

BIGW

GLOSSARY OF FOOTWEAR TERMINOLOGY.



Aim:

To provide a general description and explanation of comments terms used within the Footwear Industry. The glossary includes various construction terminology and well as description on comment design, materials and components used in the manufacture of footwear. The glossary is to be used a guide only.

A.

Abrasion resistance. The ability of a footwear material to withstand wear, due to abrasion.

Accelerator. A substance added to a rubber mix to accelerate the process of vulcanising and to improve the bottom of footwear in other ways.

Aglet The fastening at the ends of laces that prevents fraying.

Albert The Albert style is a slipper where the vamp includes a tongue at the throat.

Antique finish. This is a dressing applied to an upper and immediately removed except in edges and crevices so as to produce an appearance of old and well cared leather. Also known as antique dressing.

Apron. The part of the upper covering the central upper surface of the foot at the forepart.

Arch .The long framework of the foot extending from the heel to the toe.

Arch support. A built up support positioned under the arch of the foot on the inner side.

Arch Stiffening .Effect given on the inside waist of footwear to give support to the arch of the foot.

Artificial grain. A grain appearance given to a flesh split by use of a pigment finish, with or without embossing on the outer side.

AS. The abbreviation of Australian Standard.

B

Back line The exact centre line at the shoe's back part on a last or shoe.

Back part The quarter section of the shoe, approximately from the heel breast to the back.

Back reinforcement. A piece of material extending down the back of the upper to reinforce the seam, joining the two parts of the quarter Also known as a **back strap**.

Back stay

Material used for reinforcement at the top of the back seam and down the facing. A small oblong back stay piece cut out of the material is held in position while stitching the lining with the upper.

Backer. A fabric material used to give reinforcement and plumpness to reduce stretch in thin leathers like kid, calf and lizard.

Bagged edge. A method of joining and finishing the quarter top edge around the ankle so that the seam joining the lining with the quarter is about 5mm below the folded edge of the quarter.

Ball girth measurement. The circumference of the foot around the middle of the big and small toe joints.

Basket weave. A decorative style of weave occasionally seen in a leather upper.

Beading. The turning in of a skived or unskived edge of an upper section. Sometimes the skived edge is turned over a cotton tape to give a pleasing appearance and more strength at the edges.

Bellows tongue. A broad folding tongue stitched to the quarter at each side.

Belly. The under or belly section of the hide.

Bevelling Reducing the substance of certain components of the shoe bottom by skiving such as sole waist bevelling, piece sole bevelling, and graft sole bevelling.

Binding

1. The treatment of an edge at the top line of the insole using a fabric or leather strip that is then stitched and turned in by different methods.
2. Covering the insole edges of ladies footwear with a strip of leather or fabric.

Blake sewn construction

A method of construction where there is a direct attachment of the upper to the sole.

In this method, the upper is lasted to the insole with tacks, staple or thread, and then the sole is attached by vertical chain stitch or lock stitch. For the hand method, the attachment is made by lock stitch only.

Blind eyelet

Where the surface of the eyelet is not apparent on the outside of the footwear. Blind eyeleting is a method of setting eyelets into the shoe upper in such a way that the eyelet heads shows on the outside, but the barrels do not penetrate the lining. The clenching is done on the reverse side of the upper material or on reinforcing tape. The lining covers the clenched barrel to protect the sock or stocking.

Bloom. A light coloured deposit of ellagic acid on the surface of leather that has been treated with certain tannins.

Blushing A cloudy appearance on finished leather or other material due to the improper evaporation of solvents in the lacquers applied to the leather or material.

Bottom The bottom face of footwear sole that extends from the toe to heel.
The heel breast.

Bottom filler The material used to fill up the cavity formed by the lasted over margin of the upper and insole.

Box toe The material used to cover the toe portion of the shoe under the upper material.

Brannock A foot size measuring device with a sliding gauge.

Break The wrinkling of leather in the forepart of the shoes caused by flexing the shoes while walking.

Breast scouring of heel. Smoothing the heel breast by scouring.

Breathability The ability of the shoe to absorb and pass off foot moisture to keep the foot reasonably dry and ventilated.

Brogue An oxford shoe where the edges of the separate parts of the upper are decorated with a wing tip, bold punching or a perforating on the toe and gimping.

BSI Abbreviation of the British Standard Institute.

Buffing Removing a thin layer from the grain side of the sole or insole using an abrasive to give it a finer look or to allow the colour penetration and prevent cracking.

Burnished edge/upper

The treatment of a specially skived edge given to footwear by a special machine where the fibres on the edges are burnt to give a slightly curled appearance and to give a false folded edge.

Burnishing. Applying polish to create a bright glossy finish.

C

Calf leather This is leather made from the skin of a young bovine animal.

California slip lasted construction

In this construction method the upper is stitched onto the sock lining, which is then stitched to the heel and platform cover. A last is then forced into the cavity. The wedge heel and the platform are stuck to the sock lining and their edges are covered. Finally, the sole is attached by cementing.

Canvas footwear

A footwear style based on athletic footwear that has a canvas or part canvas upper and rubber sole.

It was originally made using the vulcanising method; however it is now commonly made using the cemented construction method.

Canvas lining A plain weave heavy cotton cloth that is usually combed and

Celluloid toe puff

Layers of fabric impregnated with a cellulose solution and kept in moist conditions in air-tight containers.

This toe puff requires no skiving along the cap-edge. The effect

of skiving is produced by stepping the layers of fabrics when they are stuck together.

