DEAS 1142: 2023

ICS 71.100.40

DRAFT EAST AFRICAN STANDARD

Liquid glass cleaner — Specification

EAST AFRICAN COMMUNITY

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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.

In order to achieve this objective, the Community established an East African Standards Committee mandated to develop and issue East African Standards.

The Committee is composed of representatives of the National Standards Bodies in Partner States, together with the representatives from the private sectors and consumer organizations. 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 procedures of the Community.

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.

DEAS 1142:2023 was prepared by the Technical Committee Technical Committee EASC/TC 074, *Surface active agents*

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.

Liquid glass cleaner — Specification

1 Scope

This Draft East African Standard prescribes the requirements, sampling and test methods for liquid glass cleaner.

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-56, *Standard Test Method for Flash Point by Tag Closed Cup Tester*

EAS 814, *Determination of biodegradability of surfactants —Test method*

ISO 862, *Surface active agents — Vocabulary*

ISO 4316, *Surface active agents - Determination of pH of aqueous solutions - Potentiometric method*

ISO 4317, *Surface-active agents and detergents — Determination of water content — Karl Fischer method*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 862 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

biodegradable
capable of decomposing by microorganisms under natural conditions (aerobic and/or anaerobic)

4 Requirements

4.1 General requirements

4.1.1 The liquid glass cleaner shall be:

a) clear and homogenous;
b) stable under ambient conditions of storage and handling;
c) capable for smooth, uniform and easy application; and
d) free from toxic ingredients

4.1.2 The liquid glass cleaner shall not:

a) impart stain to glass surfaces; and
b) have injurious effect on the personnel when used for its intended purpose.

4.1.3 The liquid glass cleaner may be coloured.

4.2 Specific requirements

4.2.1 The liquid glass cleaner shall comply with the specific requirements given in Table 1 when tested in accordance with the test methods specified therein.

Table 1 — Specific requirements for liquid glass cleaner

S/No.	Parameter	Requirement	Test method
i)	Cleaning efficiency	To pass test	Annex A
ii)	Corrosion or discolouration	To pass test	Annex B
iii)	Water content, % (m/m), max	88.0	ISO 4317
iv)	Flash point, ºC, min	27.0	ASTM D56
v)	pH	6.5 – 10.0	ISO 4316
vi)	Non-volatile matters content, % (m/m), max	1.0	Annex C
vii)	Biodegradability	To pass test	EAS 814

5 Packaging

The liquid glass cleaner shall be packaged in a suitable, well-closed container to protect the integrity of the product during transportation, handling and storage.

6 Labelling

Each container and bulk package shall be securely closed, legibly and indelibly labelled in English and/or any other official language (French, Kiswahili, etc) used in the importing East African Partner State with the following information:

a) name of the product as "glass cleaner";

b) manufacturer's name and physical address;

c) batch or code number;

d) net content;

e) list of ingredients

f) country of origin;

g) instructions for storage, use and disposal;

h) date of manufacture”; and

i) best before date.

j) safety precautions/warning

NOTE The name, physical address of the distributor/supplier and trade mark may be added.

7 Sampling

Sampling shall be done in accordance with Annex D.

Annex A
(normative)

Determination of cleaning efficiency

A.1 Apparatus

A.1.1 Glass panel

A.1.2 Pulverized clay

A.1.3 Carbon tetrachloride - containing 10 % mineral oil

A.2 Procedure

A.2.1 To test the cleaning and polishing property of the glass cleaner, it is recommended that both sides of the glass panel should be suitably prepared for application of the cleaner.

A.2.2 Take two panels of clear, plate glass 150 mm x 75 mm x 1.5 mm. Dust them with pulverized clay until a thin uniform coating is obtained. Spray a mist coat of water -on each panel to wet the clay and allow to dry for 6 hours. Apply a similar coat of clay on the other side of the glass panels. Further apply a mist coat of carbon tetrachloride containing 10 % mineral oil on both sides of the panels. Allow the panels to air dry for 24 h. To one panel, apply the sample by spreading over the surface with a rag and immediately wipe off and polish with a clean cloth. Similarly treat the other side of the panel.

A.2.3 Using the same conditions of test, clean the other panel with the approved sample and compare the two panels for cleaning properties. The efficiency of the sample shall not be inferior to that of the approved sample.

