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DRAFT UGANDA STANDARD

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Shoe polish — Specification

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Foreword

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The committee responsible for this document is Technical Committee UNBS/TC 5, *Chemical and Environment.*

This second edition cancels and replaces the first edition (US 573:2006), which has been technically revised.

Shoe polish — Specification

1 Scope

This Draft Uganda standard specifies requirements, methods of sampling and test methods for shoe polish in form of paste, liquid and cream suitable for the general application to leather footwear.

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.

DUS 1689, standard test method for the distillation of volatile organic liquids.

DUS 1690**,** *Standard Test Method for Determination of the Ash Content of adhesives*

DUS ISO 3679, Determination of flash no flash and flash point – Rapid equilibrium closed-cup method

DUS ISO 4625-1, Binders for paints and varnishes — Determination of softening point — Part 1: Ring-and-ball method

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

3 Terms and definitions

For the purposes of this standard, the following terms and definitions shall apply.

3.1
flash point
lowest temperature of the test portion, corrected to a barometric pressure of 101,3 kPa, at which application of an ignition source causes the vapour of the test portion to ignite and the flame to propagate across the surface of the liquid under the specified conditions of test

3.2
lot
quantity of polish from the same batch and from one manufacturer that is submitted at any one time for inspection and testing

3.3
batch
material from a single mix

3.4
ambient Temperature
temperature between 21 °C and 38 °C

3.5
distillation range
range of temperature within which a specific portion distills

3.6
dry point
temperature indicated at the instant the last drop of the liquid evaporates from the lowest point in the distillation flask, disregarding any liquid on the side of the flask

3.7
initial boiling point
temperature indicated by the distillation thermometer at the instant the first drop of the condensate leaves the condenser tube

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

4 Requirements

4.1 General requirements

4.1.1 Odour

The polish shall not have an objectional odour.

4.1.2 Colour

The polish shall be manufactured in convectional colours like black, tan (light brown), dark tan (dark brown) or neutral, closely matching the colour of the leather footwear or in any other colour as agreed to between the purchaser and the manufacturer.

4.1.3 Consistency

The shoe polish shall be presented as prescribed in clauses 4.1.3.1, 4.1.3.2 and 4.1.3.3

4.1.3.1 Cream

The material shall be a smooth, homogeneous cream-like pasty mass. It shall have no tendency for the separation of solvents or crystallization. It shall also be free from gritty material when tested in accordance with Annex A

4.1.3.2 Paste

The material shall be smooth, homogenous semi-solid mass, free from gritty material. It shall not flow at ordinary temperatures or show appreciable shrinkage at edges .It shall have no tendency for the separation of solvents or crystallization of the constituent materials when tested in accordance with Annex-A

4.1.3.3 Liquid

The material shall be easily pourable, free flowing, homogenous liquid free from any grit and sedimentation it shall have a tendency of separation or crystallization of the constituent material when tested in accordance with Annex A.

4.1.4 Applicability

4.1.4.1 Cream

When applied by means of a brush or clean cloth to a smooth upper leather surface, the cream shall spread easily and evenly and shall give with minimum of buffing a reasonably glossy surface free from any greasiness. In case an approved sample is available, polish a similar piece of leather and match the gloss obtained on the test sample with that of the approved sample.

The film of polish after spreading with the brush or the cloth shall satisfy the test prescribed in Annex B. The cream shall remove the ingrained dirt from the polished leather footwear.

4.1.4.2 Paste

The polish shall not crumble or dry too rapidly and shall produce a non-tacky polished surface when tested as prescribed in Annex B

The polish shall be amenable to smooth spreading on the upper shoe leather and the gloss shall appear on gentle rubbing with a brush or polishing cloth.

4.1.4.3 Liquid

The polish shall be spread evenly on the surface without any mottling. The applied film shall not show any tendency to spreading while still being wet when tested in accordance with Annex B

4.1.5 Toxicity

The polish shall have no adverse effects on the human health and environment when it is used for its intended purpose.

4.2 Specific requirements

4.2.1 Colour of Water Extract

Shoe paste—When 1 g of polish is stirred with 100 ml of water maintained at 75°C ± 2°C, the aqueous extract will not have a faint coloration.

4.2.2 Oozing Test

Shoe polish — the container of the polish shall be tested for oozing as prescribed in Annex E

4.2.3 Resistance to Heat and Cold

Shoe cream — the polish shall pass the test for resistance to heat and cold when tested as prescribed in Annex C.

