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Footwear — Vocabulary

Chaussures — Vocabulaire

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Foreword

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This document was prepared by Technical Committee ISO/TC 216, *Footwear*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 309, *Footwear*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 19952:2005), which has been technically revised.

The main changes are as follows:

— additional terms were added, such as antimicrobial footwear, bottom wall, boxing footwear, bridge, components in contact with the skin, critical substances, drawn-up toe, extended sole spike heel, stiletto heel, etc.;

— synonyms were combined, such as box toe and toe puff, runner and through sole, built heel and stack heel etc.;

— some definitions were reviewed, such as bottom assembly, children's footwear, etc.;

— terms were updated based on industry developments, for example double sole was changed to multilayer sole;

— some unnecessary terms were deleted, such as school footwear/children's school footwear.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

This document defines terms and definitions used in the footwear industry, in order to facilitate communication and understanding across trade, designers, universities, manufacturers etc. in the footwear sector. This document defines each type of footwear under the current technological processes.

Footwear — Vocabulary

1 Scope

This document defines terms used in the footwear industry.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at https://www.electropedia.org/

3.1 Footwear materials

3.1.1
abrasive
hard substance that can wear away a softer material by rubbing it

Note 1 to entry: An abrasive is usually used to prepare materials for bonding.

3.1.2
adhesive
cement
chemical compound used for bonding two surfaces together

3.1.3
backer
piece of material applied to another usually to add strength or reinforcement

3.1.4
binding
<material> narrow strip of material attached or wrapped around an edge (of a section)

3.1.5
bottom filling
bottom filler
material used to fill the void inside the lasted margin above the outsole *assembly* (3.2.2)

EXAMPLE Felt or cork.

Note 1 to entry: See Figure 2, Figure 3, Figure 4, Figure 5 and Figure 10.

3.1.6
bridge
footwear support
piece of hardened paper, plastic, wood or other material to support footwear and maintain its shape during transportation and storage

Note 1 to entry: Filled-paper can also act as bridge.

3.1.7
coated fabric
textile covered with a polymer or plastic coating such as polyurethane, polyvinyl chloride (PVC) or rubber

3.1.8
coated leather
coated split leather
<material> *leather* (3.1.20) and split leather where the surface coating, applied to the outer side, does not exceed one third of the total thickness of the product but is in excess of 0,15 mm

[SOURCE: ISO 15115:2019, 3.22, modified — The preferred term “coated and coated split leather” has been changed to two preferred terms “coated leather” and “coated split leather”.]

3.1.9
coating
layer formed on the *surface* (3.6.22) of a substrate with a single or multiple application of material

3.1.10
combined material
composite material
material constituted of a combination of several different raw materials which cannot be separated mechanically

EXAMPLE Coated textile/leather (a textile/leather covered by a polymer film), complex upper (upper and lining are fully stuck by glue or other techniques and it is impossible to separate them), rubber boot upper (the sock can be fully dissolved in rubber), soling material (in injected sole footwear the insole can be fully dissolved in the sole), foam with adhesive or foam with residues of adhesive, etc.

3.1.11
double density
dual density
sole material comprising two layers of different density, from one or two polymers, solid and/or cellular in *construction* (3.2.16)

3.1.12
elastic
tape, cord or fabric containing rubber or a similar substance that allows it to stretch and return to its original shape

Note 1 to entry: Generally elastic materials are used in *upper* (3.3.65) construction in the *quarters* (3.3.48) or in the straps to hold the shoe on the foot.

3.1.13
facing stay
reinforcement (3.1.21) used to prevent *eyelets* (3.3.25) pulling through the *facer* (3.3.26)

3.1.14
foam
porous material in which the pores are all or partly intercommunicating

3.1.15
foxing
material that connects the *upper* (3.3.65) and sole to increase bendability strength

Note 1 to entry: Generally foxing is usually used in vulcanized footwear.

Note 2 to entry: See Figure 1.

Figure 1 — Foxing

3.1.16
heel flap
Louis high heel
sole material stuck to the *heel breast* (3.3.34), where the sole continues back from the *waist* (3.6.29) down the front (breast) of the heel and extends to the *heel tip* (3.3.36)

Note 1 to entry: Such heels require a curvature at the top of the breast that blends into the waist.

