

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION R 1346

THREE-STRAND (HAWSER-LAID) AND EIGHT-STRAND (PLAITED)
POLYPROPYLENE MONOFILAMENT OR FILM ROPES

1st EDITION

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BRIEF HISTORY

The ISO Recommendation R 1346, *Three-strand (hawser-laid) and eight-strand (plaited) polypropylene monofilament or film 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. 1346, which was circulated to all the ISO Member Bodies for enquiry in February 1969. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies :

Belgium	Iran	Sweden
Brazil	Israel	Switzerland
Czechoslovakia	Italy	Thailand
Denmark	Netherlands	Turkey
France	Norway	U.A.R.
Germany	Peru	United Kingdom
Greece	Poland	U.S.A.
Hungary	South Africa, Rep. of	U.S.S.R.
India	Spain	

The following Member Body opposed the approval of the Draft :

Austria

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

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THREE-STRAND (HAWSER-LAID) AND EIGHT-STRAND (PLAITED) POLYPROPYLENE MONOFILAMENT OR FILM ROPES

1. SCOPE

This ISO Recommendation specifies the essential characteristics of three-strand (hawser-laid) and eight-strand (plaited) ropes, in the natural or pigmented state, consisting of continuous monofilaments or films belonging to the polypropylene group of a density of approximately 0.91. It applies to ropes of this type of which the nominal net mass per metre is between 17 and 4170 g and of which the nominal diameters are from 6 to 96 mm inclusive.

2. MANUFACTURE

These ropes should be formed of strands manufactured from new material. The ropes and strands should be continuous without splices.

When agreed between the purchaser and supplier, ropes of a nominal diameter greater than 18 mm (nominal net mass per metre greater than 148 g) may have a core in the strands consisting of continuous polypropylene monofilaments or films without twist.

Hawser-laid polypropylene ropes, unless otherwise specified, should be made of strands twisted together with a Z lay, these strands themselves being made with an S lay.

Eight-strand (plaited) polypropylene ropes should be formed of four pairs of strands, the pairs being constituted successively of two strands twisted in the S direction and then of two strands twisted in the Z direction.

The number of yarns or yarns and untwisted monofilaments or films should be the same for all the strands in the rope.

3. REQUIRED CHARACTERISTICS AND TOLERANCES

The main characteristics of three- and eight-strand polypropylene monofilament and film ropes should be as given in the Table on the following page.

The pitch of these ropes may be specified by agreement between purchaser and supplier.

TABLE - Main characteristics of three-strand (hawser-laid) and eight-strand (plaited)
polypropylene monofilament or film ropes

(1) Linear density in kilotex (or net mass per metre in grammes*)	(2) Tensile force applied for the measurement of the net mass		(3) Minimum breaking force		(4) Circumference***	(5) Diameter*** or reference
	kgf**	daN**	kgf**	daN**	in	mm
17	4	3.9	550	539	$\frac{3}{4}$	6
30	8	7.8	960	941	1	8
45	13	13	1 425	1 400	$1\frac{1}{4}$	10
65	18	18	2 030	1 990	$1\frac{1}{2}$	12
90	25	24	2 790	2 740	$1\frac{3}{4}$	14
115	30	29	3 500	3 430	2	16
148	40	39	4 450	4 370	$2\frac{1}{4}$	18
180	50	49	5 370	5 270	$2\frac{1}{2}$	20
220	60	59	6 500	6 370	$2\frac{3}{4}$	22
260	70	69	7 600	7 450	3	24
355	95	93	10 100	9 900	$3\frac{1}{2}$	28
460	120	118	12 800	12 600	4	32
585	150	147	16 100	15 800	$4\frac{1}{2}$	36
720	180	176	19 400	19 100	5	40
880	215	210	23 400	23 000	$5\frac{1}{2}$	44
1 040	250	240	27 200	26 700	6	48
1 220	295	290	31 500	30 900	$6\frac{1}{2}$	52
1 420	335	330	36 000	35 300	7	56
1 630	385	380	41 200	40 400	$7\frac{1}{2}$	60
1 850	430	420	46 600	45 700	8	64
2 340	540	530	58 500	57 400	9	72
2 900	660	650	72 000	70 600	10	80
3 510	785	770	86 400	84 700	11	88
4 170	925	910	102 000	100 000	12	96

* The net mass should be measured under the force indicated in column (2) of the Table.

** The S.I. unit of force is the newton; one decanewton (daN) is equal to 1.02 kgf, i.e. 1 kilogramme-force to within 2 %.

*** Circumferences and diameters are given for information only.