DEAS 848:2023

ICS 87.040

DRAFT EAST AFRICAN STANDARD

Water-thinned priming paints for wood — Specification

EAST AFRICAN COMMUNITY

Second Edition 2023

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, varnishes 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.

This second edition cancels and replaces the first edition (EAS 848: 2016) and amendment 1: 2019 which has been technically revised.

Water-thinned priming paints for wood — Specification

1 Scope

This Draft East African Standard specifies requirements, sampling and test methods for water-thinned priming paints for wood

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 4618, *Paints and varnishes — Terms and definitions*

ISO 6503, *Paints and varnishes — Determination of total lead — Flame atomic absorption spectrometric 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 tests— Part 3: Surface-drying test using ballotini

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

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

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

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

ISO 16474 (all parts) Paints and varnishes — Methods of exposure to laboratory light sources

3 Terms and definitions

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

glazing putty
adhesive material used to bond the bars to the wood and keep it solid'

4 Requirements

4.1 General requirements

4.1.1 Composition

The paint shall be based on a pigmented aqueous emulsion of a suitable polymer. Neither the emulsion nor the paint based on it shall contain any added plasticizer.

4.1.2 Compatibility with glazing putty

When the paint is used to prime glazing bars, the putty shall adhere adequately to the dried paint film, and the paint shall not adversely affect the drying properties of the putty. To assess this, the condition of the putty after drying for 40 hours, as tested in accordance with in Annex A, shall meet the following criteria:

a) It shall be suitable for painting with a high-quality alkyd or alkyd-resinous white undercoat, without experiencing lifting or surface disturbance.

b) The coat of white undercoat, as applied in (a), shall dry within 24 hours and should not display any discoloration, wrinkling, grittiness, or other defects.

4.1.3 Storage stability

The paint when stored in the original sealed container at room temperature, shall meet all the requirements specified in this standard for a period of one year from the date of manufacture.

4.1.4 Condition of paint in the container

The paint shall have no irritating or offensive odour It shall be free from lumps, skins and the condition of the material shall be such that settling, if any, may be easily incorporated on stirring

4.1.5 Application properties

When the paint is suitably applied, the resulting paint film shall not show pigment flocculation, coarseness or other undesirable characteristics.

4.2 Specific requirements

The paint shall comply with the requirements specified in Table 1, when tested in accordance with the methods therein

Table 1 — Specific requirements for water-thinned priming paints for wood

S/N	Characteristic	Requirement	Test method
i.	Non-volatile matter content, % (m/m), min-	50	ISO 3251
ii.	Volatile organic compounds, max matter % m/m	[0.5]	**ISO 11890-2**
iii.	Hard-drying time at film thickness of 50 µm – 60 µm, minutes, max.	75	ISO 9117
iv.	Blister resistance, % of blisters of area covered under test, max.	5	Annex B
v.	Dry opacity, %, min.	90	ISO 6504-3
vi.	Resistance to natural weathering, % deteriorated area after six months exposure, max.	5	Annex C
vii.	Resistance to accelerated weathering, h, max.	300	ISO 16474
viii.	Total Lead content, ppm, max.	90	ISO 6503

5 Packaging

The paint shall be packaged in a suitable container that prevents it from deterioration during storage, transportation and normal handling.

6 Labelling

6.1 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.

6.2 The paints shall be packaged in containers that are legibly and indelibly marked with the following information:

a) name of the product as ” Water-thinned priming paints for wood”;

b) manufacturer’s name and physical address and/or registered trademark;

c) indication of colour/colour code;

d) date of manufacture;

e) net content;

f) batch/code number;

g) country of origin;

h) best before date; and

i) instructions for use, safety and disposal

7 Sampling

Sampling shall be done in accordance with ISO 15528.

Annex A
(normative)

Test for compatibility with glazing putty

A.1 Materials and apparatus

A.1.1 Suitable putty knife

A.1.2 Wood moulding, length approximately 250 mm, with a 12.5 mm x12.5 mm rebate down its length, made from a piece of solid wood which is free from knots

A.1.3 Linseed oil putty

A.2 Procedure

A.2.1 Apply a coat of the paint to the wood moulding and allow it to dry for seven days. Then with a spatula, fill the moulding with putty and smooth off with one stroke of the putty knife to a clean surface so that a cross section of the putty presents a triangular area.

