



DEAS 792: 2021

ICS 71.100.40

DRAFT EAST AFRICAN STANDARD

Carpet and upholstery shampoo — 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 2504253/8
Fax: 255 27 2504481/2504255
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 persecuted

Foreword

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

In order to meet the above objectives, the EAC Partner States have enacted an East African Standardization, Quality Assurance, Metrology and Test Act, 2006 (EAC SQMT Act, 2006) to make provisions for ensuring standardization, quality assurance, metrology and testing of products produced or originating in a third country and traded in the Community in order to facilitate industrial development and trade as well as helping to protect the health and safety of society and the environment in the Community.

East African Standards are formulated in accordance with the procedures established by the East African Standards Committee. The East African Standards Committee is established under the provisions of Article 4 of the EAC SQMT Act, 2006. The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. 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 procedures of the Community.

Article 15(1) of the EAC SQMT Act, 2006 provides that “Within six months of the declaration of an East African Standard, the Partner States shall adopt, without deviation from the approved text of the standard, the East African Standard as a national standard and withdraw any existing national standard with similar scope and purpose”.

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.

EAS 792 was prepared by Technical Committee EAS/TC 074, *Surface active agents*.

Carpet and upholstery shampoo — Specification

1 Scope

This Draft East African Standard specifies the requirements, sampling and test methods for a liquid foaming shampoo used for both general cleaning and spot cleaning of colourfast carpets and upholstery that are not damaged by water alone.

2 Normative references

The following referenced documents are indispensable for the application 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.

ASTM 1319, *Standard test method for hydrocarbon types in liquid petroleum products by fluorescent indicator adsorption*

ISO 696, *Surface active agents — Measurement of foaming power — Modified Ross-Miles method*

ISO 862, *Surface active agents — Vocabulary*

ISO 1063, *Surface active agents — Determination of stability in hard water*

ISO 2271, *Surface active agents — Detergents — Determination of anionic active matter by manual or mechanical direct two-phase titration procedure* EAS 814, *Determination of biodegradability of surfactants – test method*

3 Terms and definitions

For the purposes of this standard, terms and definitions given in ISO 862 and the following shall 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>

carpet and upholstery shampoo

cleaning product designed for the purpose of eliminating dirt and stains on rugs, carpeting, and the interior of motor vehicles or on household furniture or objects upholstered or covered with fabrics such as wool, cotton, nylon, or other synthetic fabrics

4 Requirements

4.1 General requirements

4.1.1 The carpet and upholstery shampoo shall be a homogeneous liquid that may be coloured with a non-staining colour.

4.1.2 The carpet and upholstery shampoo shall be free from objectionable odour, both as received and in solution in hot water. It may be perfumed.

4.1.3 The carpet and upholstery shampoo shall not attack nor have deleterious effect on carpet and upholstery fibres (natural or synthetic) or on backing material.

4.1.4 The carpet and upholstery shampoo shall be completely soluble and effective in both hard and soft water.

4.1.5 The carpet and upholstery shampoo shall be stable and shall not lose effectiveness or otherwise deteriorate when retained in an unopened container at storage temperatures as recommended by the manufacturer during the product shelf life.

4.1.6 The carpet and upholstery shampoo shall not contain solvents such as 2-methoxyethanol (ethylene glycol monomethyl ether) and 2-ethoxyethanol (ethylene glycol monoethyl ether).

4.2 Specific requirements

Carpet and upholstery shampoo shall comply with the specific requirements specified in Table 1.

Table 1 — Specific requirements for carpet and upholstery shampoo

S/ No	Parameter	Requirement	Test method
i.	pH	5.0-11.0	Annex A
ii.	Surfactant, % m/m, min	4.0	ISO 2271
iii.	Foaming ability, mL, min	25	ISO 696
iv.	Solvents, % by m/m, max *	5.0	ASTM 1319
v.	Residue	To pass test	Annex B
vi.	Low- temperature stability	To pass test	
vii.	Stability to hard water	To pass test	
viii.	High temperature stability	To pass test	
ix.	Biodegradability	To pass test	EAS 814

5 Packaging

The product shall be supplied in suitable well-closed containers/packages.

