

DRAFT TANZANIA STANDARD

**Paints and varnishes — Daylight 45°, 0°
luminous directional reflectance of surface
coatings and pigments**

TANZANIA BUREAU OF STANDARDS

1st edition

Draft for Stakeholders' Comment

0. FOREWORD

0.1. This Tanzania Draft Standard was prepared by the Technical Committee on *Paints and varnishes*. During the preparation of this standard reference was made to the following South African National Standard as published by SABS Standards Division:

SANS 5137:2005, *Paints and varnishes — Daylight 45°, 0° luminous directional reflectance of surface coatings and pigments*.

0.2. For the purpose of deciding whether a particular requirement of this standard is complied with, the final value observed or calculated expressing the result(s) of a test or analysis shall, be rounded off in accordance with TZS 4 (see clause 2). The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

This Draft Tanzania Standard specifies a method for the determination of daylight 45°, 0° luminous directional reflectance of surface coatings (paint film), pigments and extenders.

2. Normative references

The following normative references are indispensable for the application of this standard. For dated references, only the edition cited applies. For undated references, the latest edition of the normative references (including amendments) applies.

ASTM E 259, *Standard practice for preparation of pressed powder white reflectance factor transfer standards for hemispherical and bi-directional geometries*.

ASTM E 1347, *Standard test method for color and color-difference measurement by tristimulus colorimetry*.

ISO 3270, *Paints and varnishes and their raw materials – Temperatures and humidities for conditioning and testing*.

3. Apparatus

3.1. Reflectometer, that complies with a bi-directional colorimeter described and operated in accordance with ASTM E 1347.

3.2. Reflectance standards, in accordance with ASTM E 1347.

3.3. White standard, that consists of magnesium oxide prepared in accordance with ASTM E 259. It is assigned a value of 100.

3.4. Panels, unless otherwise specified, a glass panel of size at least 150 mm × 70 mm.

3.5. Tray, a metal tray for powders and extenders.

4. Preparation of test surfaces

4.1. Paints and other liquid opaque coatings

Apply two coats of the well-mixed sample on the panel at 24 h intervals (unless otherwise specified) by using suitable applicator blade. Allow it to dry and age under standard conditions for the specified periods.

4.2. Powders and extenders

Fill the tray with the powder or extender, cover with a highly polished chromium-plated metal plate, and apply a pressure of 550 kPa (maximum) in order to obtain a very smooth and uniform surface.

5. Procedure

5.1. Calibrate the instrument in accordance with ASTM E 1347.

5.2. Measure the reflectance of the test surface in accordance with ASTM E 1347.

6. Test report

The test report shall include the following information:

- a) all details necessary to identify the product tested;
- b) a reference to this standard;
- c) the results of the test in terms of the stated requirements;
- d) any deviation from the test method specified; and
- e) the date of the test.

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