

DRAFT TANZANIA STANDARD

**General purpose thinner for synthetic paints and varnishes —
Specification**

TANZANIA BUREAU OF STANDARDS

Foreword

This Draft Tanzania Standard is being prepared by the Paints and Varnishes Technical Committee under the supervision of Chemicals Divisional Standards Committee and it is in accordance with the procedures of the Bureau.

During the preparation of this standard reference was made to Indian Standard IS 14314: 1996 (Reaffirmed - 2012) *Thinner, general purpose, for synthetic paints and varnishes – specification*, published by Bureau of Indian Standards

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.

Draft Tanzania Standard - For Comment Only

General purpose thinner for synthetic paints and varnishes — Specification

1. Scope

This Draft Tanzania Standard specifies requirements, sampling and test methods for general purpose thinner, for synthetic paints and varnishes.

2. Normative references

The following referenced documents are indispensable for the application 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.

ASTM D 86, *Standard test method for distillation of petroleum products at atmospheric pressure*

ASTM D 1613, *Standard test method for acidity in volatile solvents and chemical intermediates used in paints, varnish, lacquer and related products*

ASTM D 5580, *Standard test method for determination of Benzene, Toluene, Ethylbenzene, p/m-Xylene, o-Xylene, C9 and heavier aromatics, and total aromatics in finished gasoline by gas chromatography*

ASTM D 5769, *Standard test method for determination of Benzene, Toluene, and total aromatics in finished gasolines by gas chromatography/mass spectrometry*

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

TZS 1887/ISO 1523, *Determination of flash point — Closed cup equilibrium method*

TZS 918/ISO 2811-1 *Paints and varnishes — Determination of density— Part 1: Pyknometer method*

TZS 603/ISO 3668, *Paints and varnishes — Visual comparison of the colour of paints*

TZS 1890/ISO 15528, *Paints, varnishes and raw materials for paints and varnishes — Sampling*

ISO 16000-28, *Indoor air — Part 28, Determination of odour emissions from building products using test chambers*

TZS 649/ISO 4317, *Surface-active agents and detergents — Determination of water content — Karl Fischer methods*

TZS 59 *Water for analytical laboratory use – Specification and test method*

3. Terms and definitions

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

4. Requirements

4.1 General requirements

4.1.1 The thinner shall consist of predominantly an admixture of aliphatic and aromatic hydrocarbons derived from petroleum origin or coal tar distillation product and may also contain additives to improve certain characteristics like flow, levelling, odour and gloss.

4.1.2 The thinner shall be clear and free from sediment and suspended matters.

4.1.3 It shall not show the tendency of breakdown, coagulation or precipitation of the paint or varnish.

4.2 Specific requirements

The thinner shall comply with specific requirements given in Table 1 Table 1 — Specific requirements for thinners

S No.	Parameter	Requirement	Test method
(i)	Colour	Not darker than a freshly prepared solution of 0.003 g $K_2Cr_2O_7$ in 1 L of water	ISO 3668
(ii)	Odour	Not emit appreciable residual odour after drying on Whatman filter paper No. 42 after 1 h	ISO 16000-28
(iii)	Toxicity	Free from toxic solvents like benzene and chlorinated hydrocarbons	ASTM D 5580 and ASTM D 5769,
(iv)	Spot test	Complete evaporation, without leaving a stain, when visually examined after 1 h.	Visual examination, when 1 to 3 drops of thinner applied on a Whatman filter paper No. 42
(v)	Relative density at 27 °C, <i>min.</i>	0.76	TZS 918
(vi)	Acidity (%), <i>max.</i>	0.005	ASTM D 1613
(vii)	Distillation range, °C	120 - 240	ASTM D 86
(viii)	Residue on evaporation mg/100 mL, <i>max.</i>	5	ASTM D 86
(ix)	Total hydrocarbon content, % <i>min.</i>	95	ASTM D 5580-13
(x)	Flash point, °C, <i>min.</i>	24	ISO 1523
(xi)	Water content % max	0.5	ISO 4317

5. Packaging, labelling and marking

5.1 Packaging

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

5.2 Labelling and marking

The labelling or marking shall be either in English, Kiswahili or in combination as agreed between the manufacturer and the supplier with the following information:

- a) the name of the product
- b) manufacturer's name
- c) registered trade mark if any;
- d) net content;
- e) batch/code number;
- f) cautionary statement/symbols with the words: "Inflammable liquid";
- g) country of origin;
- h) date of manufacture and best before date;
- i) instructions for use, storage and disposal and
- j) safety precautions.

6. Sampling

Sampling shall be done in accordance with TZS 1890.

7. Quality of reagents

Analytical grade reagents and water for analytical use as specified by TZS 59 shall be used for the appropriate tests.

Bibliography

TZS 1901:2016/EAS 854: 2015, *Thinner for nitrocellulose resin-based paints and lacquers — Specification*

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