ETHIOPIAN STANDARD

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Leather –Technical Specification for leather goods

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Foreword

This Ethiopian Standard has been prepared under the direction of Technical Committee for Leather and Leather products(TC 74) and published by the Ethiopian Standards Agency (ESA).

Draft of the standard has been presented by Ethiopian Leather Industry Development Institute.

Acknowledgment has been made for the organization for its concern to contribute to the effort of national standardization.

Leather –Technical Specification for leather goods

1. Scope

This Ethiopian standard specifies the requirements for leather goods. It includes bags, wallets, belts and hats.

2. Normative references

The following standards contain provisions, which, through reference in this text, constitute provisions of the Ethiopian standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreement based on the Ethiopian standards are encouraged to investigate the possibility of applying the most recent editions of the Ethiopian standard indicated below. Registers of currently valid standards are maintained in the Ethiopian Standards Agency.

ES 3982, Standard Test Method for Flammability of Apparel Textiles

ES ISO 3376, Leather - Physical and mechanical tests-Determination of tensile strength and percentage extension

ES ISO 13934-1, Textiles — tensile properties of fabrics —Part 1: Determination of maximum force and elongation at maximum force using the strip method

ES 3983, Standard Test Method for Failure in Sewn Seams of Woven Apparel Fabrics

ES ISO 13937-1, Textiles- Tear properties of fabrics- Part 1: Determination of tear force using ballistic pendulum method (Elmendorf)

ES 3987, Standard Consumer Safety Specification for Toy Safety

ES 3985, Standard Test Methods for Operability of Zippers

ES 3984, Standard Test Methods for Strength Tests for Zippers

ES 3986, Standard Test Method for Resistance to Unsnapping of Snap Fasteners

ES ISO 12947-1, Textiles — Determination of the abrasion resistance of fabrics by the Martindale method — Part 1: Martindale abrasion testing apparatus

ES ISO 22775, Footwear — Test methods for accessories: Metallic accessories — Corrosion resistance

ES ISO22776, Footwear — Test methods for accessories: Touch and close fasteners — Shear strength before and after repeated closing

ES ISO22777, Footwear — Test methods for accessories: Touch and close fasteners — Peel strength before and after repeated closing

ES ISO 5077, Textiles- Determination of dimensional change in washing and drying

ES 3997, evaluation of water repellency of shoe care products

ES ISO 20433, Leather — Tests for color fastness — Color fastness to crocking

ES ISO 105B07, Textiles — tests for color fastness — part B07: color fastness to light of textiles wetted with artificial perspiration

ES ISO 105 C06, Textiles — Tests for colour fastness — Part C06: Colour fastness to domestic and commercial laundering

ES ISO 105 D01, Textiles — Tests for colour fastness — Part D01: Colour fastness to drycleaning using perchloroethylene solvent

ES ISO 17072, Leather — Chemical determination of metal content — Part 2: Total metal content

ES ISO 4045, Leather - Chemical tests - Determination of PH

ES ISO TS 1 6181, Footwear — Critical sub stances potentially present in foot wear and footwear components — Determination of phthalates in footwear materials

ES ISO 17226, Leathe r — Che mical determin ation of formaldehyde conte nt — Part 2 : Method using colorimetric analysis

3. Terms and Definitions

For the purpose of this standard the definitions in ES 1180 shall apply.

4. Requirements

4.1. General

4.1.1. Description

4.1.1.1. Leather Bags (handbags (fashion, basic and evening), back packs wallets, and book bags)

a)**Leather Materials** :-The type of leather material ca n be ei ther of the following s: co w nubu ck, co w softy , plain b ox, cow suede, cow embossed, patent leather, pull up leather, upholstery leather, cow aniline, cow waxy, cow smooth, sheep tie dye, aniline, sheep nappa, goat nappa, goat suede, sheep nubuck and goat nubuck

b)**Lining Materials**:-It can be made of textile, leather, synthetic or fur materials

c) ReinforcementMaterials:- can be shank board, leather fiber board, plastic board, triplex, texon board or dublex

d)Locks: - It can be turn locks, magnetic lock or press/push lock

e)Buttons: - It can be snap buttons or press buttons

4.1.1.2. Heavy Leather Goods: Document cases, Brief cases, Attaché cases, Medical Bags, Travel bags, Travel suite cases, Sports kits, School Bags, etc