The toe puff does not have to be softened before insertion, but it must be quick lasted.

Cement. A general term applied to adhesive materials.

Cement lasting The lasting of footwear uppers using adhesive.

Cemented construction A method of footwear construction where the upper is secured to the insole with thread, tacks, staples or cement adhesive

material. The sole is then attached to the upper and insole by cement under pressure. This is the most commonly used method of producing everyday

and fashion footwear. It is also known as stuck on construction.

Cleat A knob or spike on the sole of a shoe for increased traction. A number of cleats are arranged in groups or patterns.

Clicking The action of cutting the footwear components out of upper leather or other materials with the help of templates often referred to as clicking dies, knife, and press.

clicking dies, knife, press A knife made out of high speed steel to the exact shape of the component to be cut, used for clicking by machine.

Clog A term originally used to describe footwear carved from wood.

This term is now used to describe footwear with a wooden or rigid plastic sole.

Closed seam. A closed seam is made by joining two components of an upper with a seam along the edge, then opening them out and flattening them. A fabric or leather strip is attached on the top of the seam, and then two rows of stitches are made on either side of the seam.

Closing. Assembling the components of the upper by stitching or other fastening method.

Collar A narrow stitched-on strip of material around the outside of the top of boot or shoe. Used for decorative effect. It often is padded with foam or other material for comfort.

Colour fastness. The ability of a material to retain its dye and colour without changing, running or fading with wear, storage or cleaning.

Colour marking. Colour marking is used to identify lasts by colouring the top projected portion. In this method, the lasting edges of the sectional parts are painted with definite colour to indicate the sizes.

Counter. A piece of stiffening material that passes around the heel of the boot/shoe to support the outer leather. Also known as a heel counter.

Counter loop This is a pull tab positioned on the heel counter.

Counter pocket In unlined shoes, a leather piece is stitched at the back to conceal the stiffener or counter.

Country of manufacture. The country the footwear is manufactured in.

Court shoe A court shoe has no adjustable fastener, but it can have a decorative strap, bar, elastic gusset or trim. Court shoes normally have raised heels.

Also known as a pump.

Crepe rubber sole. A rubber sheet of varying thickness used as an outer sole. The sheet is produced by coagulating latex and passing it between a series of steel rollers, that are roughly scored on the face impart a pattern to the rubber. The rubber is called crepe.

Crimping To make folds or pleats in the whole-cut upper to facilitate lasting in moccasin-type slippers.

Crocking Rubbing.

Cross trainer A type of athletic footwear with a versatile design that can be used for training purposes in two or more sports.

Cuban heel. A straight-fronted medium or high heel used mainly on women's shoes and cowboy boots and some men's fashion shoes. The heel height varies normally from 35 to 55 mm.

Cushion insole An insole, covered with synthetic or natural foam or sponge sheet or felt, then covered with leather or other materials. It gives a cushioning effect.

Cut out One or more pieces cut out of the upper of a boot or shoe for decorative effects.

Cut soles. Soles cut in different sizes and shapes with different thicknesses ready for selling.

Cut tacks. Tacks resembling hand tacks, made either with sharp or blunt points, used in machine footwear construction.

Cutlan nails Nails in lengths from 5 to 16 mm with either a rectangular head and shank or at the head tapering down into the shank. They are used to attach and to reinforce top pieces and soles.

D

D-ring A D-shaped ring of metal or nylon used for fastening in footwear. Usually associated with hook and loop tape.

Desmodur An isocyanate mixed in trichloroethylene solvent. It is used with an adhesive to:

- speed up drying time and self curing
- increase bond strength.

Derby Also known as a gibson.

Dextrine adhesive. An adhesive prepared from dextrine and water. It has good tack and bond strength. It is used for toe puff and counter cementing and bottom filling. It dries brittle and therefore cannot be used for uppers.

Die A metal cutting piece specifically shaped to cut pieces of material to a pattern.

DIN The abbreviation of German National Standard.

Direct moulded construction. A process involving the use of presses, where:

- a rubber soling compound in the unvulcanised condition is pressed and cured onto the leather or canvas upper previously lasted to the insole.
- Moulding and vulcanisation of the rubber compound and adhesion to the upper are carried out simultaneously direct moulded sole. The upper and sole of the footwear are formed and the sole is cut to the desired shape. Then:

- A mould is placed around the sole and thermostatically controlled heat softens soles and compound. Pressure applied then forces the sole into the desired shape. Chemical changes take place in the sole that result in the vulcanisation of the sole with the upper material for a firm bond.

Direct vulcanisation. The process of curing a rubber compound (originally in soft unvulcanised condition) to a lasted upper under high pressure.

Doped finish. A pigment coating with a proper binder which is colour matched to the shoe upper. It is applied at the finishing stage of manufacture.

Double eyeleting. In this method of eyeleting for heavy duty footwear, two operations are performed. In the first operation, one large eyelet is inserted from inside the upper, through the lining and the outside material, and clenched on the surface. In the second operation, another eyelet with a smaller diameter barrel is inserted from the outside, and clenched with the head of the first eyelet so that the head of the second eyelet completely covers the clench of the first eyelet.

Dowie slipper construction.

A method of footwear construction where a string is passed through the lasting edge of the upper, then the upper is laid over the last. When drawn tightly, the string moulds the upper to the last. At this stage, the sole is attached. This type of footwear requires a very soft upper. The construction is very flexible.

Dressing. Cleaning and polishing footwear with liquid or paste polishes and creams.