A.2.2 After allowing the putty to dry for 48 h at a temperature of 25 ºC ± 2 ºC and a relative humidity of 65 % ± 2 %, coat the surface of the putty with a good quality alkyd or oleo-resinous white under-coat by means of a brush and allow to dry for 24 h under the same conditions. Observe if there is any lifting or disturbance of the putty surface during coating.

A.2.3 After the 24-h drying period, determine whether the white under-coat is surface-dry by carrying out the test described in accordance with ISO 9117-3 and also examine the undercoat film for discoloration, wrinkling, grittiness or other defects

A.3 Results

The undercoat film shall show no discoloration, wrinkling, grittiness or any other defects

Annex B
(normative)

Test for blister resistance

B.1 Materials and apparatus

B.1.1 **Blister box**, as shown in Figure B.1. The box is constructed of 20-mm thick wood and has two pieces of 12.5 mm aluminium angle fixed across the top to support the test panels.

B.1.2 **Two panels of pine**, 150 mm x 100 mm x 20 mm, rubbed smooth with No. 0 glass paper

B.1.3 **Magnifying lens,** X3

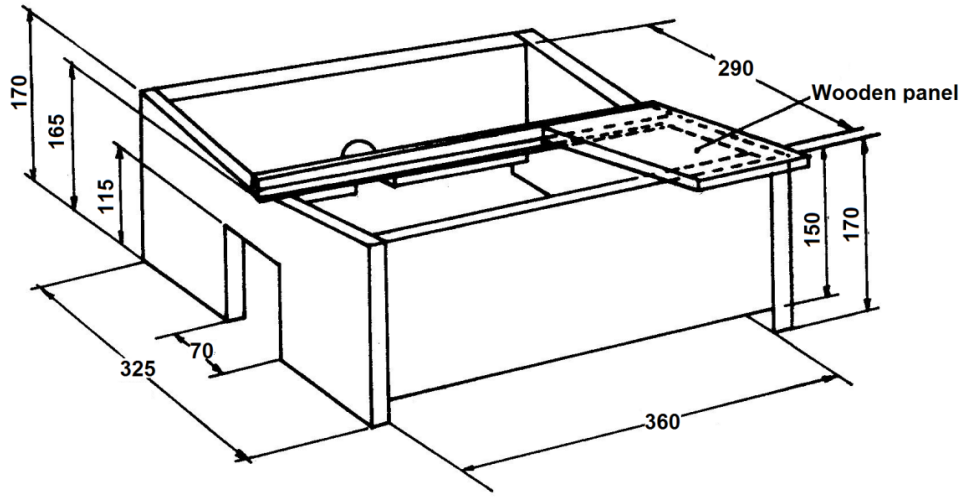

Figure B.1 — Example of a blister box

B.2 Procedure

B.2.1 Coat one face and all edges of duplicate panels of the soft wood with the paint and allow them to dry for 2 h at a temperature of 25 ºC ± 2 ºC and a relative humidity of 65 % ± 2 %. Then overpaint the primed surface of each panel with a good quality alkyd or oleo-resinous undercoat and allow to dry for 16 h - 24 h. Apply a coat of alkyd gloss finish paint and allow to dry at a temperature of 25 ºC ± 2 ºC and a relative humidity of 65 % ± 2 % for seven days.

B.2.2 After this period, place the blister box over a water-bath (an electrically heated bath is very suitable) controlled at a temperature of 65 ºC ± 2 ºC and place the panels on the box with the face which is unpainted downwards for a period of 50 h. Unused spaces of the box shall be covered with panels.

B.2.3 After this period, remove the panels and examine the painted faces with X3 magnification for blistering and cracking.

B3 Results

The painted panels shall have no blistering and cracking.

Annex C
(normative)

Method of test for resistance to natural weathering

C.1 Apparatus

C.1.1 Cypress wood, with a water content not exceeding 13 % and free from fungal infection

C.1.2 Panels, of dimensions 304 mm x 95 mm x 20 mm cut from cypress wood with a straight sided groove, 254 mm x 15 mm x 6 mm deep cut in the centre of the face on the outer side of the panels

C.2 Procedure

Paint all sides and edges of triplicate panels with one coat of the paint and then expose the panels horizontally, grooved face upper most, in an open position for the specified period. Then examine the panels using a X10 magnification for signs of deterioration of the film for example, cracking, flaking or chalking.

Failures resulting from obvious defects in the substrate shall be ignored.

C.3 Results

The painted film on the panel shall show no signs of deterioration

Bibliography

EAS 848:2016, *Water-thinned priming paints for wood — Specification*