
**Textiles — Socks — Part 2: Sport socks —
Specification**

ICS: 61.020

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Foreword

This Ethiopian Standard has been prepared under the direction of Technical Committee for Made-up-Textiles & Ready-Made Garments (TC 72) and published by the Ethiopian Standards Agency (ESA).

In preparing this Ethiopian Standard reference has been made to the ARS 658-2:2019 *Textiles — Socks — Part 2: Sport socks — Specification, prepared by East African community (EAC)*

Acknowledgement is made to the ARS (African Regional Standards) for the use of the said publication in preparing the standard.

Textiles — Socks — Part 2: Sport socks — Specification

1 Scope

This part of this African Standard specifies requirements for sport socks.

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.

ES 6579, *Textiles and textile merchandise — Terms and definitions*

ES ISO 105-B02, *Textiles — Tests for colour fastness — Part B02: Colour fastness to artificial light: Xenon arc fading lamp test*

ES ISO 105-E04, *Textiles — Tests for colour fastness — Part E04: Colour fastness to perspiration*

ES ISO 139, *Textiles — Standard atmospheres for conditioning and testing*

ES ISO 3758, *Care-labelling of textiles and clothing*

ES ISO 3998, *Textiles — Determination of resistance to certain insect pests*

ES ISO 6330, *Textiles — Domestic washing and drying procedures for textile testing*

ES ISO 8559-2, *Size designation of clothes — Part 2: Primary and secondary dimension indicators*

ES ISO 22198, *Textiles — Fabrics — Determination of width and length*

3 Terms and definitions

For the purposes of this standard, the definitions given in ES 6579 and the following definitions apply.

3.1

automatic toe closure

an acceptable and approved method, other than linking, of effecting closure of the toe and instep pieces of the sock

3.2

linking

a method of joining the toe and instep pieces of the sock by a chain stitch (single or double) that passes through adjacent loops of the same knitted course

3.3

size

the length, or length range, in centimetres, of the foot of the intended wearer

3.4

socks

a sock is an item of clothing worn on the feet and often covering the ankle or some part of the calf

3.5

leg length

the length of a sock measured on the leg, from the floor to the top of the sock

3.6

foot length

the length of the foot measured from the tip of the toe to the back edge of the heel

4 Requirements

4.1 General

Sport sock shall be;

- a) made from clean and uniformly prepared yarns,
- b) free from defects that impair their appearance or could impair their serviceability (or both),
- d) of uniform and acceptable make, colour and finish.

NOTE If a manufacturer or purchaser should require confirmation of compliance of sock with requirements that are agreed upon in terms of 4.4, 4.6 and 4.7 suitable test methods for ascertaining compliance are given in annex C.

4.2 Type

Sock shall be of one of the following types, as required:

- a) men's, women's or children's sock;
- b) commercial or sports sock; and
- c) ankle, quarter, half or three-quarter sock.

4.3 Pairing and size designation

4.3.1 Pairing

Sock shall be so paired that, when determined in accordance with 5.3.1, any difference between the lengths of the feet does not exceed 5 mm and any difference in the lengths of the legs (including the ribbed tops), does not exceed 10 mm.

4.3.2 Size designation

The size, or size range, of sock shall be as required and as stated on the label. When determined in accordance with 5.3.2, the size of sock shall be deemed correct if

- a) its volume and shape conform to the appropriate size-board without any unacceptable tightness or looseness,
- b) a straight line extension of the gore (searcher) line bisects the heel reference mark, and
- c) the top of the sock is between the appropriate reference lines.

In the case of sock that is manufactured to fit a range of sizes and that is labelled, for example, "one size fits all" or "fits all sizes", the size shall be determined in accordance with 5.3.2, but the size-board recommended by the manufacturer as being appropriate for the size stated shall be used.

4.4 Design and construction

The design and construction of sock, for example the knitted structure, the inclusion of a knitted jacquard design, or the incorporation of a plush (pile) structure in the leg or foot (or both), shall be as agreed upon.

4.5 Colour and colour match

Unless otherwise required, the colour(s) of the finished sock shall be an acceptable match to the colour(s) required.

4.6 Elastic splicing

Where relevant, the position and depth of elastic splicing shall be as agreed upon.

4.7 Toe closure

The toe shall be closed by linking or by automatic toe closure, as agreed upon.

In the case of

- a) closure by linking, the ends of the linking yarns shall extend not less than 12 mm and not more than 25 mm beyond the ends of the toe linking, and
- b) automatic toe closure, the seam shall be such as to be acceptable.