Dry-stick assembly. A construction method where an adhesive is applied to both the surfaces of the work pieces. The pieces are then left open until the solvent has evaporated. The two adhesive coated surfaces are then brought together and pressed. Due to auto-adhesion or the dry tack of the adhesive film, an adhesive strength is obtained immediately which approximates to the final adhesive strength.

Dubbin. A waxy dressing applied to heavy duty and walking footwear to keep the leather soft and maintain water resistance. Related terms include:

- polish
- wax.

Dutchman A wedge inserted between the lifts of the heels or between the insole and the outsole to throw the foot inward or outward. It is used to correct posture.

Dutch heel A heel with a wide base that slants straight to narrower top lift.

E

Edge setting Finishing the edges of the soles with polish. The polish is applied under heavy pressure by rubbing or ironing the edges, with or without wax, to give a fine uniform finish and gloss and impart water proofness.

Edge treatment Giving different treatments to the edges of upper components and to the edges of the soles and heels during the manufacturing processes. Examples are skiving, gimping, binding and edge trimming.

Edge trimming Shaping the edges of the soles with trimmers to obtain the required shape. Shapes include:

- fudge edge
- bevelled edge
- round edge
- square edge
- extension edge.

Edging Removing the sharp edges of the leather. Shoes with an upper surface of stretchable leather or fabric backed with flexible yarn woven fabric.

Elastomer Various macro molecular materials that have rubber-like properties. Used for footwear bottoms.

Embossing A method of print or raising-up decorative features on a surface by heat and pressure.

Ethyl vinyl acetate. A foam cushioning material initially used as midsoles. It has replaced natural rubber in beachwear. Abbreviated to EVA.

EVA The abbreviation of ethyl vinyl acetate.

Eye stay Refer to lace stay.

Eyelet. A ring of metal or other material with a barrel. It is inserted in footwear upper to provide a durable ring for lacing. Regular eyelets are driven in from the outside of the upper, while a blind eyelet is concealed on the inner side of the upper, leaving the lace hole with a raw edge on the outside. The head may be of different shapes, including circular, hexagonal, triangular or square.

Refer to:

- blind eyelet
- blind eyeleting
- celluloid eyelets
- double eyeleting
- eye stay
- eyeleting
- grommet
- invisible eyeleting
- lace hook
- lace stay
- mogul
- peanut
- raw eyelets
- solid celluloid head eyelets
- worked eyelet.

Eyeleting Fastening eyelets to the footwear upper.

F

Fabric Cloth that is knitted, woven or felted from a natural or man-made fibre.

Facing The portion of the quarter that carries the eyelets for lacing. Facing can be either whole-cut with the quarter or joined.

Facing materials. The pieces of material used between the upper and the lining at the face of the quarters (where eyelets are fitted) to strengthen the holding power of eyelets on the upper.

Facing rows. Decorative stitching that is sewn parallel to the row of eyelets, or sometimes in other decorative manners.

Factory. Any manufacturer of finished shoes, shoe uppers or components.

Fake bottom. A black waxy finish applied by hand to the bottom of footwear over the buffed surface of the sole to give a shine on polishing. It is applied at the bottom finishing stage.

Fakes Water emulsified waxes produce oil-in-water dispersions that may be thin and creamy or thick and pasty.

False welt A strip of leather or any other suitable material stitched or stuck along the extended edge of the sole to resemble a welt. Also referred to as a Mock Welt or randing.

Fastener Refer to buckle, buttons, hook and loop, laces, Magic tape, touch and close fasteners, Velcro™ or zip.

Feather The edge all around the bottom of a last.

Feather edge The area of the shoe where the upper joins the sole. Also known as feather line.

Feathered. An edge thinned down to create minimum resistance or obstruction.

Feathering insole. Bevelling the flesh side edge of the insole, either all around or only at the seat, to facilitate moulding of the upper over the insole.

Featherline Refer to feather edge.

Felt. A sheet made of wool, hair or fur fibres matted together and rolled flat.

Felt sole. A sole compounded from felt and runner latex. It is used as an outer sole for light indoor footwear.

FIA The abbreviation of the Footwear Industries of America.

Fibre board. Board made out of materials based on leather fibres or alpha cellulose fibres, or a combination of leather and alpha cellulose fibres, which are generally used for insoles and counters.

Fiddle shanks High arched steel shanks suitable for high-heeled ladies footwear. These are made from about 12.5 mm wide steel. They are full width for about half the distance from the heel-end, and then narrow to about 8 mm at the waist and forepart. The shank has a V-shaped cut at the seat end and has a tack hold at each end.

Filler A composition of cork, felt, rubber, spur glass or a substance made of sawdust or felt gunny to fill the gap between the sole and the insole.

Finger stitching. Stitching that reinforces the lapped quarter of a shoe or boot.

Finishing footwear. The final operation performed on footwear after constructional work has been completed. This activity improves the quality of the footwear by making the edge resistant to water and improving its appearance.

Fit. The ability of the shoe to conform to the size, width, shape and proportions of the foot.

Fitted heels Wooden heels used in ladies' footwear. They are not placed on the top of the sole seat as is usually done. The sole is cut away to make room for the heel to be fitted so that the heel breast of the wooden heel fits the cut edge, and the outer edge of the heel rests directly upon the leather edge of the heel.

Fitting sample Samples for wear testing only. Must be fitted and made with production equipment.

Fittings Measurements of girths of the last in relation to the lengths.

Flared outsole An outsole with a rim or edge that flares or extends outward to increase stability.