4.2.4 Other requirements

The polish shall also comply with the requirements given in Table 1

Table 1 — Requirements for shoe polish

Characteristic	Requirement			Test method
	Paste	liquid	cream	
Softening point of non-volatile matter, °C Min.	60	-	-	DUS ISO 4625-1
Ash content of non-volatile matter percent by mass, Max.	1.5	1.0	1.5	DUS 1690
Distillation range of volatile portion, °C	123 - 240	-	-	DUS 1689
Flash point of volatile portion, °C Min.	3 0	-	30	DUS ISO 3679
Non-volatile matter, percent by mass,	20 - 35	1.5 (max)	20 - 35	US ISO 3251
pH of water extract	6.5 to 9.0 -	-	6.5 to 9.0	Annex E
pH of polish	-	6.5 - 9.0	-	

4.3 Stability in storage

The polish manufactured shall conform to the requirements thereof for one year from the date of manufacture when stored in its original container under cover at ambient temperature.

4.4 Net content

The size of the containers shall be according to the weights and measures act.

5 packaging and labelling

5.1 Packaging

The container (including the closure) in which the polish is packaged shall not interact chemically or physically with the polish and shall be strong enough to protect the polish adequately during normal handling, transportation and storage.

5.1.1 Paste

5.1.1.1 The polish shall be supplied in sound, clean and dry, rustproof metal containers, preferably press lid type. The container shall be fitted with a lid which may be closed or opened without much difficulty and which shall prevent evaporation of the solvent and the ingress of dirt.

5.1.1.2 When filled, the surface of the polish in the container may be covered with aluminium foil or waxed paper, the size of which shall be slightly bigger than the diameter of the container so that the foil overlaps the container and ensures tight fit when the lid is in position.

5.1.2 Cream

The shoe cream shall be supplied in wide-mouthed containers or collapsible tubes; both having caps which can be easily closed or opened and which prevent evaporation of solvent and ingress of dirt.

5.1.3 Liquid

The polish shall be supplied in sound, clean and dry plastic container, fitted with inbuilt applicator for easy application. The container shall be fitted with a cap which can be opened or closed without difficulty and which shall prevent evaporation of the solvent and the ingress of dirt.

5.2 Labelling

Each container and each bulk package shall bear in prominent, legible, and indelible marking the information required in terms of the Weights and Measures Act, and the following additional information:

a) name of the product;

b) manufacturer's name and physical address;

c) net mass of the material when packed;

d) type of the shoe polish;

e) colour of polish;

f) country of origin; and

g) month and year of manufacture and expiry.

6 Sampling

The method of drawing representation samples of the material and the criteria for conformity shall be as prescribed in Annex F.

Annex A
(normative)

Determination of consistency

A.1 paste

A.1.1 procedure

Maintain an original unopened container of polish at 10 °C ± 2 °C for two hours. Open the lid and examine as given in A.1.1.1 and A.1.1.2

A.1.1.1 No liquid shall separate from the semisolid mass.

A.1.1.2 The polish shall be soft and smooth to touch and capable of being taken up readily with a brush or cloth without crumbling.

A.1.2 Repeat the above series of examinations on another container maintained at a temperature of 45 °C ± 2 °C for two hours.

A.1.2.1 The material shall not flow or run if the container is tilted to an angle of 30°C

A.1.1.2 The separation of a few drops of the solvent shall not be considered a failure to meet this test, if they are re-absorbed when the paste is brought to ordinary temperature.

A.2 liquid

A.2.1 Maintain an original unopened container of polish at 10 °C ± 1 °C for two hours. Open the lid and examine as given in A.1.2.1 and A.1.2.2

A.2.1 1 No liquid shall separate from the homogenous liquid mass.

A.2.1 2 The polish shall easily be pourable and applicable.

A.2.2 Repeat the above series of examinations on another container maintained at a temperature of 45°C ± 1°C for two hours**.**

No solid shall separate from homogeneous liquid.

A.3 cream

A.3.1 Take a small amount of cream between fingers and rub. Presence of lumps or granules shall not be felt.

A.3.2 Take two clean, dry microscopic slips. Apply a uniform thin coat of the cream on the surface of one. Immediately place the other slip on it so that the wet polish layer is sandwiched. Pressing the two slips gently with fingers, cause them to move relative to each other a few rounds. Separate the slips by sliding off.

There shall not be any streaks in the polish coat.

Annex B
(normative)

Determination of applicability

B.1 procedure

B.1.1 Leather upper piece of size 150 mm × 15o mm of nearly the same colour as the polish shall be used for testing. The piece shall be smooth and finished (non-glossy) on the grain side.