a) Leather Materials: - Th e type of leather material can be either of the followin gs: cow nub uck, cow softy , plain box, cow suede, cow embossed, patent leather, pull up leather, upholstery leather, cow aniline, co w waxy, cow smooth, she ep tie dye, aniline, shee p nappa, go at nappa, go at suede, sheep nubuck, goat nubuck

b) Lining Materials:-It can be made of textile, leather, synthetic or fur materials

c) Reinforcement Materials:- ca n be sha nk board, le ather fib er board, plastic board, triplex , texon board or dublex

d) Locks: - It can be turn locks, magnetic lock or press/push lock

e) Buttons: - It can be snap buttons or press buttons

4.1.1.3. Medium Leather Goods:- Medium Arm Case, Zip fo lio Ca se, Wrist Bags, Sha ving Kits, Wri ting Folders, etc

a)**Leather Materials** :-The type of leather material ca n be ei ther of the following s: co w nubu ck, co w softy , plain b ox, cow suede, cow embossed, patent leather, pull up leather, upholstery leather, cow aniline, cow waxy, cow smooth, sh eep tie dye, aniline, she ep nappa, goat nappa, go at sued e, sheep nubuck and goat nubuck

b)**Reinforcement Materials :-** ca n be sha nk bo ard, lea ther fiber board, pla stic b oard, tripl ex, texon board or dublex

c)**Locks:** - It can be turn locks, magnetic lock or press/push lock

d)**Buttons**: - It can be snap buttons or press buttons

4.1.1.4. Small Leather Goods:- (Coin Purse, Coin Pouch, Key Case, Spectacle Case, Wallets, Belts, Passport Case, Watch Strap, belts)

a) Leather Materials:-The type of leather material can be either of the followings: cow nubuck, cow softy , plain box, cow suede, cow embossed, patent leather, pull up leather, upholstery leather, cow aniline, cow waxy, cow smooth, sheep tie dye, aniline, sheep nappa, goat nappa, goat suede, sheep nubuck and goat nubuck

b) Locks: - It can be turn locks, magnetic lock or press/push lock

c) Buttons: - It can be snap buttons or press buttons

4.1.2. Manufacturing Norm

The leather goods shall be produced using standard manufacturing process or operations of designing, material cutting and preparation operations, assembling operations, finishing and packing.

4.2. Physical requirements

The leather goods shall conform to the requirements given below in table 1, when tested in accordance with the methods prescribed in table 1.

Table 1 leather goods chemical and physical requirements

Characteristics	Requirements	Test method
Flammability – all textiles	Plain surface fabrics: 3.5sec. or more Raised-Fiber Fabrics: 4sec. or more if they exhibit ignition or fusion of their base fibers	ES 3982
Workmanship	No major defect	Visual
Tensile strength	Shell 178N min. Lining: 90N min. Vinyl:44.5N min Textile: 4.4 N/mm min	ES ISO 3376 ES ISO 13934-1
Handle strength	11.3kg	ES 3983
Tear Strength	Lining:1.1kg	ES ISO 13937-1
Attachment strength snaps, buttons, decorative	6.8kg/10sec	ES 3987
Zipper performance: Open/close Crosswise strength Top/bottom stop holding Scoop Pull strength/slider strength Slider torque	0.9N/mm Max. 9.0N/mm min. 4N/mm min. 2N/mm min. 0.4N/mm min.	ES 3985 ES 3984 ES 3984 ES 3984 ES 3984
Snaps:	Snapping 0.4N/mm min. Unsnapping max. 1.4N/mm	ES 3986
Surface abrasion	No removal of upper surface at 200cycle	ES ISO 12947-1
Resistance to corrosion metal parts	No tarnishing after 24 hrs in 1% saline solution	ES ISO 22775
Seam strength	4.4 N/mm min.	ES 3983
Attachment strength-snaps, buttons	6.8kg/10sec.	ES 3987
Buckle strength (Belt)	4.4N/mm min. pull	ES 3983
Stretch & Recovery	Recovery after 1 minute:95% min. Elongation: Over 100%	ES ISO 13934-1 Extension and modulus test -1-15mm (elastic width):1.5kg load -16-50mm:4.5kg load -Over 50mm:7.5kg load

