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Third Edition

**Leather—Chromed crust bovine leather—
Specification**

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Kenya Industrial Research and Development Institute (KIRDI)

Kenya Association of Manufacturers (KAM)

Bata Shoes Company

Dedan Kimathi University of Technology (DeKUT)

Technical University of Kenya (TUK)

Environmental Institute of Kenya (EIK)

Kenya Leather Development Council (KLDC)

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Leather—Chromed crust bovine leather — Specification

Kenya Bureau of Standards, Popo Road, Off Mombasa Road,
P.O. Box 54974 - 00200, Nairobi, Kenya



+254 020 6948000, + 254 722202137, + 254 734600471



info@kebs.org



@KEBS_ke



kenya bureau of standards (kebs)

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Foreword

This Kenya Standard has been prepared by the Technical Committee on Leather and Leather Products under the guidance of the Standards Projects Committee, and it is in accordance with the procedures of the Kenya Bureau of Standards.

In the revision of this standard, new test methods have been included.

This standard cancel and replaces KS 675:2017, Specification for chromed crust bovine leather.

During the preparation of this standard, reference was made to the following documents:

ISO 5431:2013, Leather — Wet blue goat skins — Specification.

ISO 5432:2013, Leather — Wet blue sheep skins — Specification.

Acknowledgement is hereby made for the assistance derived from these sources.

Leather—Chromed crust bovine leather — Specification

1 Scope

This Kenya Standard specifies the requirements, test methods and sampling for chromed leather from bovine and goat/sheep. This standard is not applicable to leather made from other tanning methods other than chrome tanning.

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.

KS 819, *Glossary of terms relating to hides, skins and leather*

ISO 2418, *Leather—Chemical, physical, mechanical and fastness tests—
Position and preparation of specimens for testing*

KS ISO 2588, *Leather — Sampling — Number of items for a gross sample*

KS ISO 3376, *Leather — Determination of tensile strength and elongation*

KS ISO 3380, *Leather — Shrinkage temperature*

KS ISO 4045, *Leather — Determination of pH*

KS ISO 4047, *Leather — Determination of sulphated total ash and sulphated water-insoluble ash*

KS ISO 4048, *Leather — Chemical tests — Determination of matter soluble in dichloromethane and free acid content*

KS ISO 4684, *Leather — Chemical tests — Determination of volatile matter*

KS ISO 4098, *Leather — Chemical tests — Determination of water-soluble matter, water-soluble inorganic matter and water-soluble organic matter*

KS ISO 3377-2, *Leather — Physical and mechanical tests — Determination of tear load — Part 2: Double edge tear*

KS ISO 5398-3, *Leather — Chemical determination of chromic oxide content — Part 3: Quantification by atomic absorption spectrometry*

3 Terms and definitions

For purposes of this document, the terms and definitions given in KS 819 and the following shall apply.

3.1

chromed skin/hide

skin/hide tanned by chromium salts.

3.2

chromed crust leather

skin/hide that has been tanned with chromium salts, split and shaved as its required, subsequently re-tanned, fat liquored, conditioned, staked, if necessary dyed, trimmed, measured and dried

3.3

semi-finished state

products not fully finished but can be traded with

4 Requirements

4.1 General requirements

Raw materials

The raw material shall be fresh or preserved goat/sheep skin or bovine hides by methods other than tanning.

4.1.1 Tanning

The material after being treated by usual pre-tanning operations namely soaking, liming, degreasing and pickling, shall be tanned using chrome salts. To inhibit mould growth, suitable fungicides shall be incorporated in the skin.

4.1.2 Visual examination

The tanned crust leather shall be smooth on the grain side, free from hair and chrome stains. The flesh side shall be well fleshed.

4.2 Specific requirements

4.2.1 Physical and chemical requirements

Chromed crust leather shall comply with the requirements given in Table 1.

Table 1 — Physical and chemical requirements of chromed crust bovine leather

SL. No. N	Characteristic	Requirement		Test method
		Bovine	Goat /sheep	
(i)	Chrome content (as Cr ₂ O ₃) % by weight on dry leather, min.	2.5		KS ISO 5398-1
ii)	Soluble matter in dichloromethane and free fatty acids	2.0		KS ISO 4048
(iii)	pH of the water extract, min.	3.5		KS ISO 4045
(iv)	Shrinkage temperature in °C min.	100 °C		KS ISO 3380
v)	Sulphated ash and water insoluble ash	4		KS ISO 4047
(vi)	Tensile strength (after drying and conditioning) Mpa, min.	15	10	KS ISO 3376
(vii)	Moisture content, % m/m	10-12		KS(ISO 4684
(viii)	Water soluble organic and inorganic substances, %, max.	10		KS ISO 4098
ix)	Tear load, N, min.	70	20	KS ISO 3377-2
x	Elongation at break,%,min.	45 -75	35 - 75	KS ISO 3376

5 Grading

The crust leathers shall be graded into six selections as given below.

Grades 1, 2 and 3 are packed together in proportion 20:40:40 and can be traded in as run quality or tannery run.

5.1 Grade 1

The crust leathers shall have a good grain with well filled flanks and up to two small defects such as healed scratches.

The crust leathers shall be completely free from brand marks and flay cuts. 100 % of the area shall be usable.

5.2 Grade 2

The crust leathers shall have a good grain with well filled flanks and up to four defects (healed scratches) and not more than 25 % drawn grain. 80 % of the area shall be usable.

5.3 Grade 3

The crust leathers shall have a good grain with up to eight small holes and twenty healed scratches. Drawn grain and loose substance should not be more than 50 %. Usable area shall be 70 %.

5.4 Grade 4

The crust leathers may have one brand mark, small holes, healed scratches and flay cuts which are not deep. 60 % of the area shall be usable.

5.5 Grade 5

The crust leathers may have defects over the grains, deep wrinkles around the neck and two brand marks and deep flay cuts. 40 % of the area shall be usable.

5.6 Rejects

Any crust leathers below the standard of Grade 5 are called rejects.

6 Packaging

6.1 Packing

Packing shall be done in such manner that the crust leathers on being unpacked will be free from creases or creasing would be minimized during storage.

7 Marking

The package shall be marked or labeled with the following information:

- i) Name and address of manufacturer or packer;
- ii) Month and year of manufacture (when they were tanned);
- iii) Grade of the crusts leather (if any); and
- iv) Number and total area of the pieces.

8 Sampling and criteria for conformity

The sampling and criteria for conformity shall be as prescribed in KS ISO 2588. The location of test pieces shall be as specified in ISO 2418.