



## **DRAFT TANZANIA STANDARD**

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**Textiles – Specification for high tenacity polyester multifilament  
yarns – Yarns for fishing twines**

DRAFT FOR STAKEHOLDERS' COMMENTS ONLY

## **0. 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 was derived from the following standard:

IS 17264:2019 Textiles — Polyester Industrial Yarn — 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 basic characteristics, requirements, test method and sampling of high tenacity polyester multifilament yarns used for manufacturing twines used for making fishing nets.
- 1.2 This Draft Tanzania Standard is applicable to high tenacity polyester multifilament yarns of linear densities listed in Table 2.

## 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 creep

tendency of a solid material to move slowly or deform permanently under the influence of persistent mechanical stresses. It can occur as a result of long term exposure to high levels of stress that are still below the yield strength of the material.

### 3.2 creep resistant yarn

yarn which is resistant to creep when subjected to persistent mechanical stresses for prolonged exposure.

### 3.3 multifilament yarn

man-made continuous filaments that have low level of twists.

### 3.4 high tenacity yarn

yarn with a significantly higher breaking tenacity than others of the same generic category.

### 3.5 industrial filament yarn

yarn intended for use in products other than non-protective clothing, household, furnishing and floor coverings selected principally but not exclusively for their performance and properties as opposed to their aesthetic or decorative characteristics.

## 4. Requirements

### 4.1 General requirements

**4.1.1** The high tenacity polyester yarn shall be of circular cross section when seen under a powerful magnifying microscope.

**4.1.2** The high tenacity polyester yarn shall be free from the following major defects:

**4.1.2.1** *Dirt/Grease*

No soiling or grease spots shall be allowed. It is acceptable if the spots can be cleaned off. Air strip yarn to remove dirt on the outside surface. For dirt on the ends, clean with sprayer. If dirt does not come off, reject to off grade.

**4.1.2.2** *Wound-in waste*

None allowed. Strip to correct or reject to rewind.

**4.1.2.3** *Finish oil contamination*

Dry or regular oil yarn shall not be contaminated with finish oil when viewed under a packing table UV light, unless very slight (not immediately visible). Strip to clean if possible. Otherwise reject to off-grade.

**4.1.2.4** *Broken filaments and loops*

Broken filaments/loops in a package shall not be more than that given in Table 1:

Table 1: Maximum numbers of broken filaments or loops in a package.

S/N	Package size, kg	Broken filaments	Loops
1.	< 5	2	3
2.	5 to 10	3	7
3.	>10 to 15	5	9
4.	>15	6	10

**4.1.2.5** *Damaged/Bumped*

None allowed. Strip to correct or reject to rewind.

**4.1.2.6** *Fluorescent oil*

If applicable, the package shall have even coverage under UV light.

**4.1.2.7** *Tube defects*

No crushed, or noticeable cuts on the tubes, especially on the nose end shall be allowed.

**4.1.2.8** *Oversize or small package*

Under normal use, the package shall not overflow.

## 4.2 Specific requirements

4.2.1 The high tenacity polyester yarns shall conform to the requirements given in Table 2.

Table 2. Requirements for high tenacity polyester multifilament yarns.

S/N	Linear Density, tex	Tenacity, min mN/Tex	Elongation, max %	Breaking Load, min N
1.	>23-46	499.82	22.44	11.66
2.	>46-77	508.76		32.06
3.	>77-140	582.12		54.33
4.	>140-280	600.39		79.87
5.	>280	630		200.91

## 5. PACKAGE FORMATION, WRAPPING AND PACKING

### 5.1 Packaging

Yarns shall be compactly and uniformly wound into cones or cheeses (spools). The free end of the yarn shall be securely fastened to prevent unravelling. Yarns shall be packed on suitable cheeses or cones that are free from defects.

### 5.2 Wrapping

Each package (cone or cheese) shall be neatly and securely wrapped with a suitable packaging material to prevent it from damage or contamination with dust, moisture or fumes.

### 5.3 Packing

The neatly and securely wrapped yarn packages shall be packed in boxes/cartons in the agreed quantities.

## 6. MARKING

### 6.1 Marking of cheese

Each cheese shall be legibly and indelibly marked with the following information:

- b) Linear density of yarn
- c) Lot/batch number

### 6.2 Marking of cartons

Each box/carton shall be legibly and indelibly marked with the following information:

- a) Name of the product
- b) Lot/batch number.

- c) Month and year of manufacture.
- d) Name and address of manufacturer or trade mark.
- e) Number of cones/cheese in a box/carton.
- f) Gross mass, in Kg
- g) Net mass, in Kg

## **7. SAMPLING AND CRITERIA FOR CONFORMITY**

The number of test and criteria for conformity shall be in accordance with ISO 1130.

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