INTERNATIONAL STANDARD 1969

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Three-strand polyethylene monofilament ropes

Cordages en monofilaments de polyéthylène à trois torons

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard 1969 was drawn up by Technical Committee ISO/TC 38, *Textiles*. It was submitted directly to the ISO Council, in accordance with clause 6.12.1 of the Directives for the technical work of ISO.

This International Standard cancels and replaces ISO Recommendation R 1969-1971, which had been approved by the Member Bodies of the following countries :

Australia	Greece	South Africa, Rep. of
Belgium	India	Spain
Brazil	Iran	Sweden
Chile	Ireland	Switzerland
Czechoslovakia	Israel	Thailand
Denmark	Japan	Turkey
Egypt, Arab Rep. of	Korea, Rep. of	United Kingdom
Finland	Netherlands	U.S.S.R.
France	Norway	

No Member Body had disapproved the Recommendation.

Printed in Switzerland

Three-strand polyethylene monofilament ropes

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies the essential characteristics of three-strand ropes consisting of continuous monofilaments belonging to the polyethylene group of a density of approximately 0,96.

It applies to ropes of this type of which the net mass per metre is 8,1 to 295 g and of which the nominal diameter is from 4 to 24 mm inclusive.

2 REFERENCES

ISO 2, *Textiles — Designation of the direction of twist in yarns and related products.*

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

3 MANUFACTURE

The ropes shall be formed of strands manufactured from new material. The ropes and strands shall be continuous, without splices.

When agreed between purchaser and supplier, ropes with a net mass per metre greater than 161 g (larger than 18 mm diameter) may have a core in the strands, consisting of continuous man-made monofilaments without twist.

Polyethylene ropes, unless otherwise specified, shall be made of strands twisted together with a "Z" lay, these strands themselves being made with an "S" lay (see ISO 2).

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

4 REQUIRED CHARACTERISTICS AND TOLERANCES

The main characteristics of three-strand polyethylene monofilament ropes shall be as given in the table.

The pitch of these ropes shall be as given in the table except when otherwise agreed between purchaser and supplier.

5 METHODS OF TEST

The characteristics given in clause 4 shall be measured under the conditions indicated in ISO 2307.

6 PACKING

The masses invoiced should be net masses which include lashings, but not packing materials. Coil lashings should be of similar material to the rope[1].

1) The use of coil lashing of synthetic material meets this requirement.

TABLE – **Main characteristics of three-strand polyethylene monofilament ropes**

Linear density in kilotex (or net mass per metre in grams[1])	Tensile force applied for the measurement of the net mass per metre		Minimum breaking force		Pitch : Maximum length of 10 lays	Circumference[2]	Diameter[2]
	daN	kgf	daN	kgf	mm	in	mm
Tolerance on mass per metre ± 5 %							
8,1	2	2	196	200	150	1/2	4
12,1	2,9	3	279	285	185	5/8	5
18,2	3,9	4	392	400	220	3/4	6
24,4	5,9	6	534	545	250	7/8	7
32,7	7,8	8	686	700	280	1	8
39,3	9,8	10	882	900	300	1 1/8	9
49	13	13	1 070	1 090	320	1 1/4	10
59	15	15	1 300	1 320	350	1 3/8	11
72	18	18	1 510	1 540	380	1 1/2	12
85	20	21	1 760	1 790	410	1 5/8	13
95	24	25	2 050	2 090	440	1 3/4	14
128	29	30	2 750	2 800	510	2	16
161	39	40	3 400	3 460	570	2 1/4	18
200	49	50	4 190	4 270	635	2 1/2	20
243	59	60	4 980	5 080	700	2 3/4	22
295	69	70	5 980	6 100	760	3	24

1) The net mass per metre is measured under the force indicated in the second column of the table.

2) Diameters and circumferences are given for information only.