Flat binding A kind of edge binding done in one operation. A special stitching machine turns the binding in a U-shape and then stitches through it. The upper may be lined or unlined.

Flat last. A last with little arch or toe spring.

Flexibility The ease with which the components can be bent. This is a property of all footwear components that facilitates the easy bending of footwear components along with foot movement during walking.

Finishing the sole edge so that the under edge of the sole remains more projected than the top edge.

Foam. Any of the various resins in sponge or cellular foam with an open or closed cellular pattern.

Foam rubber Spongy rubber made from latex by foaming the rubber before vulcanising.

Folded edge The edge of a skived upper that has been turned over to give a neat finish.

Folding skive. Skiving done to facilitate folding or turning in of an edge of upper leather.

Footbed. An insert that is shaped or moulded to match the approximate contours of the bottom surface of the foot. These inserts are widely used in athletic footwear.

Footwear any foot covering in the form of shoes, boots, slippers or hosiery used for utility and or dresswear.

Force lasting This is the operation of forcing the last in the upper. The insoles are stitched together with the upper, so that the last is forced in for the subsequent operations.

Forepart The front part of a shoe. This includes the upper, the sole and the shoe last.

Foxing 1. A piece of leather that forms the lower part of the quarter of a boot or shoe. It is a sort of reinforcement that conceals the joint of the upper and sole.

2. A rubber strip of 10 to 20 mm width placed around the bottom, over the sole and upper of a rubber boot or shoes or canvas boot or shoes for water proofness. It is then vulcanised.

Foxing strip An external cover strip used to protect the sole and sole-edge of the upper.

French binding. A treatment that is given to the edge of the uppers. A strip of binding material is stitched to the upper, grain to grain, very close to the edge, then pulled up over the top of the upper and down again on the other side. It is then sandwiched between the upper and lining, showing a pipe of the binding material all along the edge.

French heel. A heel that is similar to a Louis heel, made from wood covered with leather.

Fudge edge. An edge stitched very close to the upper, then trimmed closed.

Full sock. A piece of leather or fabric that is pasted or kept on the insole of the shoe to cover any grindery and stitching inside the shoe.

A full sock may also provide better appearance.

Full welt A welt that is long enough to run all around the sole-edge.

G

German National Standard Abbreviated to DIN.

Gibson This is usually a low heel, two or three eyelet lace-up shoe. The front part of the quarters, called tabs, are apart and stitched onto the vamp. The shoe is plain fronted; it may have a toe cap, a mock stitched toe cap or an apron front show.

This style is also known as a derby.

Gillie tie Pieces of nylon tape that are folded and attached at the eye stay to form a loop for laces to pass through.

Gimped edge This is a kind of edge treatment for an upper. It is done by punching the raw edge of the upper to form an angle or semi-circle. Gimping is sometimes done in the edge of the sock lining of fancy shoes and sandals.

Girth The distance around the foot, for example, at the joints.

Goodyear welted construction.

A very flexible method of boot or shoe construction in which the insole and the upper are sewn to the welt, which in turn is stitched to the sole. No seam is visible inside the boot or shoe. Also known as welted construction.

Gouged edge A type of gimp that has a series of round wedge-shaped pieces on the edge of the upper components.

Grained leather This is leather with the grain layer left intact or only lightly corrected.

Grommet A metal or plastic eyelet used on leather or cloth.

Groove channel A type of open channel where an open groove in the shape of U is cut in the sole at a uniform distance along the edge to allow the stitches to bed in it. This is generally done on hard or thick leather, rubber, plastic nitrite or resin soles.

Gusset A piece or insert of rubber or elastic webbing in the side of a shoe.

Gypsy seam. A seam running from the throat straight down the front of a boot or shoe to the toe, making a vamp.

H

Half size The increments between full sizes.

Half sock A piece of leather or suitable material that partly covers the insole. This particular type covers the seat and waist but terminates at the joint.

Hand lasting The lasting of the upper by hand instead of using a machine.

Hand-sewn construction

A method of construction in which the sole is attached to the upper by hand. This also refers to the construction of a moccasin plug at the vamp to give a raised seam or puckered look.

Hang tag A label or tag attached by string, nylon or elastic to a shoe to describe the special features of the related product.

Heat seal A decorative treatment applied to the upper material providing a raised and coloured feature.

Heel The seat part of the footwear bottom; sometimes attached separately and sometimes as an integral part of the sole. The heel may be of leather, rubber, wood, plastics (like PVC or polyurethane), nitrile, masonite board, or particle board.

Types of heels:

- built heel
- continental heel
- Cuban heel
- Dutch heel
- fitted heel
- flange heel
- French heel
- hassock heel
- illusion heel
- keg heel
- Louis heel
- military heel
- open heel
- semi-Louis heel
- Spanish heel
- spike heel
- spliced heel
- spring heel
- stiletto heel
- wedge heel.

Heel attaching. Permanently fixing the heel to the seat of the footwear.

Heel base The part of the heel next to the sole. It is usually made concaved, so that it fits the seat of the sole.

Heel brace. A metal brace or frame to the outside of footwear to keep the heel straight.

Heel breast The front edge of the heel facing towards the toe.

Heel breasting. Cutting the surplus material from the heel breast.

Heel building This is the process of attaching several lifts having a rand or skeleton lift at the base according to required thickness.

Heel counter. Also known as a counter.

Heel girth measurement. The girth measurement around the tip of the back of the heel and the middle of the curve of the foot (where the leg joints with the foot).