3.1.17
heel grip
strip of material applied to the inside of the back part of the footwear *upper* (3.3.65) to prevent *heel* (3.3.33) slip during walking

3.1.18
heel lift
single layer of material forming part of a *built heel* (3.3.10), excluding the *top piece* (3.3.61)

3.1.19
interlining
material that is between *lining* (3.3.42) and *upper* (3.3.65)

3.1.20
leather
hide or skin with its original fibrous structure more or less intact, tanned to be imputrescible, where the hair or wool have been removed or not, whether or not the hide or skin has been split into layers or segmented either before or after tanning and where any surface coating or surface layer, however applied, is not thicker than 0,15 mm

Note 1 to entry: If the tanned hide or skin is disintegrated mechanically and/or chemically into fibrous particles, small pieces or powders, and is then, with or without the combination of a binding agent, made into sheets or other forms, such sheets or forms are not leather.

Note 2 to entry: If the grain layer has been completely removed, the term leather shall not be used without further qualification, e.g. split leather, suede leather.

Note 3 to entry: The material shall be of animal origin.

[SOURCE: ISO 15115:2019, 3.52]

3.1.21
reinforcement
material used to improve the strength and modify the stretch properties of *upper* (3.3.65) and/or lining materials or *outsole* (3.3.47) during manufacture or during wear

3.1.22
thick leather
leather (3.1.20) with a thickness greater than 2 mm

3.1.23
top facing
strip of material stitched inside a footwear *upper* (3.3.65) at the top to finish off the *lining* (3.3.42) and to reinforce the footwear

3.2 Footwear manufacturing

3.2.1
adhesion
state in which two surfaces are joined together by chemical bond or interfacial forces

Note 1 to entry: This can be via adhesive, or through a chemical reaction, i.e. thermoplastic adhesion where the soling is stuck to the rubber shoe via heating.

3.2.2
assembly
matching or bringing together the various *components* (3.3.16) of the footwear with or without the lasts

3.2.3
attached rib
ply rib
rib
wall which is perpendicular to the flat *surface* (3.6.22) of a sole or *insole* (3.3.39) and slightly inward from the edge, usually made of fabric, fixed to the insole to present a wall similar to a Goodyear insole rib

Note 1 to entry: This can be formed by cutting a channel or lip or by folding a piece of material.

Note 2 to entry: See Figure 4.

3.2.4
back seam
seam (3.2.34) at the back of the *heel* (3.3.33) joining or closing the *upper* (3.3.65) together

3.2.5
beading
folding
process of folding over an edge, usually the *top line* (3.3.60)

3.2.6
binding
<process> attaching a narrow strip around an edge

3.2.7
Blake sewn
<process> *chainstitch* (3.2.13) method in which the *upper* (3.3.65) and sole are sewn together with a single stitch from the inside, resulting in a clean and seamless appearance on the exterior of the footwear

Note 1 to entry: This sewing method was invented by Blake.

Note 2 to entry: See Figure 10.

3.2.8
bottom assembly
<process> bringing together all the parts of the footwear bottom

3.2.9
buffing
bringing up a shine or polishing or roughing or scouring in preparation for *adhesion* (3.2.1)

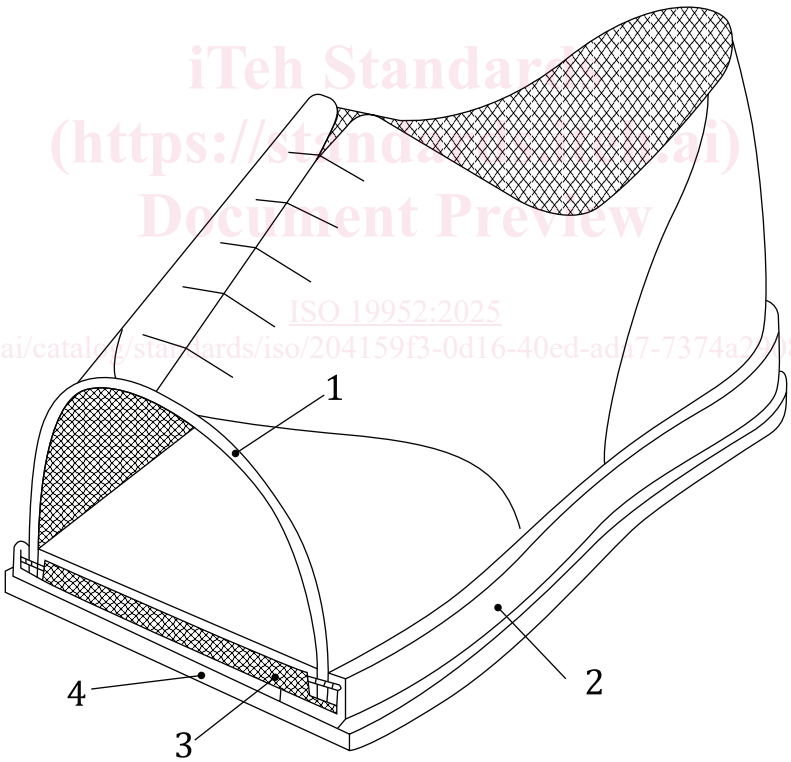
3.2.10
burnishing
treatment to add highlights, including edge treatment involving application of heat to a skive so that it assumes a quarter-round section

