INTERNATIONAL STANDARD

ISO 1969

Second edition
1990-11-01

Ropes — Polyethylene — Specification

Cordages — Polyéthylène — Spécifications

Reference number
ISO 1969:1990(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 1969 was prepared by Technical Committee ISO/TC 38, *Textiles*.

This second edition cancels and replaces the first edition (ISO 1969:1976), of which it constitutes a technical revision.

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Ropes — Polyethylene — Specification

1 Scope

This International Standard specifies the main characteristics of 3- and 4-strand laid ropes made of polyethylene 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.

Example of designation:

A 4-strand polyethylene monofilament rope of reference number 40 (linear mass 785 ktex) is designated as follows:

Rope, ISO 1969, type B, 40, polyethylene

5 Types

Polyethylene ropes are classified in two types:

Type A: 3-strand hawser-laid rope;

Type B: 4-strand shroud-laid rope.

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.

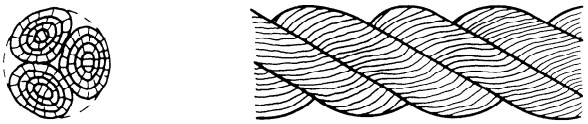

Figure 1 — Shape of a 3-strand hawser-laid rope (type A)

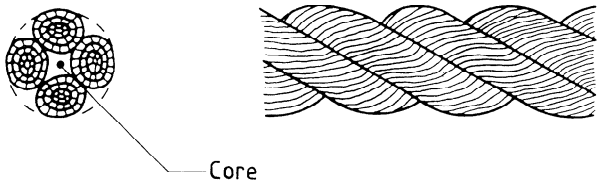

Figure 2 — Shape of a 4-strand shroud-laid rope (type B)

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

Ropes		Reference number[1]	Linear density[2) 3)]		Minimum breaking force
Type A	Type B		nominal ktex	tolerance	daN
3-Strand		4	8,1	± 10 %	196
		6	18,2		392
		8	32,7		686
	4-Strand	10	49	± 8 %	1 070
		12	72		1 510
		14	95		2 050
		16	128	± 5 %	2 750
		18	161		3 400
		20	200		4 190
		22	243		4 980
		24	295		5 980
		26	328		6 800
		28	393		8 050
		30	460		9 300
		32	525		10 500
		36	660		13 200
		40	785		16 000
		44	950		19 250
		48	1 150		22 400
		52	1 350		25 900
		56	1 570		29 800
		60	1 800		33 800
		64	2 050		38 300
		72	2 590		48 100
		80	3 210		59 200
		88	3 880		71 100
		96	4 610		83 800

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 polyethylene rope conforming to this International Standard shall be marked using a yarn or tape yarn of an easily identifiable orange colour placed within the article (see 7.1 and 7.2), so as to remain recognizable despite soiling, soaking and discoloration during use.

7.1 Ropes of reference number <12

An orange yarn or tape yarn shall be incorporated into a strand.

7.2 Ropes of reference number ⩾12

An orange 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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