



**Textiles — woven polyolefin sacks (bags) – for Packing Fertilizer -
Specifications.**

Draft for stakeholders comments only!

Foreword

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

This Draft Tanzania Standard has been prepared with assistance drawn from:

KS 1146: Woven Polyolefin Bags for Packing Fertilizer — Specification

TZS 1257, Textiles — Open mouth woven poly-sacks made from High Density Polyethylene (HDPE)/polypropylene (PP) tape-yarns- Specifications.

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1 Scope

This Draft Tanzania Standard Specifies the requirements and test methods for Polyolefin Woven sacks (bags) for packing fertilizer.

2 References

The following referenced documents are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

TZS 4, *Rounding off numerical values*

TZS 20, *Textiles — Woven fabrics — Determination of number of threads per unit length and per unit width.*

TZS 21: *Textiles — Woven or knitted fabrics — Determination of mass per unit length and per unit area*

TZS 22, *Textiles — Woven fabrics — Determination of breaking load and extension*

TZS 44, *Textiles — Woven or knitted fabrics — Determination of width and length.*

ISO 13935, *Textiles — Seam tensile properties of fabrics and made-up textile articles — Part 1: Determination of maximum force to seam rupture using the strip method.*

3 Terms and Definition.

For the purpose of this Draft Tanzania Standard the following Terms and Definitions shall apply:

3.1 woven polyolefin sack (bag)

flexible container made from woven fabric manufactured from polyolefin tapes with or without liner.

3.2 polyolefin polymer

linear polymer obtained by polymerization of an unsaturated hydrocarbon to give a linear saturated hydrocarbon. These are polyethylene and polypropylene.

3.3 polyolefin tape yarn

flat yarn having a high ratio of width to thickness composed of polyolefin polymer.

3.4 polymer (polymerization)

combination or association of molecules that may be of one compound or two or more reacting simultaneously to form a regular system of molecules behaving as one unit

3.5 coated fabric

fabric coated on one or both sides with a suitable polymer

3.6 lamination

thin coating of poly film which is adhered to either the inside or outside of bag

4 Materials

4.1 Fabric

The fabric shall be woven from polyolefin tape yarns. The Fabric may or may not be coated.

4.2 Stitch threads

The stitching thread shall be made from either;

- a) Polypropylene, or
- b) Other materials provided they are not adversely affected by the expected climatic conditions in transit, storage and use.

5 Construction

5.1 Sack

The sack shall be produced either;

- a) From material woven as a tube, or
- b) From flat woven material, and cut to the required length.

5.2 Edge sealing

All raw edges shall be sealed to prevent fraying.

5.3 Base closure

The base closure shall be effected either by a turned – over and stitched seam or by bonding and shall comply with the requirement in Table 1.

5.3.1 Turned over and stitched seam

Where the base closure is effected by turned over and stitched seam, the turn –over shall be 2 cm minimum, and the stitch line shall be 1 ± 0.3 cm from the base so formed and shall pass through all four thickness of the material.

5.3.2 Bonded seam base

Where the base closure is bonded, the seam shall be effected by applying capping tape over the ends of the sack and securing by means of an adhesive. The bond shall be such as to ensure compliance with the requirements in Table 1.

5.4 Longitudinal Seams

Where longitudinal seams are used, they shall be either stitched or bonded and shall be such as to ensure compliance with the requirements in Table 1. Longitudinal seams shall be along the edge –fold except for bonded seams which shall be on the back face in the centre, unless required to be off-set to accommodate printing.

5.4.1 Stitched Seam

Where longitudinal seam is effected by a turned –over and stitched seam, the turnover shall be 2 cm minimum and the stitch line shall be 1 ± 0.3 cm from the outer edge of the seam so formed and shall pass through all the four thickness of the material.

5.4.2 Bonded Seam (longitudinal).

Where the longitudinal seam is bonded the edges of the material shall be overlapped 3 cm minimum and bonded with a width of bond of 1.5 cm minimum. The bond shall be such as to ensure compliance with the requirements in Table 1.

5.5 Mouth of the sack

The mouth of the sack (bag) shall be either;

- a) plain, formed from the selvedge or from sealed raw edge,
- b) hemmed with a single or double fold over stitched continuously round the mouth of the sack.

6 Liners

Where liners are used, they shall be either;

- a) Loosely inserted or,
- b) Anchored with adhesive (or other suitable medium) or,
- c) Stitched at the base closure or,
- d) Stitched at the mouth.

7 Sack identification and requirements

7.1 Sack performance requirement

- a) Sacks shall conform to the requirements shown in Table 1
- b) If the sack has a liner, the liner shall conform to the requirement shown in Table 2.

7.2 Identification of a sack

For the purpose of identification, coloured tape yarns shall be incorporated into the weaving process of a sacking fabric as per customer's requirement.

8 Dimensions

The dimension of the sack shall be upon an agreement between buyer and seller with a tolerance of ± 2 cm of the declared value.

9 Carrying Capacity

The Carrying Capacity of the bag shall be upon agreement between buyer and seller. However the capacity of the bag shall not exceed 100kg conforming to the International Labour Organization (ILO) Regulations.

Table 1; Requirments for woven Polyolefin Sacks (Bag)

SN	Parameters	Requirements	Test method
1	Capacity	As agreed between buyer and seller. However, the capacity of the bag shall not exceed 100kg conforming to the International Labour Organization (ILO) Regulations.	-
2	Dimensions	The dimension of the bag shall be upon an agreement between buyer and seller with a tolerance of ± 2 cm of the declared value	TZS 44
3	Number of stitches per dm, min	12	TZS 20
4	Total mass per unit area (g/m ²), min	60	TZS 21
5	Average breaking strength (ravelled strip method, (200mm x 50mm), minimum, N a) Length wise b) Width wise	500 500	TZS 22
6	Elongation at break of fabric (%), min i) Length wise ii) Width wise	20 20	TZS 22
7	Minimum bBreaking strength of seam, N,min	250	ISO 13935

Table 2 — Performance requirement of the liner (in case the sack is attached with a liner)

SN	Characteristics	Requirements	Test method
1	Thickness of the liner (micron), min	30	ISO 4591 (check)
2	Bottom seam of loose liner	At least 25 mm from the bottom edge.	ISO 13935-1

3	Dimension of liner Width of loose liner Length of loose liner	At least 20 mm more than the specified width of the sack At least 50 mm more than the specified length of the sack	TZS 44
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7 Packing

The sack (bags) shall be packed in bales of the agreed quantity. The bales shall be securely bound.

8 Marking

8.1 marking on each sack (Bag)

The following information shall be marked on each sack

- a) The name of the product.
- b) Manufacturer's name and/or trademark.
- c) Size of the bag
- d) Carrying capacity of the bag
- e) Country of manufacture.
- f) Material used
- g) Batch number

8.2 Marking on each bale

The following information shall be marked on each bale

- h) The name of the product.
- i) Manufacturer's name and/or trademark.
- j) Size of the bag
- k) Carrying capacity of the bag
- l) Country of manufacture.
- m) Material used
- n) Batch number

NOTE 2 – Each sack shall be compulsory marked with visible recycling logo as given below at a space on bottom of the bag compatible with the art work of the buyer for printing the sack and bale.



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