3.2.11
butt seam
seam (3.2.34) made by butting two edges together with no overlap, usually sewn using a zigzag stitch

3.2.12
California
construction (3.2.16) in which the *upper* (3.3.65) is stitched to a flexible *insole* (3.3.39) or a light *sock* (3.3.31) to make a bag into which the *last* (3.6.13) is forced

Note 1 to entry: The band is then used to cover the edge of a *midsole* (3.3.43) before the *outsole* (3.3.47) is stuck on.

Note 2 to entry: See Figure 2.



Key
1 upper
2 covering
3 bottom filling/filler
4 outsole

Figure 2 — California construction

3.2.13
chainstitch
stitch made by a single thread passing to and fro through a hole in the material and caught on one side by a loop formed by the previous stitch

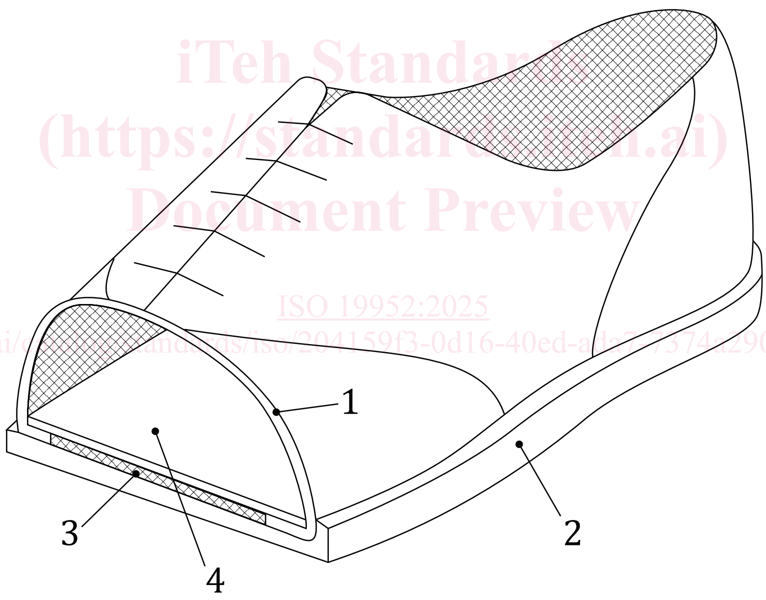
3.2.14
cohesion
state in which the particles of a single substance are held together by the primary or secondary valence forces

3.2.15
construction
<process> particular method or process used for constructing or assembling a sole (*outsole* (3.3.47))

3.2.16
construction
<process result> manner in which the *outsole* (3.3.47) is attached to the *upper* (3.3.65)

3.2.16.1
cemented construction
flat lasted
stuck-on sole construction
stuck-on
method of construction where the *upper* (3.3.65) is fixed or lasted to the sole using *adhesive* (3.1.2)

Note 1 to entry: See Figure 3.



