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EAST AFRICAN STANDARD

Toilet brush — 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. XXXXXX.

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 072, *Plastics and related products*, Attention is drawn to the possibility that some of the elements of this document may be subject of

Toilet brush — Specification

1 Scope

This Draft East African Standard specifies requirements, sampling and test methods for brush used for scrubbing and cleaning toilet bowls and urinal trenches.

2 Normative references

The following referenced documents 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 13061-1, *Physical and mechanical properties of wood — Test methods for small clear wood specimens — Part 1: Determination of moisture content for physical and mechanical tests*

3 Terms and definitions

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

plastic

synthetic material made from a wide range of organic polymers such as polyethylene, Polyvinyl Chloride (PVC), nylon, High-Density Polyethylene (HDPE), Polyethylene Terephthalate (PET), phenolic resin, polypropylene, and Ultra-High-Molecular-Weight Polyethylene (UHMWPE, UHMW)

3.2

wood

hard fibrous material that forms the main substance of the trunk or branches of a tree or shrub

3.3

block

part of the toilet brush where the tufts are anchored

3.4

lot

unit of production that, is far as practicable, consists of production units of a single type, class, size and composition, manufactured under the same conditions, and at substantially the same time

3.5

tuft

bunch or cluster of bristles/monofilaments, usually flexible, attached or fixed closely together at the base and loose at the upper ends

3.6
pith
tissue located in the centre of the stem of vascular plants which is composed of soft, spongy parenchyma cells

3.7
head
part of the brush comprising of the block and tufts

3.8
bristle length
length of the monofilament that protrudes from the block

3.9
handle length
part of handle that protrudes from the block

4 Requirements

4.1 General requirements

4.1.1 General

4.1.1.1 The toilet brush shall have a smooth finish and all the components shall be free from imperfections and defects, which might impair its serviceability.

4.1.1.2 Surfaces shall be free from sharp edges or corners that may cause injury to the user.

4.1.1.3 The head and handle may be coloured.

4.1.1.4 The toilet brush shall be supplied with a holder or bowl. If supplied with a bowl, the brush head shall fit completely in the bowl.

4.1.2 Block and handle

4.1.2.1 Material used for making the block and handle shall be plastic, metal, wood or any other suitable material.

4.1.2.2 Wooden handle and block, shall be free from brashness, any kind of biological or non-biological deterioration, insect attack, centre heart (pith), knots (except pin knots), cracks, warp or any other defect which may reduce the life of the brush or affect its utility.

4.1.2.3 Plastic handle and block shall be made of plastic which does not deflect while in service, and the handle shall fit firmly in the block.

4.1.2.4 The handle shall be designed as to provide a firm and stable grip under normal conditions of use.

4.1.3 Bristles

4.1.3.1. Bristles shall be stiff metal or plastic (synthetic) or any other suitable material.

4.1.3.2 Suitable adhesive, wire, nails, or staples shall be used to fix the bristles in the tuft holes. Wire, nails or staples used shall be corrosion resistant.

4.1.3.3 Each tuft shall contain bristles of uniform length, diameter, quantity and of the same material.

4.2 Specific requirements

4.2.1 The toilet brush shall comply with the specific requirements given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Specific requirements for toilet brush

Characteristic	Requirement		Test method
Moisture content, %, max.	Wooden	Plastic	ISO 13061-1
	15	-	
Tuft anchorage	Neither a tuft nor its individual bristle shall dislodge.		Annex A
Bristle diameter, mm, min	0.35		Annex C
Bristle length, mm, min	25.0		
Handle length, mm, min	300		
Handle detachment force, N, min	35.0		
Number of bristles per brush, min	2000		
Pull out force for 1 min, N	50.0		Annex A

4.2.2 When metal is used as any of the components of the toilet brush, it shall be corrosion-resistant or shall be protected against corrosion, the surfaces shall show no sign of corrosion when tested in accordance with Annex B.

5 Packaging

The toilet brush head and bowl shall be packaged suitably in a manner that prevents deterioration of the product.

6 Labelling

6.1 The toilet brush or its bowl shall be legibly and indelibly marked in English and/or any other official language (French, Kiswahili) of the importing East African country with the following information:

- Name of the manufacturer and/or trademark;
- Batch number; and
- Code of resin if plastic material is used.

6.2 The package shall be legibly and indelibly marked in English and/or any other official language (French, Kiswahili etc.) of the importing East African country with the following Information:

- Name of product "Toilet brush";
- Country of origin;
- Batch number

6.3 The bulk package shall be legibly and indelibly marked in English and/or any other official language (French, Kiswahili) etc. of the importing East African country with the following information:

- a) manufacturer's name, physical address and /or registered trade mark;
- b) name of the product as, "Toilet brush";
- c) declaration of the number of toilet brushes in the bulk package;
- d) batch or code number;
- e) instruction for storage and disposal of the bulk packaging material; and
- f) country of origin.

7 Sampling

Sampling shall be done in accordance with Annex D.

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Annex A (normative)

Determination of Pull out Force

A.1 General

A simple instrument as shown in Figure A.1 can be used for testing the pull force. This unit is suitable for mounting on wall. It consists of dial force gauge/weighing scale (0 kg - 10 kg) operating on spring (A) mounted on a plate (B). A tubular tuft holder (C) is hung on the hook of dial gauge. A clamp for holding brush (E) is provided which is movable downward and upward with a screw (F). The dial force gauge/weighing scale shall be calibrated having traceability.

