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ICS 71.100.40

DRAFT EAST AFRICAN STANDARD

Carpet and upholstery shampoo — Specification

EAST AFRICAN COMMUNITY

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Second Edition 2026

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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 074, *Surface active agents*.

This second edition cancels and replaces the first edition (EAS 792: 2022), which has been technically revised.

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Carpet and upholstery shampoo — Specification

1 Scope

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

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.

EAS 814, *Determination of biodegradability of surfactants — Test method*

ISO 862, *Surface active agents — Vocabulary*

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

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*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 862 and the following 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

— IEC Online browsing platform: available at https://www.iecee.org/

3.1
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

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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 All ingredients used shall comply with the requirements of EAS 377 (all parts) to cover all the prohibited substances

4.1.7 Carpet and upholstery shampoo shall not contain restricted solvents (such as 2-methoxyethanol (ethylene glycol monomethyl ether) and 2-ethoxyethanol (ethylene glycol monoethyl ether)), and flammable solvents (such as petroleum naphtha and white spirit).

4.2 Specific requirements

Carpet and upholstery shampoo 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 Carpet and upholstery shampoo

S/No.	Parameter	Requirement	Test method
i.	pH of 1 % solution (m/v), at 25 °C ± 2 °C	5.0 – 11.0	Annex A
ii.	Surfactant, % m/m, min.	4.0	ISO 2271
iii.	Foaming ability, mL, min.	25	ISO 696
iv.	volatile organic compounds, % m/m, max.	5.0	Annex D
v.	Residue	To pass test	Annex B
vi.	Low temperature stability		
vii.	Stability to hard water		
viii.	High temperature stability		
ix.	Biodegradability	To pass test	EAS 814

5 Packaging

Carpet and upholstery shampoo shall be packaged in suitable well-sealed containers that shall protect the contents and shall not cause any contamination or react with the products.

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6 Labelling

Each package shall be legibly and indelibly labelled in English and/or any other official language (French, Kiswahili, etc.) used in the importing East African Partner State with the following information

a) name of the product as "Carpet and upholstery shampoo";

b) manufacturer's name and physical address. The name, physical address of the distributor/supplier and trademark may be added;

c) batch or lot number;

d) net content;

e) list of ingredients;

f) country of origin;

g) date of manufacture;

h) expiry date;

i) hazard and precautionary statements or hazard pictogram/symbols and signal words;

j) storage instructions;

k) disposal instructions, and

l) instructions for use.

7 Sampling

Sampling shall be done in accordance with Annex C.

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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, 1-L capacity

A.2.3 Analytical balance, capable of weighing to the nearest 1 mg

A.2.4 Water bath, thermostatically controlled capable of maintaining 30 °C ± 0.5 °C

A.2.5 Thermometer

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 4 to 12 at 30 °C for calibrating the pH meter.

A.4 Procedure

Weigh accurately 10 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. Using the water bath, adjust the temperature of the solution and the distilled water to 30 °C ± 0.5 °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 two hours prior to measuring the pH. Adjust the temperature of the setup to 25 °C ± 2 °C and measure the pH of the solution using a glass electrode.

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Annex B
(informative)

Determination of residue and stability to both temperature and hard water

B.1 Apparatus

Top pan balance, capable of weighing up to 0.1 g

B.2 Residue

B.2.1 The residue of the carpet and upholstery shampoo shall be non-sticky, non-tacky and friable after drying when determined by the method in B.2.2.

B.2.2 Weigh accurately 10.0g of the product into a watch glass of 10 cm diameter and dry the liquid sample at 100 ºC ± 5 ℃ for four hours. Allow the setup to cool to room temperature in a desiccator. Check for the presence of stickiness or tackiness.

B.3 Stability to temperature

B.3.1 Low-temperature stability

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

B.3.2 High temperature stability

After the product has been held at 50 ºC 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 one part of the product to nine parts of hard water. The hard water shall be prepared adding 0.353 g of calcium acetate (Ca $(CH_3COO)_2.H_2O$) and 0.246 g of magnesium sulphate ($MgSO_4.7H_2O$) to sufficient distilled water to make 1 L.

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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 ***N***	Number of packages (cartons) to be selected ***n***	Number of samples
4 – 15	3	3
16 – 40	4	4
41 – 65	5	2
66 - 110	7	2
≥ 111	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 $N \div n$.

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.

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Annex D
(normative)

Determination of volatile organic compounds (VOCs)

D.1 Principle
This method involves determining the VOC content through a combination of gravimetric analysis and water content determination using Karl Fischer methods. First, the total volatile weight of a representative sample is measured by calculating its weight loss upon drying. From this total volatile weight, the mass as water is identified and subtracted to isolate the net VOC content.

D.2 Apparatus

D.2.1 Aluminium dishes

D.2.2 Weighing balance, of accuracy 0.001 g

D.3 Procedure

D.3.1 Determination of total volatile content

D.3.1.1 Transfer approximately 0.5 g – 1.0 g of sample using a syringe into a preconditioned aluminium weighing dish (W_S). Preconditioning is achieved by heating the aluminium dishes for 30 minutes at 110 ℃ ± 5 °C, after which they are transferred and stored in a desiccator prior to use.

NOTE A small volume of distilled water is added to facilitate its dispersion. The solvent evaporates fully during sample heating and does not contribute to sample non-volatile weight, which is used to determine sample total volatiles. If the sample in the dish does not disperse well it may interfere with sample volatilization.

D.3.1.2 Heat the sample at 110 ℃ ± 5 ℃ for 60 min and then cool in a desiccator to ambient temperature and weigh (W_R).

D.3.2 Determination of water content

The water content, (W_W), expressed, as percent mass by mass, shall be determined using Karl Fischer methods provided in ISO 4317 using a separate product sample.

D.4 Calculations

D.4.1 Weight of total volatile content

D.4.1.1 The total volatile matter (V_T) expressed as % m/m shall be calculated as follows

$$(W_S - W_R) \times 100/W_S$$

D.4.1.2 The total volatile organic compounds (VOCs) expressed as percent mass by mass shall be calculated as follows:

$$V_T - W_W$$

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Bibliography

[1] EAS 792: 2022*, Carpet and upholstery shampoo — Specification*

[2] Chinese reference method: GB/T 13173-2021, *Surface active agents — Test methods for detergents*

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