



## **DRAFT EAST AFRICAN STANDARD**

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**Auto refinishing paint — Specification — Part 2: Nitrocellulose resin based**

**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.

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 070, *Paints, varishes and related products*.

EAS 853 consists of the following parts, under the general title Auto refinishing paint — Specification;

- Part 1: Synthetic resin based
- Part 2: Nitrocellulose resin based

This second edition cancels and replaces the first edition (EAS 853-2:2016), which has been technically revised.

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.



# Auto refinishing paint — Specification — Part 2: Nitrocellulose resin based

## 1 Scope

This Draft East African Standard specifies the requirements, sampling and test methods for nitrocellulose resin-based auto refinishing paint.

## 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.

ISO 2810, *Paints and varnishes — Natural weathering of coatings — Exposure and assessment*

ISO 2813, *Paints and varnishes — Determination of gloss value at 20 degrees, 60 degrees and 85 degrees*

ISO 3248, *Paints and varnishes — Determination of the effect of heat*

ISO 3251, *Paints varnishes and plastics — Determination of non- volatile matter content*

ISO 3856-1, *Paints and varnishes — Determination of “soluble” metal content — Part 1: Determination of lead content — Flame atomic absorption spectrometric method and dithizone spectrophotometric method*

ISO 6504-3, *Paints and varnishes — Determination of hiding power — Part 3 Determination of contrast ratio of light coloured paints at a fixed spreading rate*

ISO 9117-3, *Paints and varnishes — Drying test — Part 3: Surface drying test using Ballotini*

ISO 9227, *Corrosion tests in artificial atmospheres — Salt spray tests*

ISO 15184, *Paints and varnishes — Determination of film hardness by pencil test*

ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

ISO 21207, *Corrosion test in artificial atmospheres — Accelerated corrosion test involving alternate exposure to corrosion promoting gases, neutral salt spray and drying*

ISO 4618, *Paints and varnishes — Terms and definitions*

ISO 6503, *Paints and Varnishes — Determination of Total Lead — Flame Atomic Absorption Spectrometric Method*

ISO 6503, *Paints and Varnishes — Determination of Total Lead — Flame Atomic Absorption Spectrometric Method*

ISO 9117-4, *Paints and varnishes — Drying tests — Part 4: Test using a mechanical recorder*

### 3 Terms and definitions

For the purposes of this standard, terms and definitions given in ISO 4618 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>

### 4 Requirements

#### 4.1 General requirements

4.1.1 The paint shall be made of nitrocellulose resin blended with a suitable plasticizer.

4.1.2 The paint shall be made of light and solvent fast pigments.

4.1.3 The paint shall be thinned using a suitable thinner that complies with the DEAS 854.

4.1.4 The paint shall be free from gel, coarse particles, foreign matter and skin; and shall be in such a condition that at the time of use by stirring, produces a homogenous product of uniform consistency

#### 4.2 Specific requirements

The nitrocellulose resin-based auto refinishing paint shall comply with the requirements given in Table 1, when tested in accordance with the test methods therein.

**Table 1 — Specific requirements for nitrocellulose resin based auto refinishing paints.**

S No.	Parameter	Requirement	Test method
	Viscosity, Pa. s	4 - 6	ISO 2884
	Solids content , %m/m, min.	38	ISO 3251
	Skinning	To pass the test	Annex A
	Recoating properties	To pass the test	Annex B
	Resistance to neutral salt spray	To pass the test	ISO 9227
	Diesel and gasoline	To pass the test	Annex C
	Accelerated weathering	To pass the test	ISO 21207
	Weather resistance	To pass the test	ISO 2810
	Drying times at 25 °C ± 2 °C, minutes, max: Surface drying time Hard drying time	15 60	ISO 9117-3 ISO 9117-4
	Gloss at 60°, %, min.	80	ISO 2813
	Hardness, min.	1H	ISO 15184
	Total lead content, ppm, max.	90	ISO 6503

## 5 Storage stability

The nitrocellulose resin-based auto refinishing paint when stored in the original sealed container under room temperature shall meet all the requirements for a period of at least one year from the date of manufacture.

## 6 Packaging

The nitrocellulose resin-based Auto refinishing paint shall be packaged in a suitable container that prevents it from deterioration during storage, transportation and normal handling

## 7 Labelling

**7.2.1** The labelling shall be either in English, Kiswahili or French or in combination as agreed between the manufacturer and the supplier. Any other language shall be optional.

**7.2.2** The nitrocellulose resin based Auto refinishing paint shall be packaged in containers that are legibly and indelibly marked with the following information: the name of the product as “ nitrocellulose resin based Auto refinishing paint.

- a) manufacturer's name and physical addresses and/or registered trade mark;
- b) indication of colour/colour code;
- c) date of manufacture;
- d) net content;
- e) batch/code number;
- f) country of origin;
- g) expiry date or best before date;
- h) instructions for use and safety precautions;
- i) storage conditions; and
- j) Disposal instructions.

## 8 Sampling

Sampling shall be done in accordance with ISO 15528.



## **Annex A** (normative)

### **Skin formation**

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

**A.1.1 Container**, of 250 mL with a tight-fitting lid

**A.1.2 Spatula**

#### **A.2 Test conditions**

The test shall be carried out at a temperature of  $25\text{ }^{\circ}\text{C} \pm 2\text{ }^{\circ}\text{C}$  and a relative humidity of  $65\% \pm 2\%$ .

#### **A.3 Procedure**

**A.3.1** Stir and pour 125 ml - 130 ml of the paint into the container. Place the lid on tightly and momentarily invert to seal the lid.

**A.3.2** Allow the container to stand upright for 14 days.

**A.3.3** Open the container and test the surface of the paint for any skin formation using a spatula. Examine the walls and the lid for the presence of the skin.

#### **A.4 Results**

The paint shall show no sign of skinning.

## **Annex B** (normative)

### **Determination of recoatability**

#### **B.1 Apparatus**

**B.1.1 Burnished mild steel panel**, flat sheets of size 150 mm x 100 mm x 4 mm

**B.1.2 Film applicator**, capable of applying a wet film thickness of 60- $\mu$ m

**B.1.3 Glass stirrer**, long enough to stir the paint without dipping the hands into the paint

#### **B.2 Procedure**

Thoroughly stir the paint and apply one coat onto a dry panel, and leave to dry for 6 h at room temperature. Apply a second coat and examine for recoating properties after drying for 24 h.

#### **B.3 Results**

The paint shall not show any signs of lifting of the underlying coat after 1 h.

## **Annex C** (normative)

### **Diesel and gasoline resistance test**

#### **C.1 Apparatus**

##### **C.1.1 Burette**

##### **C.1.2 Stand**

##### **C.1.3 Ultra violet lamp 125**

##### **C.1.4 Timing device**

##### **C.1.5 Glossmeter**

#### **C.2 Procedure**

**C.2.1** The diesel and gasoline resistance test is done by allowing 200 ml of the fuel to drop from a burette at a rate of 10 drops/minute from a height of 10 cm onto the test panel held at an angle of 20° from the horizontal plane.

**C.2.2** The test panel is illuminated with a u.v. light at a 90° angle during this test for a period of 2 ½ h.

**C.2.3** There shall be no change in gloss, colour, swelling or softening of the paint film.

#### **C.3 Results**

There shall be no reduction in gloss level, colour change, production of swelling or softening of the paint film.

## Bibliography

EAS 853-2:2015 Auto refinishing paint — Specification — Part 2: Nitrocellulose resin based

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