



**DEAS 962: 2019**

ICS 71.100.70

## **DRAFT EAST AFRICAN STANDARD**

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**Hair spray — 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 071, *Cosmetics and related products*.

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.



## Hair spray — Specification

### 1 Scope

This Working Draft East African Standard specifies the requirements, sampling and test methods for hair spray. This standard is applicable to both water based and oil based hair sprays delivered by the aerosol or non-aerosol system.

This standard does not apply to medicinal products for which therapeutic claims are made.

### 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 346, *Glossary of terms relating to the cosmetic industry*

EAS 377 (all parts), *Cosmetics and cosmetic products*

EAS 847-13, *EAS 847-13, Cosmetics — Analytical methods — Part 13: Determination of rancidity*

EAS 847-17,

EAS 847-18 *Cosmetics — Analytical methods — Part 18: Determination of thermal stability*

ISO 3960, *Animal and vegetable fats and oils -- Determination of peroxide value -- Iodometric (visual) endpoint determination*

ISO 660, *Animal and vegetable fats and oils -- Determination of acid value and acidity*

ISO 18416, *Cosmetics — Microbiology — Detection of Candida albicans*

ISO 22716, *Cosmetics — Good Manufacturing Practices (GMP) — Guidelines on Good Manufacturing Practices*

ISO 21149, *Cosmetics -- Microbiology -- Enumeration and detection of aerobic mesophilic bacteria*

ISO 22717, *Cosmetics — Microbiology — Detection of Pseudomonas aeruginosa*

ISO 22718, *Cosmetics — Microbiology — Detection of Staphylococcus aureus*

WDEAS /TC 071/811, *Specification for cosmetic and air freshener aerosols*

### 3 Terms and definitions

For the purposes of this document, the terms and definitions given in EAS 846 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>

**3.1**

**aerosol**

system of solid or liquid particles suspended in gas

**3.2**

**fragrance**

pleasant smell usually from essential oils

**3.3**

**propellant**

gas utilized to accelerate or spray particles

**4 Delivery systems for hair sprays**

**4.2 Aerosol hair sprays**

Aerosol hair sprays are packaged in containers under pressure and a release valve is used to emit the pressurized suspension into the air in a mist propelled by propellant gases. With an aerosol, you can usually get a continuous emission of the suspension as long as the gas or particles last (see Figure 1).

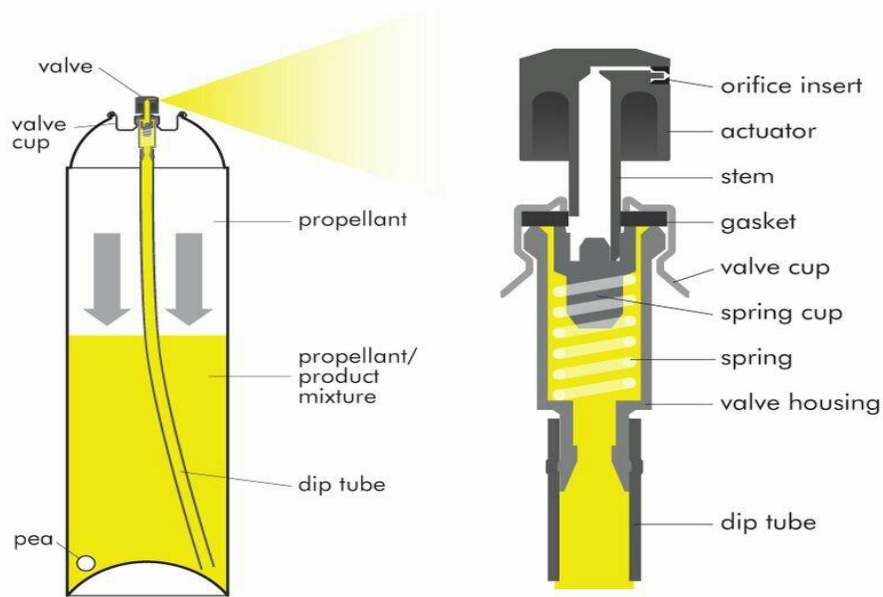


Figure 1 — Aerosol delivery system A paragraph.

**4.3 Non-aerosol hair sprays**

Non-aerosol hair sprays are packaged as liquids, usually in bottles with an atomizer attachment such as a pump-sprayer. The pump sprayer uses springs, valves and tubes to mix the liquid with small amount of air and emits the liquid as small droplets propelled in short bursts. Unless the pump mechanism malfunctions, non-aerosol hair sprays may be used until the liquid inside is used up.

## 5 Requirements

### 5.1 General requirements

#### 5.1.1 Appearance

Hair spray shall be a clear liquid free from sediment and suspended matter. It may be coloured or colourless.

#### 5.1.2 Odour

Hair spray may be perfumed or non-perfumed. If a perfume is added, it shall be of cosmetic grade and shall not be objectionable.

#### 5.1.3 Ingredients

**5.1.3.1** The product shall contain acceptable ingredients necessary to achieve the intended end use as stipulated on the label.

**5.1.3.2** All ingredients used shall conform to EAS 377 (all parts).

#### 5.1.4 Dermatological safety

Hair spray shall be dermatologically safe. It shall not be irritating or harmful to the scalp, when used as instructed by the manufacturer.

