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DRAFT EAST AFRICAN STANDARD

Tarpaulin for general use — Specification

EAST AFRICAN COMMUNITY

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Foreword

Development of the East African Standards has been necessitated by the need for harmonizing requirements governing quality of products and services in the East African Community. It is envisaged that through harmonized standardization, trade barriers that are encountered when goods and services are exchanged within the Community will be removed.

The Community has established an East African Standards Committee (EASC) mandated to develop and issue East African Standards (EAS). The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the public and private sector organizations in the community.

East African Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. Draft East African Standards are circulated to stakeholders through the National Standards Bodies in the Partner States. The comments received are discussed and incorporated before finalization of standards, in accordance with the Principles and procedures for development of East African Standards.

East African Standards are subject to review, to keep pace with technological advances. Users of the East African Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

The committee responsible for this document is Technical Committee EASC/TC 061, Textiles, textile products and accessories.

Attention is drawn to the possibility that some of the elements of this document may be subject of patent rights. EAC shall not be held responsible for identifying any or all such patent rights.

Tarpaulin for general use — Specification

1 Scope

This Draft East African Standard specifies requirements, sampling and test methods for tarpaulins used for general purposes.

This standard does not apply to tarpaulins used for handling food products.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 105-B02, *Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test*

ISO 105-C10, *Textiles — Tests for colour fastness — Part C10: Colour fastness to washing with soap or soap and soda*

ISO 105-X12, *Textiles — Tests for colour fastness — Part X12: Colour fastness to rubbing*

ISO 176, *Plastics — Determination of loss of plasticizers — Activated carbon method*

ISO 248-1, *Rubber, raw — Determination of volatile-matter content — Part 1: Hot-mill method and oven method*

ISO 811, Textiles — Determination of resistance to water penetration — Hydrostatic pressure test

ISO 1420, *Rubber- or plastics-coated fabrics — Determination of resistance to penetration by water*

ISO 1421, *Rubber- or plastics-coated fabrics - Determination of tensile strength and elongation at break*

ISO 2411, *Rubber- or plastics-coated fabrics — Determination of coating adhesion*

ISO 2286-2, *Rubber- or plastics-coated fabrics — Determination of roll characteristics — Part 2: Methods for determination of total mass per unit area, mass per unit area of coating and mass per unit area of substrate*

ISO 4674-1, *Rubber-or plastics-coated Fabrics-Determination of tear Resistance-Part 1: Constant rate of tear methods*

ISO 4675, *Rubber- or plastics-coated fabrics — Low-temperature bend test*

ISO 4892-3:2016, *Plastics — Methods of exposure to laboratory light sources — Part 3: Fluorescent UV lamps*

ISO 5978, *Rubber- or plastics-coated fabrics — Determination of blocking resistance*

ISO 6451, *Plastics coated fabrics — Polyvinyl chloride coatings — Rapid method for checking fusion*

ISO 6964, *Polyolefin pipes and fittings — Determination of carbon black content by calcination and pyrolysis — Test method*

ISO 7771, *Textiles — Determination of dimensional changes of fabrics induced by cold-water immersion*

ISO 7854, *Rubber- or plastics-coated fabrics — Determination of resistance to damage by flexing*

ISO 22198, *Textiles — Fabrics — Determination of width and length*

ISO 22958, *Textiles — Water resistance — Rain tests: exposure to a horizontal water spray*

ISO 24153, *Random sampling and randomization procedures*

3 Terms and definitions

For the purposes of this document, the following terms and definitions shall apply.

tarpaulin
sheet of strong, flexible, water-resistant or waterproof material

4 Requirements

4.1 General requirements

4.1.1 Tarpaulins shall be made of fabrics coated on one or both sides with a suitably plasticized coating.

4.1.2 Tarpaulins shall be free from tears, or any other defect that may impair the serviceability of the tarpaulins.

4.1.3 Tarpaulins shall be UV stabilized.

4.1.4 Tarpaulins may have plastic or metallic eyelets. If metallic eyelets are used, they shall be corrosion-resistant.

4.2 Specific requirements

4.2.1 Dimensions

The size of a tarpaulin shall not vary more than ±1 % from the dimensions declared on the label when measured in accordance with ISO 22198.

4.2.2 Performance requirements

Tarpaulins shall conform to the performance requirements specified in Table 1 and Table 2.