Heel grip A name given to a counter-piece of either suede or sheep skin, with flesh side out, inserted at the back of the quarter. This serves as a counter lining and does not allow the foot to slip out of the footwear while walking. Also due to its rough surface, it holds the sock from moving.

Heel height .The thickness of the heel in relation to the toe spring. The height is determined by the style of the last. The correct heel height gives from 6 to 8 mm toe spring for normal walking shoes.

Heel lift Layers of material used for intermediate heel building.

Heel pad A pad of leather, felt or rag that is placed in the heel of the footwear, inside the covering, at the point where the heel of the foot rests.

Heel pins Nails that are grooved or spiralled especially for attaching heels of boots and shoes.

Heel Plates. Steel plates made to the size of the heel in a U-shape. There are four to six nail holes in the plate for attaching it to the heel.

Heel scouring Shaping and smoothing out the edge or surface of the heel with abrasive.

Heel seat The portion of the boot or shoe bottom where the heel is fitted.

Heel stay A pasted lining placed in the heels of oxford or other low cut shoes to prevent the shoe from slipping at the heel.

Heel tip A reinforcement of metal, rubber or plastic that is fixed to the back outside edge of a top piece of heel to give increased wear resistance during walking.

Hinged lasts A last made in two parts, hinged together for easy insertion into, and withdrawal from, the footwear.

Hob nails. Nails similar to protector studs with heads of varying styles, including bullet, Victoria, pyramid, star and Irish. Hob nails are used to reinforce soles and heels of heavy boots and shoes.

Hook and loop tape. A type of tape used as a fastener. It comprising of two strips of fabric, one with a dense arrangement of small nylon hooks and the other with nylon pile. When the strips are pressed together, one hooks into the other sufficiently firmly to hold the fastening together. This product was invented by Velcro™ corporation but it is not known as Velcro™. A variant on this component uses a loop tape in conjunction with a tape containing minute mushroom shaped protuberances. The preferred generic name for this component is hook and

loop tape or touch and close fasteners. Velcro™ is only to be used when genuine Velcro™ corporation products are used or referred to.

Hot blasting Giving some form of heat treatment to the leather upper to smooth out any wrinkles and to tighten up the grain surface of the leather.

Hot melts Thermoplastic adhesive of polyamides or polyesters that are generally used for lasting.

Hot puffs A type of toe puff made of heavy woven cotton cloth that has been impregnated with a molten mixture of resin and wax. It is naturally hard and requires softening by heat after its insertion.

I

Indian moccasin A genuine moccasin construction with a vamp plug and puckered plug stitching, with or without a fringed collar or decorative beading.

Injection moulded soles. A variation of the direct moulded sole. In this process, the footwear upper and insole assembly are placed in an outsole shaped mould. The outsole material is then injected into the die to form the outsole.

Injection moulding

1. A construction method where PVC is injected into the sole cavity to form the sole of footwear with an upper.

2. A process in which the footwear as such is moulded by injection.

Inked bottom A name given to the operation of a particular type of finishing. In this case a quick drying black pigment is applied to the already buffed sole. It is then polished on the machine or by hand.

Inside foot joint position. In a normal foot, the inside foot joint position is at five-sevenths of the length of the foot. This is measured from the back at the inside of the last.

Inside joint of last. A point located at two-thirds of the standard last length. This is measured from the back at the inside of the last.

Insole The inner sole of the shoe which often forms the surface in contact with the foot. The insole is an essential feature of most traditional footwear construction methods, but in some modern construction methods, the insole may be replaced with a sew-in sock. Insoles may also be covered with a sock or footbed.

Insole of the last. The bottom of the last is called the insole of the last.

Insole of a shoe. A component of the shoe bottom that rests at the bottom of the last and holds the upper and the sole firmly in position.

Insole slashing Making the insole of machine-sewn, cemented or other types of constructions more flexible. The operation consists of putting a few rows of slashes across the forepart of the insole. These slashes are not more than one millimetre deep.

Insole tack. A round parallel shank with a square pyramid point. Insole tacks are used to tack insoles to lasts that have metal plates. This is not acceptable practice in the production of product for Woolworths Ltd.

Instep The front part of the arch of the foot.

Instep girth measure. The girth measurement of a last or foot taken at the middle of the waist through the instep point.

Inner lining. An additional lining, usually of cotton drill, between the vamp lining and vamp of the footwear. It aids in preserving the shape during wear.

Interlaced A sheet made by interlacing strips of leather or other material. It is used for making the whole or part of an upper.

Interlining A material used between the footwear upper and the lining to increase the softness and plumpness of the upper materials.

International Standards Organisation Abbreviated to ISO.

J

Job lot. A bulk of merchandise bought or sold by the supplier

Joiner An elastic or nylon string that is used to join the shoes or attach swing tags.

Just in time The schedule that ensures that supplies or materials are delivered to the manufacturer on a precise deadline. Abbreviated to JIT.

JIT The abbreviation of just in time.

Jute A glossy fibre of an east Indian jute plant. Used for some shoes with rope soles.

K

Keg heel. A heel with rounded breast and back.

Kiltie Casual or athletic footwear with a slashed tongue overlapping the lace rows at the instep.

L

Label brand The brand of the footwear.

Lace hook Small hooks inserted like eyelets into boot/shoe facings to hold the lace for fastening.

Lace stay. Also known as eye stay. A strip of leather or substitute material applied on the front of a laced boot or shoe to strengthen and reinforce the eyelets or eyelet holes.

