

INTERNATIONAL STANDARD

ISO
1346

Second edition
1990-11-01

Ropes — Polypropylene — Specification

Cordages — Polypropylène — Spécifications



Reference number
ISO 1346:1990(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 1346 was prepared by Technical Committee ISO/TC 38, *Textiles*.

This second edition cancels and replaces the first edition (ISO 1346:1975), of which it constitutes a technical revision.

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International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Ropes — Polypropylene — Specification

1 Scope

This International Standard specifies the main characteristics of 3- and 4-strand laid ropes and 8-strand plaited ropes made of polypropylene 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 9554:1990¹⁾, *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, B or E);
- its reference number;
- its nature.

Example of designation:

An 8-strand plaited polypropylene multifilament rope of reference number 60 (linear density 1 630 ktex) is designated as follows:

Rope, ISO 1346, type E, 60, polypropylene

5 Types

Polypropylene ropes are classified in three types:

Type A: 3-strand hawser-laid rope;

Type B: 4-strand shroud-laid rope;

Type E: 8-strand plaited rope.

6 Characteristics

6.1 Main characteristics

The main characteristics shall be as given in table 1 and table 2 (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)

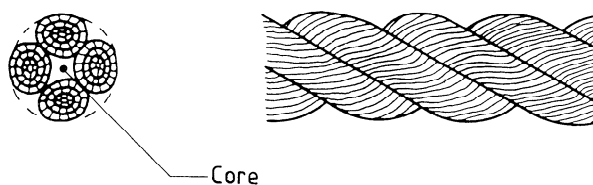


Figure 2 — Shape of a 4-strand shroud-laid rope (type B)

Table 1 — Main characteristics of 3-strand hawser-laid and 4-strand shroud-laid polypropylene ropes

Ropes		Reference number ¹⁾	Linear density ^{2) 3)}		Minimum breaking force daN
Type A	Type B		nominal ktex	tolerance	
3-Strand	4-Strand	4	6	± 10 %	210
		6	17		590
		8	30		1 040
		10	45	± 8 %	1 530
		12	65		2 170
		14	90		2 990
		16	115	± 5 %	3 700
		18	148		4 720
		20	180		5 690
		22	220		6 820
		24	260		7 970
		26	305		9 220
		28	355		10 490
		30	405		11 980
		32	460		13 230
		36	585		16 590
		40	720		20 100
		44	880		24 150
		48	1 040		28 040
		52	1 220		32 450
		56	1 420		37 100
		60	1 630		42 420
		64	1 850		48 000
		72	2 340		60 270
		80	2 900		74 130
		88	3 510		88 950
		96	4 170		105 000

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.



Figure 3 — Shape of an 8-strand square-plaited rope (type E)

Table 2 — Main characteristics of 8-strand plaited polypropylene ropes

Reference number ¹⁾	Linear density ^{2) 3)}		Minimum breaking force daN
	nominal ktex	tolerance	
8	30	$\pm 10 \%$	1 040
12	65	$\pm 8 \%$	2 170
16	115	$\pm 5 \%$	3 700
20	180		5 690
24	260		7 972
28	355		10 490
32	460		13 230
36	585		16 590
40	720		20 100
44	880		24 150
48	1 040		28 040
52	1 220		32 450
56	1 420		37 100
60	1 630		42 420
64	1 850		48 000
72	2 340		60 270
80	2 900		74 130
88	3 510		88 950
96	4 170		105 000
104	4 900		120 440
112	5 700		139 000
120	6 500		159 600
128	7 400		180 180
136	8 400		202 860
144	9 400		226 380
160	11 521		277 400

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

2) The linear density (in ktex) 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.

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