DEAS 852: 2023

ICS 87.040

DRAFT EAST AFRICAN STANDARD

Air-dried roofing paint — Specification

EAST AFRICAN COMMUNITY

Second Edition 2023

Copyright notice

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, vanishes and related products.*

This second edition cancels and replaces the first edition (EAS 852:2016), 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.

Solvent-borne air-dried roofing paint — Specification

1 Scope

This Draft East African Standard specifies requirements, sampling and test methods for solvent-borne air-dried roofing paint for use on galvanized iron sheet, zinc and zinc alloy coated steel.

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 1523, *Determination of flash point — Closed cup equilibrium method*

ISO 1524, *Paints, varnishes and printing ink — Determination of fineness of grind*

ISO 2811 (all parts), *Paints and varnishes — Determination of density*

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

ISO 2884-2, *Paints and varnishes — Determination of viscosity using rotary viscometers — Part 2: Disk or ball viscometer operated at a specified speed*

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

ISO 17132, *Paints and varnishes — T-bend test*

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

ISO 4618:2014, *Paints and varnishes — Terms and definitions*

ISO 6503:1984, *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 recorde*

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 Composition of the paint

The paint shall be made of a suitable resin with pigments that are fast to light and other ingredients as may be necessary to produce a paint that satisfies the requirements of this standard.

4.1.2 Condition of the paint in the container

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

4.1.3 Application

4.1.3.1 Priming

Before application of the roof paint, the substrate shall suitably be primed as per the instructions of the manufacturer

4.1.3.2 Top coat

4.1.3.2.1 The paint shall, after recommended thinning, be suitable for application by any suitable applicator.

4.1.3.2.2 The resulting film shall not show pigment flocculation, coarseness or other undesirable characteristics.

4.2 Specific requirements

Solvent-borne air-dried roofing paint shall comply with the specific requirements given in Table 1 when tested in accordance with the test methods therein.

Table 1 — Specific requirements for Solvent-borne air dried roofing paint

S No.	Parameter	Requirement	Test method
i)	Drying times at 25 ºC ± 2 ºC, h, max.: • Surface drying time • Hard drying time	 5 24	 ISO 9117-3 ISO 9117-4
ii)	Fineness of grind, µm, max.	25	ISO 1524
iii)	Chemical resistance	To pass the test	Annex A
iv)	Flexibility	To pass the test	ISO 17132
v)	Dry opacity, %, min.	90	ISO 6504-3
vi)	Gloss at 60°, %, min.	70 All partner states to carry out research to have Data to support lowing of this figure	ISO 2813
vii)	Specific gravity. at 25 °C ± 2°C	0.97 – 1.30	ISO 2811
viii)	Non-volatile matter, %, m/m, min.	50	ISO 3251
ix)	Flow times, ISO cup No. 4	135 ± 5 All partner states to carry out research to have Data to support lowing of this figure	ISO 2431
x)	Total lead content, ppm, max.	90	ISO 6503
xi)	Heat resistance	To pass the test	ISO 3248
xii)	Flash point, °C, min.	32	ISO 1523
xiii)	Accelerated weathering test, min.	3 years equivalent	ISO 21207

5 Storage stability

The solvent-borne air-dried roofing 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 solvent-borne air-dried roofing 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 paints shall be packaged in containers that are legibly and indelibly marked with the following information: the name of the product as "solvent-borne air-dried roofing paints";

a) manufacturer's name and physical addresses /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)

Chemical resistance test

A.1 General

This method is based on the immersion method and the test is carried out at 25 ºC ± 2 ºC. Test pieces are preferably individually immersed in the test liquid, particularly when using liquids of high electrical conductivity in which electrolytic effects could be of importance. In certain cases, however, where the nature of the test liquid is unaffected by the test pieces, it may be convenient to immerse several pieces in a single tank.

The test pieces shall be at least 30 mm from the sides and bottom of the tank and shall be at least 30 mm apart. The test pieces shall be electrically insulated from their supports.

A.2 Apparatus

A.2.1 **Panels**, mild steel panels of dimensions 150 mm ×100 mm × 3 mm prepared and solvent cleaned

A.2.2 Tank, constructed from corrosion resistant materials. A suitable beaker can also be used if several samples are not tested together.

A.2.2 Supports for test specimen, construction of non-conductive materials to hold the specimen 30 mm apart and 30 mm from the bottom and sidewalls of the tank

A.3 Reagents

A.3.1 **Sulphuric acid,** 10 %, v/v.

A.3.2 **Distilled water**

A.4 Preparation and coating of panels

Prepare and clean the panels as in A.1.1. After preparation paint both faces of the panel and protect the edges. To paint the faces, apply the paint at 120 µm wet film thickness. This will dry to about 60 µm film thickness. Dry the coated panels at 25 °C and 65 % ± 2 % relative humidity for seven days.

A.5 Procedure

A.5.1 Place a sufficient amount of reagent in a suitable vessel (tank) to partially immerse the test piece to 100 mm length. Immerse the test piece in an approximately vertical position using suitable supports. Immerse for 48 h.

A.5.2 Cover the container for the duration of the test to minimize loss of reagent by evaporation or splashing.

A.5.3 At the end of the specified immersion period, wash the test piece thoroughly with running water. Remove any residue liquid from the surface by dabbing with a suitable absorbent cloth or paper and examine the test piece immediately for any signs of deterioration, colour change, blistering, etc. Remove the coating from the panel and examine for any signs of attack.

A.6 Results

Solvent-borne Air-dried roofing paint shall be resistant to 10 % v/v H_2SO_4 after 24 h.

Bibliography

EAS 852:2016, Air-dried roofing paint — Specification