Laces Made of cord or leather and are used as a fastener. The laces are passed through eyelets, D-rings, or gillie ties. Laces may be tipped at each end with an aglet. They may also be used as a decorative trim at the front vamp or passed through the collar of the footwear.

Lapped seam A seam produced by laying one part over another and stitching together.

Last The wooden, metal, or synthetic mould over which the footwear is constructed. It gives the footwear its shape in accordance with the volume of the foot. The last is a reproduction of the approximate shape of a human foot.

Last girth scale The amount of increase or decrease in girth measurement of a last in relation to its increase and decrease in sizes and fittings.

Last slipping. Removing the last from the finished or ready footwear.

Lasting Moulding the upper to the exact shape of the last by pulling and then attaching it to the insole by thread, tacks or staples or permanent cement.

Lasting allowance. The allowance provided at the free edge of the upper to enable the upper to be lasted properly.

Lasting jack An iron stand fitted with a last peg where the last with the upper is placed in during lasting.

Latex cement. An adhesive or cement that is produced with chemicals to prevent putrefaction and to increase the bonding power of latex.

Lay out An arrangement of different components of leather or fabric in a systematic manner to minimise waste.

Leather. This is a material from animal and reptile skins that is used in footwear for:

• uppers; • lining • soles • heels.

There are many types of leather including:

• aniline leather • calf leather • corrected leather • grained leather • lamb skin
• nubuck

Leather can suffer from various problems including:

• bloom; • blushing • mildew • pipiness.

Certain materials are manufactured to mimic leather, some of which are

• polyvinyl chloride • resin rubber soles.

Leather boards. Boards that are made out of a mix of scrap leather pulp and binder, then pressed into sheets of varying thickness. They are generally used as insoles and stiffeners.

Leather layer boards. Boards made out of thin splits of leather, cemented together and processed with gums, resins, rubber solution and glue. They are used for insoles and stiffeners.

Length scale A method of specifying standard lengths of feet or lasts, generally adopted in the footwear trade. There are various methods including English, American and Paris Points.

Lifts Pieces of leather or any other suitable material cut in the shape of the heel. The heel is built of lifts.

Lining The inside material used under the upper. Lining is generally cut to the same shape as the upper, giving certain allowances. Lining is named after the components, for example, vamp lining, tongue lining and quarter lining. As a rule, vamp linings are generally taken out of fabric, whereas the others are taken from tanned goat, sheep or calf skins or splits. Note: It is the quarter lining content that must be specified on the commerce markings.

Linings may be used in just the back of the shoe, or as a full lining covering the entire shoe interior.

Littleway construction. A method of construction that is similar to the machine sewn method except that no lasting tacks are used. The lasting is done using littleway staples driven in with the points curving inwards. This leaves the inside of the insole free from any marks of grindery. The stitch is a lock stitch instead of a chain stitch.

Loafer. A laceless slip-on style of shoe with a moccasin style forepart and a saddle over the instep.

Lock stitch Lock stitch is formed by two threads known as the upper (or top) thread and bottom thread. The threads are locked (knotted) and pulled to keep the lock (knot) in the middle of the material.

Logo The distinctive signature, symbol or insignia of a business used as a kind of trademark.

Louis heel A slender heel with a curved back line and a lip extending partly under the shank of footwear. This results in a curved breast that is covered by a thin layer of sole leather during the footwear making process. The heel height ranges from 50 to 75 mm.

M

Magic tape Magic tape is a clear adhesive tape that is not typically used for footwear. Magic tape is a registered trademark of the 3M company and should not be used except when referring to that specific product.

Making A term used to describe lasting and other associated processes.

Mark down The marking of merchandise for sale at a reduced price or below original retail price.

Marking The printing or stamping of sizes and other details on the lining of the footwear.

Mary Jane. A classic style consisting of a low-heel shoe with an instep strap.

McKay sewn construction. A type of footwear construction where the upper is Tack-stapled or cemented-lasted and the outsole is attached by a chain stitch seam. The stitches are concealed by a channel in the outsole and passed through the outsole, insole and upper.

Medallion The decorative perforated pattern punched onto the top of men's and women's oxford shoes.

Micro-cellular rubber soles. A sponge rubber sole that has extremely small pores. It is made from resin rubbers by incorporating a blowing agent that, at the temperature of vulcanising, decomposes and produces the sponge effect. This has cushioning effect and is hard wearing.

Micrometer A dial gauge with calibration in millimetres and fractions thereof used to measure the thickness of leather and its cut components.

Midsoles Soles that are cut to the shape of the outsoles and used between the outsoles and insoles to increase the thickness of the soles.

Mildew Any fungus or mould that attacks or appears on organic material such as leather.

Military heel Straighter than a Cuban heel and not so high.

Moccasin The name applies both to the construction methods and style. It is usually a shoe for casual wear. A true moccasin has the upper material running under the foot with an apron or centre seam on top. If it has a sole, it may be stuck on or stitched on. Used for men's and women's shoes and slippers.

Mock welt construction. A single-sole footwear construction that has a strip of leather stitched around the leather edge of the upper with the sole to give it an appearance of welted footwear

Mogul A large footwear eyelet.

Monk shoe A closed shoe, usually men's, with a plain toe. It is held onto the foot with a wide buckle instep strap.

Moulded footwear. Footwear where the sole is moulded directly to the shoe. It may be direct vulcanised rubber or injection moulded using thermo-plastic polymers such as PVC and PU.

