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DRAFT TANZANIA STANDARD

Rust remover — Specification

For Stakeholders Comments Only

TANZANIA BUREAU OF STANDARDS

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Contents

Page

Foreword ..... **vi**

1 Scope **1**

2 Conformance **1**

3 Normative references **2**

4 Terms and definitions **3**

5 Symbols (and abbreviated terms) **3**

6 Clause **4**
6.1 Subclause (level 1) **4**
6.1.1 Subclause (level 2) **4**
6.1.2 Subclause (level 2) **5**
6.2 Subclause (level 1) **5**

7 Clause **5**

8 Special **10**

Annex A (normative) Annex title **11**
A.1 General **11**
A.2 Clause **11**
A.2.1 Subclause (level 1) **11**
A.2.2 Subclause (level 1) **12**
A.3 Clause **12**

Annex B (informative) Which styles correspond to which element — Quick reference guide **13**

Bibliography 16

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Foreword

This Tanzania Standard was published under the authority of the Board of Director of Tanzania Bureau of Standards.

Tanzania Bureau of Standards (TBS) is the statutory national standards body for Tanzania established by the Standards Act Cap. 130.

Tanzania Standards are developed through Technical Committees that are representative of key stakeholders including government, academia, consumer groups, private sector and other interested parties. The Technical Committees work under the supervision of Divisional (sectoral) Committees. The Standards are developed in accordance with the Guide and Procedure for Development of Tanzania Standards and TZS 0, Guide for presentation of Tanzania Standards.

Tanzania Standards are subject to review, to keep pace with science and technological advances. Users of the Tanzania Standards are therefore expected to ensure that they always have the latest versions of the standards they are implementing.

This Tanzania Standard was developed under the supervision of the Chemical Divisional Standards Committee CDC. The Technical Committee responsible for the standard is CDC 7 Paints and Varnish Technical Committee.

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Rust remover — Specification

1 Scope

This Standard specifies requirements, sampling and test methods for liquid rust remover.

This Standard does not apply to abrasive rust removers, mechanical rust-removal equipment, rust-converting coatings or corrosion inhibitors intended primarily to prevent rust formation.

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.

TZS 1445 ISO 3165*, Sampling of chemical products for industrial use — Safety in sampling*

TZS 646 ISO 4316, *Surface active agents — Determination of pH of aqueous solutions — Potentiometric method.*

3 Terms and definitions

For the purposes of this document, the following terms and definitions 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

— IEC Electropedia: available at http://www.electropedia.org/

3.1

rust remover

formulated solution that remove rust

3.2

rust

corrosion products formed predominantly on metal (iron and steel alloys) surfaces as a result of reaction with the oxygen and moisture

4 Requirement

4.1 General requirements

4.1.1 Where the product is intended for use before and after painting or coating, the cleaned surface shall not affect adhesion of the subsequently applied coating.

4.1.2 After rinsing according to the manufacturer's instructions, the treated metal surface shall be free from rust

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4.1.3 Rust remover shall not result into attacking or pitting of the underlying metal.

4.1.4 The rust remover shall be environmentally safe.

4.1.5 The rust remover shall be **non-flammable**, and **soluble in water**.

4.1.6 The rust remover shall be clear, odourless solution, homogeneous in appearance, and free from visible sediment and foreign matter.

Note. colour may be added as agreed between manufacture and user.

4.2 Specific requirements

Rust remover shall comply with the specific requirements given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 Specific requirements of rust remover

S/N	Parameter	Requirement	Test Method
i.	Total acidity, %, w/ w, min.	10	Annex A
iii.	pH at room temperature	1.0 - 3.0	TZS 646

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5 Packaging

Rust remover shall be packaged in suitable, well-sealed containers that shall protect the contents and shall not cause any contamination or react with the product.

6 Labelling

Each package shall be legibly and indelibly labelled in English and/or Kiswahili with the following information:

a) name of the product as “rust remover”

b) manufacturer's name and physical address;

c) net content;

d) batch or lot number;

e) date of manufacture;

f) best before date or expiry date

g) instructions for use;

h) storage and disposal instructions

i) cautionary words and symbols:

7 Sampling

Sampling shall be done in accordance with TZS 1445 ISO 3165**.**

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Annex F
(normative)

Determination of acidity

Accurately weigh 10 g of sample in a 250-mL Erlenmeyer flask and add 25 mL of distilled water. Add approximately 15 mL of 5 % aqueous calcium acetate solution and warm contents to 50 °C. Cool and filter into beaker.

Carefully rinse the Erlenmeyer flask precipitate with 3 to 4 aliquots of distilled water collecting all rinsing with the filtrate. Titrate the filtrate with standard 1 mol/L NaOH solution.

Calculate as follows:

$$\text{Percent acidity} = \frac{\text{Concentration of NaOH (mol/L) x mL of NaOH x } C}{\text{Mass of sample}}$$

where

C = 3.647 for HCl; or
C = 3.132 for H_3PO_4

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