Key

1 upper
2 outsole
3 bottom filling/filler
4 insole

Figure 3 — Cemented construction

3.2.17
cutting area
usable area of material, for example, a hide or skin, from which *components* (3.3.16) are cut

3.2.18
direct moulding
method of having a sole/heel mould that is held against the lasted *upper* (3.3.65), making contact at the bite-line where the welt-plate touches the upper, thus enclosing a cavity within which the sole/heel is formed

3.2.18.1
injection moulding
type of *direct moulding* (3.2.18) where the sole is formed from polymer that is forced into the mould while in a molten state

3.2.18.2
direct vulcanizing
dv moulded
type of *construction* (3.2.16) where uncured rubber is placed in a sole mould in contact with the lasted margin of the *upper* (3.3.65) and cured or vulcanized in situ via the application of heat and pressure

3.2.18.3
reaction moulding
type of *construction* (3.2.16) where a sole, such as a polyurethane (PUR) sole, is formed in the mould attached to the lasted upper by mixing the components of the PUR (e.g. polyol and isocyanate) immediately before they are introduced into the mould and where the components react in the mould to produce a cellular PUR outsole

3.2.19
direction of stretch
directions with the most and least stretch (modulus) respectively, usually with *leather* (3.1.20), but also with other upper materials

3.2.20
edge

3.2.20.1
edge finishing
application of inks and colorants to raw edges

3.2.20.2
edge guide
mechanical device fitted to equipment to aid following of edges, often seen on stitching machines

3.2.20.3
edge iron
setter
heat treatment applied by using a tool shaped to match the edge profile and to make edges smooth

3.2.20.4
edge trimming
operation with tool to define the profile on the edge of a *component* (3.3.16) so its edge is neat and/or matches an adjacent component

Note 1 to entry: Top stitching is often known as under edge trimming.

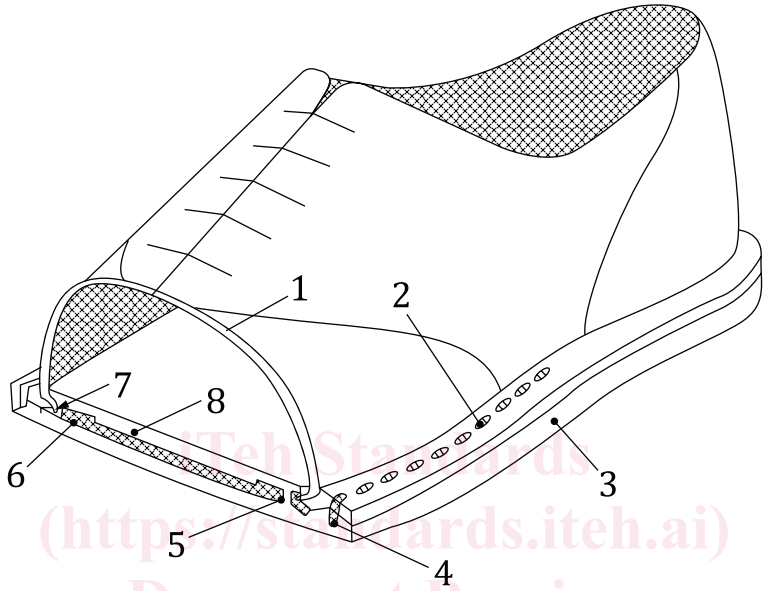
3.2.21
finishing
<process> applying the final treatments, colourants and glosses to footwear

3.2.22
fitting
<process> matching the dimensions of the foot most accurately to a given size of foot

3.2.23
force lasting
method of *lasting* (3.2.28) where the *upper* (3.3.65) is joined to the *insole* (3.3.39) or *insock* (3.3.38) and forced on to a *last* (3.6.13)

3.2.24
Goodyear welted
type of *construction* (3.2.16) in which the *welt* (3.3.70) and the *upper* (3.3.65) are sewn to the insole *rib* (3.2.3) by the *welt sewing* (3.2.48) machine or by hand, then welt is sewn to the *midsole* (3.3.43) or *outsole* (3.3.47)

Note 1 to entry: See Figure 4.



Key
1 upper
2 welt
3 outsole
4 seam
5 rib
6 bottom filling/filler
7 welt sewing
8 insole

Figure 4 — Goodyear construction

3.2.25
halogenation
treatment, usually with chlorine, to improve the *bondability* (3.5.4) of materials

Note 1 to entry: Other halogens such as iodine or bromine may also be used.

3.2.26
lace hooks
<factory> small hooks inserted like *eyelets* (3.3.25) into footwear or boot *facings* (3.3.26) used for temporary closing during *lasting* (3.2.28), to prevent damage