Mud guard A piece of upper material that forms the side wall of the upper in apron fronted shoes.

Mule A mule is a shoe, slipper or sandal without quarters. It may be held on the foot by a high or low cut vamp, with or without the toes exposed. Mules can be flat, have a heel, or have a wedge heel.

Mulling Mulling is an artificial upper treatment that allows the material to last easily and not break. It is achieved using heat and moisture.

N

Neoprene The soles of footwear made from polychloroprene rubber that resembles natural rubber.

Net pattern A pattern that has no allowance.

Non-marking sole. Sole that is constructed out of a material that will not mark flooring during wear.

Notch V-shape cut in the underlay and cut parts of upper components that facilitates lasting and identification.

Nubuck. This is leather that is buffed on the grain surface to produce a fine nap finish.

Nylon mesh Nylon threads woven in a mesh form and used in footwear, mostly as an upper or a vamp. Nylon mesh is most commonly used in athletic footwear.

O

Oil-resistant sole. This is a sole that is constructed out of a material that is resistant to oil from floor spills. Oils can be absorbed into or degrade non-oil-resistant soles.

One-bar shoes A bar shoe that has one bar in front of the ankle for fastening.

Opaque finished bottom. Where the bottom is finished with pigments to cover up any defects.

Open heel Where there is no counter or material at the heel other than a sling of leather or material to heel the footwear.

Open shank A style in women's footwear where the bridge of the shank is open and the upper is cut away to reveal the arch of the foot.

Open toe A tiptless shoe with an opening that is shaped and bound or stitched to reveal the toes.

Outside heel attachment. A method of attaching heels to the lasted footwear. In this method, the nails for attaching heels are driven from outside, going from the heel to the inside.

Outsole The bottom component of the sole that comes in direct contact with the ground.

One-bar shoes A bar shoe that has one bar in front of the ankle for fastening.

Oxford In this style, the front edges of the quarters are stitched close together under the edge of the vamp. The tabs are fixed at the bottom and open to the top in the shape of a V. It is usually fitted with four or five eyelets and a toe cap.

P

Painted bottom This is a particular type of bottom finishing that is carried out with a suitable pigment finish that has a good covering power. The finish is generally used for cheaper grades of footwear where inferior quality soles are used.

Painted on plastic puff. A hardening liquid painted on the reverse side of the leather (upper) to stiffen it, instead of using a toe puff. It is used mainly for unlined footwear.

Pattern grading Reducing or increasing the patterns proportionately of a standard pattern to suit every size. This can be done either by hand or machine.

Peep toe shoes A type of shoe that has a small opening that reveals the toes.

Perforating. Ornamenting of the uppers by means of series of holes of various shapes and sizes.

Perforating upper. An operation used for ornamenting footwear uppers using a series of holes of varying shapes. This gives a pleasant appearance to the upper.

permeability to air and water vapour the ability of the footwear material to pass air and water through its pores.

Piped seam A seam produced in the same way as the welted seam. The only difference is that instead of using a single piece of material, a prepared folded piping is inserted between the two outside sections so that the folded edge is in the exact position relative to the seam.

Pipiness. An inherent characteristic of certain leathers that can be aggravated by poor lasting or laminating systems.

Piping A strip of leather, fabric or plastic folded over itself, stuck and then inserted between two pieces of material being stitched together.

Pitch The correct heel height arrived at by elevating the seat end of the last from a horizontal surface so that the last stands on its tread line. In general practice, the higher the pitch, the wider and shorter the forepart and the narrower the waist and the seat.

Pitch of last The distance between the horizontal surface and the seat of the last, where the seat is raised from the horizontal surface to its correct height so that the last stands at its tread line.

Plain edge sole A sole with a narrow, closely hugging edge.

Plated lasts These are lasts that have metal plates on the bottom.

Platform in shoe. The piece of material between the soles and the insoles. It is usually hard felt, cork (natural or processed), hard sponge rubber or rubberised cork. It increases the thickness of the soles.

Plug The apron front of a moccasin shoe.

Polish A cream substance used on the upper material of footwear to provide a clean, shiny and protective finish to the material. Related terms include:

- Dubbin
- wax.

Polyamides A polymer used in the manufacture of promeric uppers, toe puffs and adhesives.

Polyesters A polymer used in the manufacture of promeric uppers and adhesives.

Polychloroprene cement. An adhesive made of neoprene with magnesium oxide, antioxidant zinc and oxide dissolved in solvent toluene.

Polyethylene Low density polyethylene is used in the manufacture of insoles and toe puffs. High density polyethylene is used in the manufacture of footwear lasts.

Polypropylene A polymer used in the manufacture of heels and promeric uppers.

polystyrene A polymer used in the manufacture of heels, toe puffs and stiffeners.

Polyurethane Is a polymer used in the manufacture of soles, foam lining, heels, top pieces, promeric uppers and adhesives. As a soling, the material is usually used in a cellular form, which is a strong, lightweight and highly durable material. Polyurethane is abbreviated to **PU**.

Polyvinyl chloride. A polymer used in the manufacture of uppers, linings, soles and

heels. It is a thermo-plastic compound that has outstanding resistance to water, alcohol and alkalis.

Polyvinyl chloride is designed to simulate leather in appearance. Polyvinyl chloride is abbreviated to **PVC**.

Pounding An action performed by a pounding machine. It flattens creases that occur during the lasting of uppers, and creates a clean feather edge.

Pre-finish sole A sole that is finished by trimming before it is attached to the footwear.