NOTE An acceptable seam is sufficiently extensible to prevent cracking and undue shrinkage, and flat enough to prevent discomfort.

4.8 Composition

The socks shall be produced from natural fibres, synthetic fibres or the blend of the two. The composition shall be agreed upon by the producer and the customer.

4.9 Performance requirements

Sock shall comply with the performance requirements given in Table 1.

4.10 Moth resistance

When tested in accordance with 5.9, 95% - 98 % of mothproofing agent should remain on the textile.
(ES ISO 3998: Textiles – Determination of resistance to certain insect pests)

Table 1 — Performance requirements

1	2	3
Parameters	Requirements	Test method
Dimensional change on laundering, %, max.		5.5
Leg	5	
Foot	5	
Colourfastness to:		
a) Light, rating, min.	4	5.6
b) Washing, rating, min.		5.7
change in colour	4	
staining of transfer cloths	4	
c) Perspiration, rating, min.		5.8
change in colour	4	
staining of transfer cloths	4	
d) Rubbing	4	5.10

5 Inspection and methods of test

5.1 Inspection

After inspecting the sample for compliance with the requirements of Clause 6, inspect all the sock in the sample for compliance with the requirements of 4.1, 4.2, 4.4, 4.5, 4.6 and 4.7.

5.2 Conditioning

Condition all the sock in the test sample in accordance with ES ISO 139.

5.3 Pairing and sizing

5.3.1 Pairing

Lay the sock forming a pair on top of each other to see whether there is any difference in the foot lengths and the leg lengths. If there is, determine the extent of the difference by measuring the foot length and the overall leg length of each sock forming the pair, using ES ISO 8559-2.

5.3.2 Size

5.3.2.1 Apparatus

Set of size-boards.

5.3.2.2 Procedure

So fit each sock in turn on the appropriate size-board that all avoidable wrinkles are eliminated without the use of excessive force. In the case of three-quarter sock, turn the rib top over at a point halfway between its start and finish. Check for compliance with 4.3.

5.4 Overall composition of sock

Determine by physical and chemical analysis.

5.5 Dimensional change on laundering

Mark, measure and record the length of the leg and the foot of each specimen, as described in ES ISO 22198. Then wash and dry each specimen in accordance with washing procedure D and drying procedure G given in ES ISO 6330. Check for compliance with 4.9.

5.6 Colour fastness

5.6.1 Colour fastness to light

Use ES ISO 105-B02. Check for compliance with 4.9.

5.6.2 Colour fastness to washing

Use ES ISO105-C06.

5.6.3 Colour fastness to perspiration

Use ES ISO 105-E04. Check for compliance with 4.9.

5.9 Moth resistance

Use ES ISO 3998.

5.10 Color fastness to rubbing

Use ES ISO 105-X12.

6 Packing, care-labelling and marking

6.1 Packing

Pairs of sock of the same type, size, design and colour shall be acceptably packaged and packed, as required. The sock shall be delivered in a clean and commercially dry condition.

6.2 Care-labelling

Each pair or package of sock shall carry a suitable label that provides appropriate care instructions in accordance with ES ISO 3758.

6.3 Marking

6.3.1 Sock

The following information (which can also incorporate the care instructions in accordance with 6.2) shall be legibly and durably marked on the packaging of the sock, or on an adhesive label attached to each pair of sock, or, by transfer printing, on one sole of each pair of sock (or any combination of these):

- a) the manufacturer's name or trade mark (or both);
- b) the overall composition; and
- c) the size or size range.

6.3.2 Containers

The following information shall be legibly and indelibly marked on the outside of each container:

- a) the manufacturer's name or trade mark (or both);
- b) a description of the contents, e.g. type and size;
- c) the colour;
- d) the quantity (in pairs);
- e) the gross mass, in kilograms; and
- f) the order or contract number.

6.4 Additional marking

When so required, sock or bulk containers (or both) shall bear information additional to that specified in 6.3.1 and 6.3.2.

Annex A
(informative)

Recommended test methods

The test methods below are recommended for determining the various requirements that can be agreed upon by the purchaser and the supplier.

A.1 Design and construction

Determine by visual or physical examination.

A.2 Position and depth of elastic splicing

Determine by physical examination and by using a suitably calibrated rule.

A.3 Toe closure

Determine by physical examination and, in the case of closure by linking, a suitably calibrated rule.

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- ❖ Develop Ethiopian standards and establish a system that enable to check whether goods and services are in compliance with the required standards,
- ❖ Facilitate 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.

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