B.1.2 Clean the grain surface with a cloth or brush to remove any adhering dust particles. Apply the polish in a thin film to the smooth grain surface using a rag or brush and examine after two to three minutes for the characteristics in B.1.2.1 and B.1.2.2

B.1.2.1 Examine the polished leather piece for gloss visually. In case an approved sample of polish is available, polish a similar piece of leather and match the gloss obtained with the test sample with that of the approved sample.

B.1.2.2 Place the leather piece (see B.1.2) which has been allowed to dry for 5 minutes on the pan of a suitable physical balance and counterpoise it with weight. Place an additional weight of 2.5 kg and press the polished surface with thumb till the two pans of the balance are counterpoised. Keep the thumb in this position for one minute and then slowly release.

B.2 There shall be no sign of stickness of the thumb. The thumb impression, if produced, shall be such that it shall be wiped out with a cloth or brush.

Annex C
(normative)

Test for resistance to heat and cold

C.1 General

The test is carried out on the shoe cream in its original containers One sample is maintained at 10 °C ± l°C and another sample at 45°C ± 2°C for 2 hours.

C.2 Resistance to Heat

The material maintained at 45°C ± 2°C shall pass the following requirements.

C.2.1 No disagreeable odour shall emit from the containers when opened.

C.2.2 No polish shall ooze out through the caps of containers.

C.2.3 No liquid shall separate from the cream and it shall not flow when the container is tilted. Separation of a few drops shall not be considered a failure if these are reabsorbed into the cream on cooling.

C.3 Resistance to Cold

The material kept at 10°C ± 1°C shall pass the following requirements.

C.3.1 The material shall spread on leather without crumbling when applied with a brush.

C.3.2 No liquid shall separate.

Annex D
(normative)

Determination of pH.

D.1 paste and cream

Add about 15 g of the material to 100 ml of water in a beaker. Heat with stirring to about 80°C till all the wax has melted. Allow to cool to a temperature of 27 °C ± 2 °C. Separate the aqueous layer from the wax cake and determine its pH-meter with a glass electrode

D.2 liquid polish

The pH of the liquid polish is determined using a pH meter with a glass electrode at 27 °C ± 2 °C. No extraction is required.

Annex E
(normative)

Oozing Test

Procedure

Place original and unopened container as tendered of polish over a sheet of clean, white filter paper and keep the assembly in an air-oven at 44°C ± 2°C for 2 hours. Examine the container for oozing of polish and filter paper for any stain caused by the oozed material.

Annex F
(normative)

Sampling

F.1 General

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

F.1.1 Samples shall be taken in a protected place not exposed to damp air, dust or soot.

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

F.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.

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

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

F.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.

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

F.2 Scale of sampling

F.2.1 Samples, to determine the conformity of a consignment of polish to this specification, shall be selected so as to be representative of the consignment and for this purpose the consignment should be made up of homogeneous lots.

F.2.2 Lot — All the containers in a single consignment of the material drawn from the same batch of manufacture and belonging to the same size shall constitute a lot. If a consignment is declared or known to consist of different batches of manufacture or of different sizes of containers, the containers belonging to the same batch and size shall be grouped together and each such group shall constitute a separate lot.

F.2.3 Samples shall be tested for each lot for ascertaining the conformity of the material to the requirements of this specification.

F.2.4 The number (n) of containers to be chosen from the lot shall depend upon the size of the lot and shall be in accordance with Table F.1.

TABLE F.1 — Numbers of containers to be selected for sampling

Lot size (N)	Number of containers to be chosen (n)
Up to 500	10
501 to 1000	15
1000 and above	20

F.2.5 These containers shall be chosen at random from the lot; in order to ensure the randomness of selection.

F.3 Preparation of composite test samples

F.3.1 For material supplied in bottles, withdraw sticks of material by means of borer such as cork borer from several different points across the surface of the bottles selected according to F.2.4. For material supplied in collapsible tubes, press out sticks of material. The total quantity drawn from each bottle or tube shall be approximately 10 g.

F.3.2 Thoroughly mix, if necessary by heating below 45°C, with a mechanical stirrer all the portions of the material drawn from different containers so as to form a composite test sample weighing not less than 100 g.

F.4 Number of tests and criterion for conformity

F.4.1 Test for consistency shall be done on the original containers from which no sample has been drawn.

F.4.2 Tests for the determination of other characteristics prescribed in this standard shall be conducted on the composite sample.

F.4.3 The lot shall be declared as conforming to this specification if the test results satisfy the corresponding requirement.

Bibliography

[1] EAS 462, *Shoe polish wax solvent paste type — Specification*

[2] IS 1746*, shoe polish, paste — specification*

[3] IS: 6350*; specification for shoe cream.*

[4] IS 12010*; specification for shoe polish, liquid.*

[5] SANS 257, *wax shoe polish*

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