Foreword

This Bangladesh Standard was adopted by the Bangladesh Standard and Testing Institution on ………………… after the draft finalized by the Leather, Footwear and Leather Products Sectional Committee and approved by the Chemical Divisional Committee.

A belt is a flexible band or strap, typically made of leather, plastic, or heavy cloth, worn around the natural waist or near it (as far down as the hips). The ends of a belt are free; and a buckle forms the belt into a loop by securing one end to another part of the belt, at or near the other end. Often, the resulting loop is smaller than the hips. Belts come in many lengths because of the variety in waist sizes, and most belts can be adjusted at the buckle to suit the wearer's waist.

Leather is the most popular belt material because it can withstand being bent, folded, and tightened without being damaged. Genuine leather belts will also adapt to the wearer with time. Belts are also made using a range of other materials, including braided leather, tooled leather, suede, leather-backed ribbon, canvas, webbing, rope and vinyl etc.

Leather belts differ in design, shape, colour and size from one manufacturer to another. Even with particular size and shape, the quality of the material and the workmanship may be different.

Due to its growing demand the sectional committee decided to formulate this standard. While formulating this standard the sectional committee gave due consideration to the views of the producers, consumers and technologists and felt that it should be related to the prevailing trade and manufacturing practices followed in this field in the country.

In the preparation of this standard assistance derived from the following publication is acknowledged with thanks:

   DEAS/1124:2022 Belts - Specification: Part 1 - Leather; East African Community.

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value (observed or calculated) expressing the result of a test or analysis, shall be rounded off in accordance with BDS 103.

Bangladesh Standard

Specification
for
Leather Belts

1. Scope

This standard specifies the requirements, sampling and test methods for leather belts. This standard does not cover belts made from other materials apart from leather.

2. Normative References

2.1 The following standards are necessary adjuncts to this standard. For undated reference latest edition may be used.

BDS 103   Methods of rounding off numerical values.

BDS 389   Glossary of terms relating to hides, Skin and leather industries.

BDS ISO 3376   Leather — Physical and mechanical tests — Determination of tensile strength and percentage elongation

ISO 3379   Leather — Determination of distension and strength of surface (Ball burst method)

BDS ISO 4045   Leather — Chemical tests — Determination of pH and difference figure

BDS ISO 4048   Leather — Chemical tests — Determination of matter soluble in dichloromethane and free fatty acid content

BDS ISO 11640   Leather — Tests for colour fastness — Colour fastness to cycles of to-and-fro rubbing

ISO 11644   Leather — Test for adhesion of finish

3. Terminology

For the purpose of this standard the definitions given in BDS 389 and following shall apply.

3.1 Acceptable - Acceptable to the parties concluding the purchase contract, but in relation to the standardization mark and to inspections carried out, acceptable to the Bangladesh Standards.

3.2 Belt - A strip of leather or material worn around the waist to support cloth or for decoration.

3.3 Leather - It's a material made from skins/hides of an animal by tanning.

3.4 Tanning - Process of converting hides/skins from putrescible (liable to decay) to non-putrescible material.

4. Requirements

4.1 General Requirements

4.1.1 Leather

The leather shall be free from defects and comply with requirements specified in Table 1.

4.1.2 Sewing threads - The sewing threads should be of acceptable quality.

4.1.3 Metal components

4.1.3.1 General

All metal components, whether functional or decorative, shall be of an intrinsically corrosion-resistant metal or shall have been coated to render them resistant to corrosion. They shall be of adequate size and strength for their intended function. Their design shall be such that, when closed, no sharp edges, prongs or decorative shapes protrude.

4.1.3.2 Buckles

Buckles may have one or more prongs, or may be of the plain or roller type, or be slide buckles. The width of a buckle shall be such as to ensure an acceptable fit with the belt to which it is attached.

4.1.3.3 Closure fittings

Spring-loaded closure fittings or clasps, when relevant, shall be as required, but shall be of acceptable design.

4.1.3.4 Press studs

Press studs shall be of the male and female type and shall have a tenacious grip.

4.1.3.5 Rivets

All rivets shall be securely and neatly attached and of sufficient length to allow the caps to be firmly clinched

4.1.4 Type, design and size of belts

4.1.4.1 Type - The belts shall be of one of the following types (or acceptable modifications of these types), as required:

> a) **Type A** — Belts of leather and of unlined construction, incorporating a buckle or a closure fitting.

> b) **Type B** — Belts of leather and lined with leather, incorporating a buckle or a closure fitting; or

> c) **Type C** — Belts of reversible construction, incorporating a buckle or a closure fitting.

Belts shall be supplied in sizes 87 cm, 92 cm, 97 cm, 102 cm, 107 cm or in other sizes, as agreed between the buyer and the seller.

4.1.5 Construction of Lining and interlining

4.1.5.1 Belts of type B shall be lined with leather that complies with the requirements of 4.1.1.

4.1.5.2 Belts of type B and of type C may be interlined with fabric or other acceptable interlining material.

4.1.6 Strength of belts - Finished belts, when tested in accordance with BDS ISO 3376 shall have a breaking strength of at least 400 N.

4.1.7 Riveting

All rivets shall be securely and neatly attached and of sufficient length to allow the caps to be firmly clinched.

4.1.8 Workmanship and finish

Workmanship and finish shall be in accordance with sound trade practice. Belts shall be clean, well made, and free from any defects that affect their appearance or that may affect their serviceability (or both). Sewing shall be uniform, and double rows of stitching shall be uniform unless intended to be otherwise.

4.2 specific requirements

4.1.2 Leather material

The physical and chemical properties shall comply with the requirements given in Table 1, when tested in accordance with test methods specified therein.

