



DEAS 1083: 2021

ICS 83.080.01

EAST AFRICAN STANDARD

Sweeping broom (push brush) — Specification

EAST AFRICAN COMMUNITY

Copyright notice

This EAC document is copyright-protected by EAC. While the reproduction of this document by participants in the EAC standards development process is permitted without prior permission from EAC, neither this document nor any extract from it may be reproduced, stored or transmitted in any form for any other purpose without prior written permission from EAC.

Requests for permission to reproduce this document for the purpose of selling it should be addressed as shown below or to EAC's member body in the country of the requester:

© East African Community 2021 — All rights reserved
East African Community
P.O. Box 1096,
Arusha
Tanzania
Tel: + 255 27 2162100
Fax: + 255 27 2162190
E-mail: eac@eachq.org
Web: www.eac-quality.net

Reproduction for sales purposes may be subject to royalty payments or a licensing agreement. Violators may be prosecuted.

Contents

Page

Foreword	iv
1 Scope	1
2 Normative references).....	1
3 Terms and definitions	1
4 Requirements.....	2
4.1 General requirements	2
4.1.6 Bristles	2
4.1.7 Block and handle.....	2
4.2. Specific Requirements.....	3
5. Labelling	3
6 Packaging.....	3
7 Sampling	4
Annex A (normative) Determination of moisture content of wood	Error! Bookmark not defined.
A.1 Test Specimen	Error! Bookmark not defined.
A.2 Procedure	Error! Bookmark not defined.
A.3 Calculation	Error! Bookmark not defined.
Annex B (normative) Determination of pull strength.....	5
B.1 General	5
B.2 Procedure.....	5
Annex C (normative) Determination of corrosion resistance	6
C.1 Procedure	6
C.2 Results.....	6
Annex D (normative) Sampling and criteria for conformity of the sweeping brooms	7
D.1 Scale of sampling	7
D.2 Criteria for conformity.....	7
Bibliography.....	8

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*,

Sweeping broom (push brush) — Specification

1 Scope

This Draft East African Standard specifies the requirements, sampling and test methods for sweeping brooms (push brush)

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

block

part on which the filling material “bristles” are secured

3.2

bristle

stiff animal hair, feather, extruded plastic, or natural material e.g. sisal fibre, coconut fibre, secured in a block.

3.3

broom

cleaning tool consisting of usually stiff or soft fibres (often made of materials such as plastic, hair, sisal fibre or corn husks) which may be attached to, and roughly parallel to, a cylindrical handle which may be plastic, wooden, or metallic

3.4

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)

3.5

tuft

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

- 3.6 wood**
hard fibrous material that forms the main substance of the trunk or branches of a tree or shrub
- 3.7 consignment**
quantity of brooms of the same specifications made available for dispatch at the same time
- 3.8 lot**
definite quantity of sweeping brushes that are manufactured or produced under conditions that are presumed uniform
- 3.9 brush**
consists of the block and the bristles

4 Requirements

4.1 General requirements

- 4.1.1** The brooms shall have smooth finish and all their components (block, bristles and handle) shall be free from imperfections and defects which may affect the appearance or impair their serviceability.
- 4.1.2** Plastic components shall be made of plastic which does not significantly deflect while the broom is in use
- 4.1.3** Wooden components shall be free from brashness, any biological or non-biological deterioration, insect attack, pith, knots (except pin knots), cracks and any other defect that may reduce the life of the brush and affect its utility.
- 4.1.4** The broom shall consist of a brush and a handle
- 4.1.5** The brooms may be in various colours, designs and sizes
- 4.1.6 Bristles**
- 4.1.6.1** The bristles shall be made of animal hair, plastic, natural material such as coconut fibre, sisal fibre or any other suitable materials.
- 4.1.6.2** The bristles shall be of uniform length, size, quantity and of the same material.
- 4.1.6.3** The bristles shall not be loose and shall be firmly secured in the block using nails, wires, staples or any suitable glue
- 4.1.7 Block and handle**
- 4.1.7.1** Material used for making the block and handle shall be made of plastic, metal, wood or any suitable material.
- 4.1.7.2** Handles shall be firmly attached to the block
- 4.1.7.3** The wooden portion of block and handle shall be smoothly finished and suitably vanished, wrapped or painted

4.1.7.4 Dimensions of the block and handle shall be as per the agreement between the supplier and purchaser.

4.1.7.5 Metallic handles shall be insulated

4.2. Specific Requirements

4.2.1 The sweeping brush shall conform to the requirements given in Table 1 when tested in accordance with the test methods specified therein

