



DRAFT TANZANIA STANDARD

**Textiles – Polyethylene monofilament twines for fishing –
Specification**

Draft for Stakeholders comments only!

TANZANIA BUREAU OF STANDARDS

Foreword

This Draft Tanzania Standard is being developed by the Yarns and Twines Technical Committee under supervision of the Textile and Leather Divisional Standards Committee, and it is in accordance with the procedures of the Tanzania Bureau of Standards.

In the preparation of this Draft Tanzania Standard assistance has been obtained from the following standard:

IS 6347:2003 (Reaffirmed 2019) Textiles — Polyethylene monofilament twines for fishing — Specification

In reporting the results of a test or analysis made in accordance with this Draft Tanzania Standard if the final value, calculated or observed is to be rounded off, it shall be done in accordance with TZS 4 *Rounding off numerical values*.

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1. Scope

- 1.1 This Draft Tanzania Standard specifies requirements, test method and sampling of high density polyethylene monofilament twines used in the manufacture of fishing gears.
- 1.2 It does not prescribe the type of finish and feel of the twines.

2. Normative reference

For the purpose of this Draft Tanzania Standard, the following references shall apply. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

TZS 3, Atmospheric conditions for testing.

TZS 4, Rounding off numerical values.

TZS 265, Textiles – Methods of testing the strength of yarns from packages – Part 1: Determination of breaking strength and extension.

3. Terms and definitions

For the purpose of this Draft Tanzania Standard, the following definitions shall apply:

3.1 cheese

cylindrical package of yarn wound on a flangeless tube.

3.2 filament

fiber of an indefinite or extreme length such as found naturally in silk. Manufactured fibers are extruded into filaments that are converted into filament yarn, staple, or tow.

3.3 runnage

length of twine or cord. per unit weight.

3.4 strand

ordered assemblage of textile fibers having a high ratio of length to diameter and normally used as a unit; includes slivers, roving, single yarns, plied yarns, cords, braids, ropes.

4. Requirements

4.1 General

4.1.1 Materials

The material used in the manufacture of twines shall be of high density continuous monofilament polyethylene having a relative density of 0.95 to 0.96 and a minimum tenacity of 40 g/tex within the range of 0.15 to 0.20 nominal diameter of yarn.

4.1.2 Design and constructions

The twines shall either be supplied in natural colour or as required by the buyer. The finished twines shall be flexible and consist of 3 strands, each being uniform and well laid and free from defects in the yarn.

4.2 Specific requirements

4.2.1 The twines shall conform to the requirements given in Table 1. The twines shall have S twist unless otherwise agreed to between the manufacturer and buyer.

4.2.2 Mass

A tolerance of ± 5 percent shall be allowed on the declared mass of any one package provided that the variation from the gross specified mass of any delivery to one code number does not exceed 5 percent.

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Table 1 – Requirements of Polyethylene monofilament twines.

S/N	Construction		Runnage, m/kg, ± 8 %	Breaking Load, Dry and Wet, N(kgf) ¹⁾ , Min	Elongation at break, Dry and Wet, %, Max	Turns/Metre ²⁾	
		No. of filaments × Strands				Strand Z way	Twine S way
1.		1×3	10235	35	45		280
2.		2×3	5035	65	45	280	270
3.		3×3	3320	98	45	260	250
4.		4×3	2460	129	45	195	190
5.		5×3	1970	160	45	185	185
6.		6×3	1640	190	45	175	170
7.		8×3	1230	253	45	170	160
8.		9×3	1095	280	45	160	150
9.		10×3	975	313	45	155	150
10.		12×3	810	373	45	150	140
11.		15×3	650	464	45	130	125
12.		18×3	535	559	45	115	110
13.		21×3	460	647	45	110	100
14.		24×3	400	736	45	100	100
15.		28×3	345	858	45	95	90
16.		40×3	235	1226	45	90	80
Test Method		-	Annex A	TZS 265	TZS 265	add method	add method

¹⁾ 1 N = 0.102 kgf (approximately).

²⁾ For guidance only.

5. Packaging, packing and marking

5.1 Packaging and packing

A number of hanks or cheeses of twine as agreed by the buyer shall be placed one over the other and shall be wrapped with a layer of waterproof packaging material. The pack shall be tied with twine of adequate strength and a suitable number of such packs shall be packed in a container of adequate strength which is previously lined with one layer of waterproof packing paper.

5.1 5.2 Marking

The hank or cheeses containing twines shall be marked with the following information:

- a) Name of the material,
- b) Construction and runnage,
- c) Gross and net mass,
- d) Month and year of manufacture and batch number,
- e) Number of pieces in a single package, and
- f) Indication of the source of manufacture.

6 Sampling and criteria for conformity

6.1 Lot

The quantity of monofilament twines of the same runnage and construction details delivered to a buyer against one dispatch note shall constitute a lot.

6.2 Conformity of a lot to the requirements of this standard shall be determined on the basis of test carried out on the sample selected from it.

6.3 The number of cheeses/packs to be selected at random from a lot shall be as given in Table 2 below:

Table 2 – Sampling plan

S/N	Lot size	Sample size
1.	Up to 100	3
2.	101 to 300	4
3.	301 to 500	5
4.	501 to 1000	7
5.	1001 and above	10

ANNEX A

(Normative)

METHOD FOR DETERMINATION OF RUNNAGE

A-1 TEST SPECIMENS

Remove 10 m length skeins from each of the hank or cheese constituting the sample under test.

A-2 PROCEDURE

Determine the mass of a skein removed from a hank or cheese to the nearest gram. From the mass compute the runnage (m/kg).

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