Annex B

(normative)

Corrosion or discolouration

B.1 Apparatus

B.1.1 Aluminium panel - 75 mm x 50 mm x 1 mm

B.1.2 Watch glass

B.1.3 Distilled water

B.2 Procedure

Place approximately 3 ml of the sample/cleaner on a cleaned, grease free surface of 75 mm x 50 mm x 1 mm aluminium panel and cover with a watch glass.

At the end of 6 hours, remove the watch glass, rinse panel with distilled water and air dry at room temperature. Inspect the panel for any attack or discolouration.

Annex C

(normative)

Determination of Non-volatile matters content

C.1 ApparatusC.1.1 Glass beaker

C.1.2 Steam bath

C.1.3 Oven - 100°C to 105°C

C.2 Procedure

Weigh accurately a 50 g sample of the cleaner into a tared glass beaker and heat on a steam bath to dryness. Place the beaker in an oven at 100°C to 105°C and dry to constant mass. (If decomposition or discolouration of the solids occurs, carry out the drying in a vacuum oven at 45°C to 50°C.) Report the mass of the residue as a percentage by mass of the cleaner.

C.3 Calculation

Non-volatile matter, percent by mass = $\frac{B-C}{A-C}$ x 100

where

A = mass in g of the sample taken for test and beaker,
B = mass in g of the beaker and solids after drying, and
C = mass in g of the beaker.

Annex D

(normative)

Sampling

D.1 General requirement of sampling

In drawing, preparing, storing and handling of test samples, the following precautions and directions shall be observed.

D.1.1 Samples shall be taken in a place not exposed to dust or soot.

D.1.2 The sampling instrument shall be clean and dry when used.

D.1.3 Precautions shall be taken to protect the samples, the material being sampled, the sampling instrument and the containers for samples from adventitious contamination.

D.1.4 Samples shall be placed in clean, dry and air-tight glass containers or other suitable containers on which the material has no action.

D.1.5 The sample containers shall be of such size that they are almost completely filled up by the sample.

D.1.6 Each sample container shall be sealed air-tight after filling and marked with full details of sampling, the date of sampling and the month and year of manufacture of the material.

D.1.7 Samples shall be stored in such a manner that the temperature of the material does not vary unduly from the normal temperature.

D.2 Scale of sampling

D.2.1 For determining conformity of a consignment to this specification, sample shall be selected so as to be representative of the consignment. Samples drawn in compliance with an agreement between the purchaser and the manufacturer shall be held to be representative of the consignment. In case of dispute, the following scheme is recommended to serve as guide.

D.2.2 *Lot* - All the containers in a single consignment of the material drawn from the same batch of manufacture and of the same size shall constitute a lot. If a consignment is declared or known to consist of different batches of manufacture or different sizes of containers, the containers belonging to the same batch and size shall be grouped together and each group shall constitute a separate lot. Samples shall be tested for each lot for ascertaining conformity of the material to the requirements of this specification.

D.2.3 The number of containers (*n*) to be chosen from a lot shall depend upon the size of the lot (*N*) and shall be in accordance with Table D.1.

Table D.1: Number of containers to be selected

Lot size	Number of containers to be selected
N	***n***
Up to 500	10
501 to 1 000	15
1 001 and above	20

D.2.4 These containers shall be chosen at random from the lot and in order to ensure the randomness of selection, a random number table shall be used. In case such tables are not available, the following procedure shall be adopted:

Arrange all the containers in the lot in a systematic manner and starting from any container, count them as 1, 2, 3, . . . _., up to r and so on, where r is the integral part of *N/n*. Every r^{th} container thus counted shall be withdrawn to give sample for test.

D.3 Preparation of composite sample

Shake well each of the containers selected according to D.2.3 and pour out quantity of liquid such that the total quantity obtained from all the containers provides material sufficient for all the tests (about 500 g). Thoroughly mix the material drawn from the selected containers so as to form composite sample.

Bibliography

[1] TZS 2262:2018*, Glass cleaner, liquid - Specification*

[2] RS 283: 2017, *Liquid glass cleaner – Specification*

[3] KS 1455: 1999, *Specification for glass cleaner - Part 1: Liquid glass cleaner*