Table 1. Specific requirements for sweeping brooms

Characteristic	Requirement		Test method
	wooden	plastic	
Moisture content, %, max	15	-	ISO 13061-1
Tuft Strength, N	No pulling out of an individual tuft from the block shall be observed		Annex A
Strength of the bristles in a tuft	Not more than 2% of the bristles subjected to the tensile load shall be extracted before the force reaches 50.0 N in approximately 15 s		Annex A

4.2.2 When metal is used as any of the components of the broom, it shall be corrosion-resistant or shall be protected against corrosion when tested in accordance with Annex B.

5 Packaging

Sweeping brooms shall be packaged in appropriate materials that shall protect the product integrity during transportation and storage.

6 Labelling

6.1 The sweeping broom shall be legibly and indelibly labelled in English and/or any other official language (French, Kiswahili etc.) of the importing East African country with the following information:

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

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

- a) Name of product "Sweeping broom";
- b) Country of origin;
- c) Batch number

6.3 The bulk package shall be legibly and indelibly labelled 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, "Sweeping broom";
- c) declaration of the number of sweeping brooms 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

Sweeping brooms shall be randomly sampled in accordance with Annex C. Any sample of sweeping brooms randomly selected from a consignment shall comply with the requirements of this standard and shall be a representative of the entire consignment

Annex A (normative)

Determination of Pull out Force

A.1 General

A simple instrument as shown in Fig. A1 can be used for testing the pull strength. This unit is suitable for mounting on wall. It consists of dial force gauge /weighing scale (0-10 kg) operating on spring (A) mounted on wooden 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 brush with bristles in upward direction in the brush holder with the help of screw (G).

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 tufts 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 till it reaches 5 kg mark and keep it there for 1 min. Then remove the brush from the gadget and examine. The bristles of any tuft shall not come out during the test.

Note: The tufts shall not fail when subjected to a pull by thumb and finger grip or the force required for pulling out an individual tuft shall not be less than 50.0 N for 15 seconds

NOTE — any other appropriate instrument for determination of the pull out force available may also be used

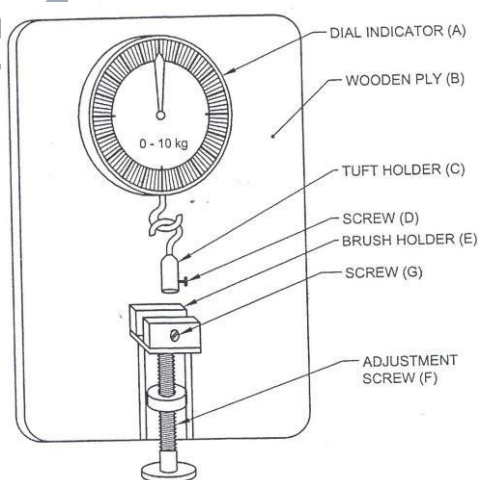


Fig. A1 Instrument for determination of pull strength

Annex B **(normative)**

Determination of corrosion resistance

B.1 Procedure

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.

B.2 Results

The surfaces shall show no sign of corrosion

Annex C (normative)

Sampling and criteria for conformity of the sweeping brooms

C.1 Scale of sampling

C.1.1 lot — In any consignment, all the brushes of the same size and quality 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.

C.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 2.

Table.C1 — Scale of sampling sweeping brooms

S/N	Number of brooms in the lot (N)	Number of brooms to be selected (n)
I.	Up to 10	2
II.	11 to 25	3
III.	26 to 50	4
IV.	51 to 100	5
V.	101 to 150	6
VI.	151 to 300	7
VII.	301 to 500	8

C.1.3 the brushes shall be selected at random. To ensure randomness of selection one of the following procedures, whichever is suitable, may be followed

- a) 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.
- b) 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 C1.

C.2 Criteria for conformity

C.2.1 for declaring the conformity of the lot to the requirements of this specification, all the brushes selected according to C.1.2 and C.1.3 shall satisfy the relevant requirements given in clause 4

Bibliography

- [1] IS 2622, *Specification for brush, banister (hand sweeping)*,
- [2] TZS 1095: 2017, *Sweeping brooms — Specification*
- [3] US 2226: 2021, *Sweeping broom (push brush) — Specification*

DEAS 1083:2021

DEAS 1083:2021