6 Labelling

The container shall be securely closed, legibly and indelibly labelled either in English, Kiswahili or French or combination or any other language as agreed between the manufacturer and supplier with the following information:

- a) name of the product as “carpet and upholstery shampoo”;
- b) manufacturer’s name and physical address
- c) batch or code number;
- d) net content;
- e) list of ingredients used;
- f) country of origin;
- g) instructions for use (which shall be in either English, Kiswahili or French or in combination as agreed between the manufacturer and supplier);
- h) date of manufacture and best before date; and
- i) cautionary statement, “For use on colorfast fabrics only. Test on hidden surface by applying shampoo dilution and wiping with a clean white cloth, if no colour is removed, proceed with cleaning. The instructions for use and dilution rates may vary with different products. Be sure to follow the manufacturer’s recommendations for use and dilution rates contained on the label”.

NOTE The name, physical address of the distributor/supplier and trade mark may be added as required

7. Sampling

Sampling shall be done in accordance with Annex C.

Annex A **(normative)**

Determination of pH

A.1 General

pH determination shall be made in an acid free atmosphere.

A.2 Apparatus

A.2.1 pH meter, any standard electrometric instrument, equipped with a low sodium error glass electrode. The instrument shall be calibrated and standardized with standard buffer solution before use.

A.2.2 Volumetric flask, 100 mL capacity

A.3 Reagents

A.3.1 Distilled water

Distilled water shall be boiled thoroughly or purged with carbon dioxide free air to remove carbon dioxide, and shall be protected with soda lime or soda asbestos while cooling and in storage. The pH of this water shall be between 6.2 and 7.2 at 30 °C. The residue on evaporation when heated at 105 °C for one hour shall not exceed 0.5 mg/L.

A.3.2 Standard buffer solution

Any two suitable buffer solutions within the pH range of 9 to 11 at 30 °C for calibrating the pH meter

A.4 Procedure

Weigh $10 \text{ g} \pm 0.001 \text{ g}$ material and transfer to a 1-L volumetric flask. Partially fill the flask with distilled water and agitate until the sample is completely dissolved. Adjust the temperature of the solution and the distilled water to $30 \text{ °C} \pm 0.5 \text{ °C}$, and fill to the calibration mark with distilled water. Stopper the flask, mix thoroughly, and allow the solution to stand at a temperature of 30 °C for 2 h prior to measuring the pH. Measure the pH of the solution using a glass electrode at $25 \text{ °C} \pm 2 \text{ °C}$.

Annex B

(normative)

Determination of residue and stability to temperature and hard water

B.1 Residue

B.1.1 The residue of the carpet and upholstery shampoo shall be non-tacky and friable after drying when determined by the method below.

B.1.2 Weigh a mass of 10.0 ± 0.1 g of the product into a watch glass of 10 cm diameter and dry the liquid sample at 100 °C for 4 h. The sample shall not be sticky or tacky. Check for the presence of stickiness or tackiness.

B.2 Temperature stability

B.2.1 Low-temperature stability

After the product has been held at 2 °C for 24 h and brought to room temperature, it shall be a clear and homogenous liquid.

B.2.2 High temperature stability

After the product has been held at 50 °C for 24 h and then brought to room temperature, it shall be a clear and homogeneous liquid.

B.3 Stability to hard water

The product shall have no precipitate, when tested in accordance with ISO 1063, with the following exception: dilute in the ratio of 1 part of the product to 9 parts of hard water. The hard water shall be prepared adding 0.353 g of calcium acetate ($\text{Ca}(\text{CH}_3\text{COO})_2 \cdot \text{H}_2\text{O}$) and 0.246 g of magnesium sulphate ($\text{MgSO}_4 \cdot 7\text{H}_2\text{O}$) to sufficient distilled water to make 1 L.

Annex C (normative)

Sampling

C.1 Procedure

C.1.1 In a single consignment, all packages (cartons) materials drawn from the same batch of production shall constitute a lot. For ascertaining the conformity of the lot to the requirements of this standard, tests shall be carried out on each lot separately. The number of packages to be selected for drawing the sample shall be in accordance with Table C.1.

Table C.1 — Scale of sampling

Number of packages (cartons) in the lot <i>N</i>	Number of packages (cartons) to be selected <i>n</i>	Number of samples
4 to 15	3	3
16 to 40	4	4
41 to 65	5	2
66 to 110	7	2
111 and above	10	1

C.1.2 The packages shall be selected at random, using tables of random numbers. If these are not available, the following procedure shall be applied:

Starting from any package, count all the packages in one order as 1, 2, 3.... *N*, selecting every *k*th package, where *k* is the integral part of N/n .

C.1.3 From each package thus selected, draw at random an equal number of containers so as to obtain a total volume of at least 2 L.

C.2 Samples for testing

Take at one time all test samples required for the tests in 4.2. Measure the test sample required for determination of free alkali or acid content, and use it immediately.