A.2 Procedure

A.2.1 Fix a toilet brush with bristles in upward direction in the brush holder with the help of screw (G). Divide the bristles into segments of about 10 mm length.

A.2.2 Insert all bristles of one tuft in the hole provided at the bottom of tubular tuft holder (C). Care should be taken not to allow bristles from adjacent segment to enter in to the hole. Fix the bristles firmly with the help of screw (D).

A.2.3 Adjust the pointer on dial to zero by adjustment of screw (F).

A.2.4 Move down the brush holder slowly with screw (F) watching the pointer on dial carefully until it reaches the 5-kg mark, and keep it there for 1 min. Remove the brush from the gadget and examine. The bristles of any segment shall not come out during the test.

A.2.5 The force required for pulling out an individual tuft shall not be less than 50.0 N for 1 min.

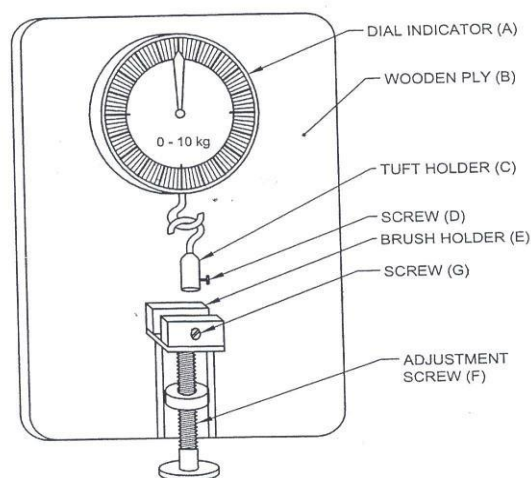


Figure A.1 — Instrument for determination of pull strength

Annex B

(normative)

Determination of corrosion resistance

Submerge all metal components for 7 h in distilled water, then dry them as rapidly as possible at a temperature not exceeding 70 °C, and examine the surfaces that are required to be corrosion resistant for freedom from corrosion. Check for compliance with 4.2.2.

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Annex C

(normative)

Test methods for dimensions and handle strength

C.1 Bristle diameter

The bristle diameter shall be measured by a micrometer screw gauge or a Vernier calliper or any instrument that can measure diameter to the nearest 0.01 mm. Measure the diameter of six bristles to the nearest 0.01 mm. Select the six bristles from six random tufts from the same brush head, then calculate the average bristle diameter.

C.2 Bristle length

The bristle length shall be measured using a Vernier calliper. Measure the length of six bristles to the nearest 0.01 mm. Select the six bristles from six random tufts from the same brush head. Calculate the average bristle length.

C.3 Handle length

The handle length shall be measured using a graduated metre ruler/tape. Measure with a scale of 1 mm or any other suitable instrument, capable of measuring length to the nearest 1 mm.

C.4 Handle strength

C.4.1 Apparatus

C.4.1.1 Means of supporting the head of the brush with the handle horizontal

C.4.1.2 Means of applying a force perpendicular to the handle

C.4.2 Test specimen

Toilet brushes used in the sampling plan

C.4.3 Procedure

C.4.3.1 Horizontally support the head of the toilet brush under test such that the handle cantilevers.

C.4.3.2 Apply a perpendicular force to the handle at a distance of 250 mm from the block-handle joint until the handle detaches from the head. Record the force at which this happens.

Annex D (normative)

Sampling of toilet brushes and criteria for conformity

D.1 Scale of sampling

D.1.1 Lot: in any consignment, all the brushes of the same size and quantity shall be divided into groups of 500 brushes or less and each such group shall constitute a lot. Care shall be taken to ensure that brushes included in a lot do not differ in construction as far as possible.

D.1.2 The conformity of the brushes in a lot to the requirements of this specification shall be ascertained for each lot separately. The number of brushes to be selected for this purpose shall be in accordance with Table D.1.

Table D.1 — Scale of sampling

Number of brushes in a lot <i>N</i>	Number of brushes to be selected <i>n</i>
Up to 10	2
11 to 25	3
26 to 50	4
51 to 100	5
101 to 150	6
151 to 300	7
301 to 500	8

D.1.3 The brushes shall be selected at random. To ensure randomness of selection, one of the following procedures is recommended for use:

- if all the brushes in a lot are packed in one box, then starting from any brush, count them in any suitable order as 1, 2, up to ' r ' and so on, where ' r ' is the integral part of ' N/n ' (' N ' and ' n ' being the lot size and sample size respectively). Every ' r^{th} ' brush thus counted shall be withdrawn to constitute the sample; and
- if the brushes in a lot are packed in more than one box, approximately equal number of brushes shall be picked up at random from as many boxes as possible so as to obtain the required number of brushes as specified in Table D.1

D.2 Criteria for conformity

For declaring the conformity of the lot to the requirements of this standard, all the brushes selected according to D.1.3 shall satisfy the relevant requirements given in Clause 4.

Bibliography

- [1] TZS 1096:2017, *Toilet brush — Commode chutes — Specification*
- [2] US 2227:2021 , *Toilet brush — Specification*

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