  
**1181**

Second edition  
1990-11-01

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## Ropes — Manila and sisal — Specification

*Cordages — Abaca (manille) et sisal — Spécifications*

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ISO 1181:1990

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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<sup>1)</sup>, *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);

1) To be published.

- its reference number;
- its nature and quality.

### Example of designation:

A quality 1, 3-strand manila rope, reference number 52 (linear density 1870 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.

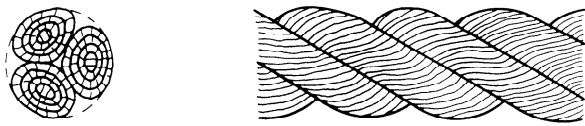


Figure 1 — Shape of a 3-strand hawser-laid rope (type A)

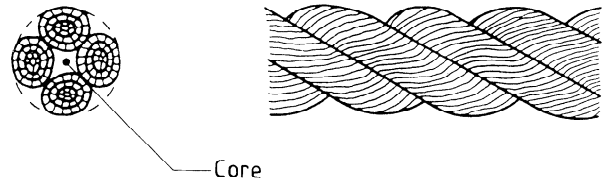


Figure 2 — Shape of a 4-strand shroud-laid rope (type B)

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

Ropes		Reference number <sup>1)</sup>	Linear density <sup>2) 3)</sup>		Minimum breaking force daN		
Type A	Type B		nominal ktex	tolerance	Manila Quality 1	Manila Quality 2	Sisal
3-Strand	4-Strand	6	29	± 10 %	280	255	255
		8	54		534	473	473
		10	68	± 8 %	691	622	622
		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<sub>c</sub>" 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 $\geq 12$

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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**Descriptors:** textiles, textile products, cordages, sisal, manila hemp, ropes, specifications, designation, marking.

Price based on 3 pages

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