Durability of Velcro, button, snap fastener & rivet	Velcro Peel strength, N/mm After 5,000wear cycle min.0.1 After 10,000wear cycle min. 0.08 Shear strength, KPa After 5,000 cycle min 75 After 10,000 cycle min 65 Snap, Button, fastener, rivet Shall remain functional after opening & closing for 100cycle	ES ISO22776/ES ISO22777
Dimensional stability (if washable) - After 3 machine washings - After one dry cleaning	Knit:+/-5% Woven3% max. Knit:+/-3% Woven2%max.	ES ISO 5077
Water repellency (leather)	90 min.	ES 3997
Color fastness to Crocking (gray scale max.)	Dry 4 Wet 3	ES ISO 20433
Color fastness to light	Leather: 3 at 10hrs Silk: 3 at 10hrs Woven3 at 20hrs	ES ISO 105B07
Colorfastness to laundering or dry cleaning	Staining 3 Color change 4 Self -staining 4	ES ISO 105 C06 ES ISO 105 D01
pH level	6-8	ES ISO 4045

4.3. Hazardous chemical requirements

The leather goods shall conform to the requirements given below in table 2, when teste d accordance with the methods prescribed in table 3.

Table 2 hazardous chemical requirements

Characteristic	Requirement	Method of test
Total lead (accessible components), ppm, by weight	Leather: 300 PVC: 200 Others: 300	ES ISO 17072
Lead in surface coating, ppm, by weight, max.	90	ES ISO 17072
Total Cadmium, ppm, max. by weight	75	ES ISO 17072
Phthalates (accessible components) PVC, PU, Synthetic, leather, soft plastics	Maximum 1000ppm (0.1% by weight) (DEHP, DBP, BBP, DINP, DIDP, DNOP, DEP)	ES ISO TS 16181 or GC-MS analysis
Formaldehyde Content (including in printed items), ppm, max.	300	ES ISO 17226
Hexavalent chromium, ppm, max.	3	ES ISO 17075

5. Sampling

Sampling shall be ca rried out in acco rdance with E S ISO 2418, ES ISO 2419 ES ISO 2588 and ES ISO 4044.

6. Packing

Leather goods shall be placed in polypropylene plastic bags or wrapped in them as agreed to between the purchaser and producer.

7. Marking/Labeling

Each container of finished leather goods shall be labeled with the following information.

a) The name and address of manufacturer's;
b) Name of the country;
c) The number of pieces;
d) The total mass in kg;
e) Batch number(s) or code number
f) Product colour
g) Any other labeling information required by the purchaser.

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Ethiopian Standards Agency

Organization and Objectives

The Ethiopian Standards Agency (ESA) is the national standards body of Ethiopia established in 2010 based on regulation No. 193/2010.ESA is established due to the restructuring of Quality and Standards Authority of Ethiopia (QSAE) which was established in 1998.

ESA's objectives are:-

- ❖ Develop Ethiopian standards and establish a system that enable to check whether goods and services are in compliance with the required standards,
- ❖ Facilitat the country's technology transfer through the use of standards,
- ❖ Develop national standards for local products and services so as to make them competitive in the international market.

Ethiopian Standards

The Ethiopian Standards are developed by national technical committees which are composed of different stakeholders consisting of educational institutions, research institutes, government organizations, certification, inspection, and testing organizations, regulatory bodies, consumer association etc. The requirements and/ or recommendations contained in Ethiopian Standards are consensus based that reflects the interest of the TC representatives and also of comments received from the public and other sources. Ethiopian Standards are approved by the National Standardization Council and are kept under continuous review after publication and updated regularly to take account of latest scientific and technological changes. Orders for all Ethiopian Standards, International Standard and ASTM standards, including electronic versions, should be addressed to the Documentation and Publication Team at the Head office and Branch (Liaisons) offices. A catalogue of Ethiopian Standards is also available freely and can be accessed in from our website.

International Involvement

ESA, representing Ethiopia, is a member of the International Organization for Standardization (ISO), and Codex Alimentarius Commission (CODEX). It also maintains close working relations with the international Electro-technical Commission (IEC) and American Society for Testing and Materials (ASTM).It is a founding member of the African Regional Organization for standardization (ARSO).

More Information?

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