Table 1 — Performance requirements for PVC coated tarpaulins for general use

Property		Requirement	Test method
Total mass per unit area, g/m^2, min.	With coating	550	ISO 2286
	Without coating	400	
Coating mass per unit area, g/m^2, min.		350	ISO 2286

Breaking strength (N), min.	Longitudinal	1 500	ISO 1421 (type C machine)
	Transverse	1 500	
Breaking extension (%), min. – max.	Longitudinal	15 – 40	ISO 1421
	Transverse	15 – 40	
Tear strength (N) (use a specimen measuring 200 mm × 150 mm), min.	Across Longitudinal direction	180	ISO 4674-1 method A2
	Across Transverse direction	180	
Adhesion (N/50 mm), min.	Longitudinal	60	ISO 2411
	Transverse	60	
Cold crack (^{0}C), max.		-25	ISO 4675
Blocking		Separation without damage to surface or lifting of specified weight piece	ISO 5978
Heat ageing (mass loss as % of coating mass), max.		5	ISO 176
Colour fastness to light (xenon arc lamp), min.		6	ISO 105-B02
Dimensional stability on immersion in water (use a water temperature of 27 ^{0}C ± 2 ^{0}C), max.	Extension (%)	1.0	ISO 7771
	Shrinkage (%)	2.0	
Fusion		No cracking or disintegration of face coating	ISO 6451
Water penetration, hydrostatic head test (cm), min.		150	ISO 1420 Method A
Flex cracking (No. of flex cycles), min.		5×10^5	ISO 7854 Method B
Carbon black content by mass (if stabilized with carbon black), %, min.		2.5	ISO 6964

Table 2 — Performance requirements for HDPE tarpaulins for general use

Parameter		Requirement	Test method
Total mass per unit area, g/m^2, min.		200	ISO 2286-2
Loss of volatile matter, %, max.		5	ISO 248-1
Resistance to water penetration (hydrostatic test) cm head of water, min.		150	ISO 811
Water resistance, Rain test, g, max.		1	ISO 22958
Breaking strength	Warp	700	ISO 1421 (type C

(N), min.	Weft	690	machine)
Tear strength (N) (use a specimen measuring 200 mm × 150 mm)	Warp	130	ISO 4674 method A2
	Weft	130	
[a]Retention of breaking strength after UV exposure, min.	Warp	85 percent of original actual value of the tarpaulin	ISO 1421
Colourfastness to light		5	ISO 105-B02
Colourfastness to washing, min.	Change in colour	4	ISO 105-C10
	Staining	4	
Colourfastness to rubbing, min.	Dry	3-4	ISO 105-X12
	Wet	3-4	
[a] UV exposure is done for a minimum of 144 hours UV under ISO 4892-3 (UVB 313 nm peak)			

5 Labelling

Each tarpaulin roll shall have a label attached bearing the following information:

a) name, address and/or distinctive mark of the manufacturer;

b) fibre type of the base fabric, e.g. “polyamide or polyester”;

c) batch number;

d) country of origin and/or manufacture;

e) information concerning the recommended methods of cleaning the coated surface, and if only coated on one side, the most suitable means of cleaning the substrate materials also.

f) instructions for correct use

g) the words, “Tarpaulins for general use”;

a) If flame resistant, an indication that the tarpaulin is flame-resistant

6 Sampling

Sampling shall be done in accordance with ISO 24153.

6.1 Lot

6.1.1 The quantity of the same type and quality delivered to one buyer against one dispatch note shall constitute a lot.

6.1.2 The conformity of the lot to the requirements of this Standard shall be determined on the basis of tests carried out on the samples selected from the lot

6.1.3 The number of pieces to be selected at random from a lot shall be in accordance with Table 3.

Table 3 — Sampling size and permissible number of non-conforming pieces

Number of pieces in the lot	Sample size for visual inspection	Permissible number of nonconforming pieces	Sub-sample size for testing
Up to 25	3	0	2
26 – 50	5	0	2
51 – 150	8	0	3
151 – 300	13	1	3
301 – 500	20	1	5
501 – 1 000	32	2	5
1 000 and above	50	3	8

Bibliography

ISO 8095:1990, PVC-coated fabrics for tarpaulins - Specification