Table 1 physical and chemical requirements for leather belts

(Clause 4.1.1)

SI No.	Property	Requirements	Test methods
(1)	(2)	(3)	(4)
i.	Shrinkage temperature, °C, Min.	75	ISO 3379
ii.	Grease content (on a moisture-free basis), %	3.0 – 12.0	BDS ISO 4048
iii.	pH value, Min.	4.5 – 5.5	BDS ISO 4045
iv.	**Resistance to wet and dry rubbing after 50 rubs**: Grain side (all leathers), permissible colour change, rating, Min. Flesh side (leather for type A belts only), permissible colour transfer, rating, Min.	4 4	BDS ISO 11640
v.	Adhesion of finish, N, Min. Dry Wet	 3.5 2	ISO 11644
vi.	Tensile strength, N/mm^2, Min.	20	BDS ISO 3376
vii.	Elongation at break %,	30 - 80	BDS ISO 3376

5. Packaging

The belts shall be packaged in individual suitable material and then so packaged, in suitable bulk containers, so as to protect them from damage during transportation and storage. The belt shall be packed in suitable material, so as to protect them from damage during transportation and storage.

6. Marking/ Labelling

6.1 Individual Belts - Each belt shall be neatly, legibly and indelibly marked with the following information:

a) The manufacturer's name, trade name or trade mark;

b) The batch identification;

c) The size;

d) The country of origin; and

e) The colour.

6.2 Bulk Package

The following information shall appear in neat, legible and indelible marking on the outside of each bulk container:

a) The manufacturer's name, address, trade name or trade mark;

b) The number of belts; and

c) The country of origin.

6.3 The product(s) may also be marked with the BSTI Certification mark.

NOTE – The use of the BSTI Certification Mark is governed by the provisions of the Bangladesh Standards and Testing Institution Act 2018 and the Rules and Regulations made thereunder. Details of the conditions under which license for the use of the BSTI Certification Mark may be granted to manufacturers or Processors may be obtained from the Bangladesh Standards and Testing Institution.

7. Sampling and Criteria for Conformity

For the purpose of ascertaining the conformity of the leather belts in a consignment to this specification, the scale of sampling and criteria for conformity shall be as prescribed in Annex A.

Annex A

(Normative)

Methods of sampling and criteria for acceptance

A-1 Scale of sampling

A-1.1 Samples shall be selected and examined for each lot separately for ascertaining the conformity of the belts to the requirements of this standard.

A-1.2 A belt shall be considered to be of different lots if they differ in shape, colour, and design.

A-1.3 The number of belts to be selected from any lot shall depend on the size of the lot and shall be in accordance with Columns 1 and 2 of Table A-1.

A-2 Method of selection

A-2.1 Belt to be selected from the lot shall be chosen at random. To ensure randomness the procedure in A-2.3 shall be used.

A-2.2 When the belts in a lot are not packed in a number of cases (boxes), the sampling shall be as follows:

Starting from any belt in the lot, count the belts as 1, 2, etc …… up to r and so on in one order. Every rth piece thus counted shall be withdrawn to constitute a sample (r is the integral part of N/n where N is the lot size and n is the sample size). This procedure shall be stopped as soon as the required number of pieces is obtained.

For example, if a sample of 125 belts is to be selected from a lot of 3000 belts, compute r as equal to integral part of 3000/125=24. Starting from any piece, the belt shall be counted in one order and every 24th piece shall be withdrawn.

A-2.3 When the belts in a lot are packed in different cases (boxes), a suitable number of boxes (not less than 30 % of the total boxes in the lot) shall be first chosen at random. For each of the boxes so chosen, an approximately equal number of belts shall be picked up from its different parts so as to obtain the required number of belts. For example, if a lot consists of 1000 belts packed in 50 boxes, each containing 20 belts, choose more than 15 boxes at random. If it is decided to open 20 boxes, then 4 belts shall be picked up from different parts of each of the 20 boxes to give a total of 80 pieces as specified in Table A-1.

Table A-1 Scale of sampling and permissible number of defects

Number of belt's in a lot	Samples for visually observed defects (Pieces)	Permissible number of defectives (Pieces)	Sample size for laboratory testing (Pieces)	Permissible number of defects (Pieces)
(1)	(2)	(3)	(4)	(5)
Up to 50	13	0	2	0
51 - 100	20	1	3	0
101 - 300	32	1	3	0
301 - 500	50	2	5	1
501 - 1000	80	3	6	1
1001 - 3000	125	5	7	2
3001 and above	200	7	8	3

A-3 Defects - All randomly selected belts (Table A-1, Column 2) shall be inspected for visually observed defects, i.e:

    a)   difference in shape, design and colour;

    b)   distorted shapes;

    c)   cracking defects;

    d)   faulty jointing and adhesion ;

    e)   broken stitches and incorrect stitching;

    f)   Fasteners defects in buckles and studs;

    g)   Grain damage;

    h)   Broken threads ;

    i)   finish not even and unpolished.

A-4 Acceptance criteria

The number of defective belts shall not exceed the permissible number given in Table A-1, Column 3. If the number of defective pieces exceeds the permissible number of defectives, the lot shall be rejected.

In case the lot has been found satisfactory for visually observed defects, sample pieces for laboratory testing (Table A-1, Column 4) shall be taken from among those drawn (Table A-1, Column 2). The pieces shall be chosen at random and tested for dimensional, physical and chemical characteristics. If the number of defective belts is less than or equal to the corresponding permissible number of defectives given in Table A-1, Column 5, the lot shall be declared to have met the requirements of this standard. Otherwise, if the defective belt pieces are more than the corresponding permissible numbers of defectives, the lot shall be rejected.