5.1.5 The product shall be produced, prepared and handled in accordance with ISO 22716.

### 5.2 Specific requirements

#### 5.2.1 Water-based hair sprays

Hair spray shall also comply with the requirements given in Table 1 when tested in accordance with the test methods specified therein.

**Table 1 — Specific requirements for water-based hair spray**

Characteristic	Requirement	Test method
pH	5 - 8	EAS 847-17
Thermal stability	To pass test	EAS 847-18
Rancidity	To pass test	EAS 847-13

#### 5.2.2 Oil-based hair sprays

Hair spray shall also comply with the requirements given in Table 2 when tested in accordance with the test methods specified therein.



**Table 2 — Specific requirements for oil-based hair spray**

Characteristic	Requirement	Test method
Peroxide value, mg/1 000g, max.	7.5	ISO 3960
Acid value, max.	1.0	ISO 660
Rancidity	To pass test	EAS 847-13
Thermal stability	To pass test	EAS 847-18
Chlorofluorocarbons	Absent	WDEAS /TC 071/811
Delivery rate, g/s, min.	0.01	WDEAS /TC 071/811
General leakage	To pass test	WDEAS /TC 071/811
Net weight delivery, %, min.	95	WDEAS /TC 071/811
Stability of smell	To pass test	WDEAS /TC 071/811

### 5.3 Microbiological requirements

Hair spray shall comply with the microbiological limits given in Table 3 when tested in accordance with the test methods specified therein.

**Table 3 — Microbiological limits for hair spray**

Characteristic	Limit	Test method
Total viable count for aerobic mesophilic micro-organisms per g, max.	1000	ISO 21149
<i>Pseudomonas aeruginosa</i>	Not detectable in 0.5 g of cosmetic product	ISO 22717
<i>Staphylococcus aureus</i>		ISO 22718
<i>Candida albicans</i>		ISO 18416

### 5.4 Heavy metals requirements

The product shall comply with the heavy metal requirements given in Table 4 when tested in accordance with the test methods specified therein

**Table 4 — Heavy metal requirements for air freshener aerosols**

Heavy metal	Limit mg/kg, max	Test method
i) Lead (Pb)	10.0	EAS 847-16
ii) Arsenic (As)	2.0	
iii) Mercury (Hg)	2.0	

Note- The total amount of heavy metals as lead, mercury and arsenic, in combination in the finished product shall not exceed 10 mg/kg

### 5.5 Propellant

**5.5.1** The propellant used shall be of hydrocarbons or any other propellant with low mammalian toxicity.

**5.5.2** Chlorofluorocarbons (CFC's) banned under Montreal protocol as ozone depleting shall be not used as aerosol propellants

## 5.6 Flammability

The flammability of an aerosol formulation shall be kept as low as possible to ensure safety during use.

## 5.7 Handling and storage

Hair spray shall be kept away from fire and flames in closed containers for aerosols.

## 6 Packaging

**6.1** The container (including the closure) in which the hair spray is packaged shall not interact chemically or physically with the hair spray and shall be strong enough to protect the hair spray adequately during normal handling, transportation and storage

**6.2** Filled aerosol containers shall be appropriately classified as follows in terms of flame propagation characteristics of their contents when tested in accordance with DEAS 956

- a) Highly flammable: if the average length of the flame is greater than 0.45 m or if the flame burns back to the actuator, or continues to burn when the test flame is extinguished;
- b) Flammable: if the average length of the flame is between 0.20 m and 0.45 m; and
- c) Non-flammable: if the product does not burn in the manner described a) and b)

## 7 Labelling

**7.1** In addition to the labelling requirements in EAS 346, the package shall be legibly marked with the following information:

- a) manufacturer's name and physical address;
- b) product name as "Hair spray";
- c) net content of the material when packed;
- d) instructions for use;
- e) country of origin;
- f) batch number
- g) month and year of manufacture and expiry; and
- h) precaution /warnings such as:

**CAUTION: Keep away from radiators and heat. Store in a room with room temperatures, away from heating elements since they are flammable. Follow flammable liquid storage requirements.**

**7.2** All ingredients shall be declared in descending order of predominance. The International Nomenclature for cosmetic ingredients (INCI) label names shall be used.

## 8 Sampling

Random samples of the product for test shall be drawn from the market, factory or elsewhere in accordance with ISO 24153.

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## **Annex A** (normative)

### **Stability of smell**

#### **A.1 Apparatus**

**A.1.1 Porcelain cup**

**A.1.2 Pincers**

**A.1.3 Bleached gauze**, 10 pieces, of dimension 5 cm x 10 cm

**A.1.4 Thermometer**

**A.1.5 Hygrometer**

#### **A.2 Procedure**

Put some pieces of bleached gauze which have been pre-washed in hot water without soap and dried into a porcelain cup. Spray continuously about 2 ml of the sample into this cup. After the gauze gets soaked, remove one piece using a pair of pincers. Without squeezing it, dry it in an environment with temperature of  $27\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$  and humidity of  $65\% \pm 5\%$  for 12 h.

#### **A.3 Results**

The product shall be taken to have passed the test if after 12 h, the smell of the sample can clearly be picked up.

## Bibliography

- [1] 76/768/EEC, *The European Economic Community Cosmetics Directive*.
- [2] KS 602:1999, *Specification for hair oils*.
- [3] KS 1669:2001, *Specification for cosmetic and air freshener aerosols*
- [4] US 1701: 2017, *Hairspray — Specification*

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