Pre-lasted upper. An upper with an insole, with or without a shank, which has been put on a last and then the last has been taken out.

Prick holes. Holes or marks produced by a sharp pointed awl into the leather or fabric to allow upper closing.

Protective toe cap. A strong shell that is placed in the toe of the footwear, generally between the upper and its lining, in order to protect the toes from being of crushed.

Protector studs Round shank nails that have a large diameter flat head, patterned with serrations. These are used in a sole immediately behind a toe plate, or in a heel inside the heel plate. The head remains on top and the stud is driven into the sole or heel.

PU The abbreviation of polyurethane.

Pull tab A small piece or strip of upper material or tape that is fixed to the upper of the shoe as either a feature, or for the functional purpose of helping to pull the shoe on. Refer to counter loop.

Pull up A test of leather quality and depth. The finger knuckle pushes up from the underside of the leather to form a knob. The knob surface reflects a different tonal effect; the quality known as pull up.

Pump Refer to court shoe or style.

Punching The operation of making holes in upper components, either as decorative perforations or for eyeleting.

Putting into colour. Dyeing or inking the edge of the sole and heel after they have been properly trimmed and scored.

PVC The abbreviation of polyvinyl chloride.

PVC moulded soles. Made from polyvinyl chloride. They are previously moulded or shaped to correctly fit the contour of the lasted footwear bottom, without having to be forced into shape. PVC soles Synthetic soling materials made of polyvinyl chloride.

Pyroxylin cement. This is cement with a nitro-cellulose base. It is mainly used for attaching leather soles, Louis heels, breast flaps, sticking cellulose puffs and contours, and cement lasting with upright tacks.

Q

QA Abbreviation of quality assurance.

QC Abbreviation of quality control.

Quarter The section of an upper that covers the heel and connects with the vamp of the footwear. It is sometimes joined at the back by a back reinforcement or back strap.

Quarter heelstrap. The waist post strap of a sandal.

Quarter lining. The material used as a lining of the quarters of footwear. Different materials can be used.

Quarter reforming An operation where the quarter tops of footwear are given a final shape at the finishing stage. The operation consists of:

- shrinking and pressing the top edge of the quarter lining under the top edge of the upper
- turning or rolling the top edge of the shoe inwards along the lining
- finally, ironing or shrinking out any fullness in material.

Quarter tip A semi-circular piece of rubber or metal that is attached to a built heel at the back of centre, towards the outside where maximum pressure and strain is exerted when walking.

R

Rand 1. A piece of material curved in the shape of a horse shoe and fitted around the top of the heel. The inner edges are shaved thin, creating a hollow that helps to form a rounded heel seat.

Rand 2. A strip of material attached to the top of the bottom running around the feather (lower edge). It is often decorated with stitching or notching.

Rand lift A narrow strip of leather skived at the inner edge. It is used at the seat for coupling.

Randed sole. An extension edge sole randed on the edge for a more stout appearance.

Raw eyelets. Eyelets that are merely holes through the lace stay, without the visible annular metal ring.

Recede This term applies to toes of shoes, or last that are drawn down sharply towards the toe, so that the top of the toe recedes. It makes it comparatively narrow and pointier rather than blunt in outline.

Relasting. Putting the last in again after having performed certain operations. For example, in single sole footwear the last has to be slipped off prior to the sole stitching, then slipped back, that are, relasted, to enable the remaining operations to be completed.

Relative humidity Abbreviated to RH.

Resin rubber soles. Footwear soles made of synthetic rubber. They are made almost in the same manner as that of vulcanised natural rubber soles, the difference being in the nature of some ingredients. They look like leather soles. They are hard wearing, easily processed and readily stick on, but they have a tendency to spread in wear. They are completely impermeable and it is difficult to finish them.

Restricted grading. Certain components in the upper may not need the increase or decrease for different sizes because it may look ugly or may bring in some difficulty, for example, one bar shoe if the bar width is not restricted, different sizes of buckles would be needed for different sizes of shoes.

Resubmission When a sample has been submitted before but corrections were required.

Rework The product has been rejected but can be made acceptable after further work has been carried out.

Rise The difference between the joint and the instep girth measurement.

Riveted construction. A method of footwear construction where the sole is secured to the upper and insole with rivets instead of thread, screws or pegs.

Rivets These are grinderies made of brass or steel wire. They have a flat round head with spear shape points and parallel shank.

Rolling An operation intended to level the substance by pressing down the high spots. It is also used to solidify the fibres and increase its resistance to abrasive wear. Components requiring this effect are passed through two rollers moving in the same direction, the pressure of the rollers can be regulated as desired.

Rope sole Hemp, jute or fibre braids that are coiled in the shape of a sole and fastened together with thread or adhesive.

Rope stitched Heavy corded stitching used on the edges of soles or elsewhere chiefly for ornamental effect.

Rough rounding This is the shearing off of any surplus sole material around the edges prior to the sole stitching operation. This operation can be done on rough rounding machines.

Roughing soles The process of opening up the fibres of the components to be cemented for attaching, with the help of wire brush, for better penetration of cement.

S

SA Abbreviation of Standards Australia.

Saddle seam A seam made by stitching through the pieces being laid so that the edges are even, instead of being lapped.

Saddle stitch Saddle stitch is formed by using two needles or bristles attached to two ends of the same thread. The needles are passed through the same holes in opposite directions to form a cross seam. This is also known as bristle stitch.

Safety shoe A shoe with a high or low upper that always has a protective metal toe-cap. The shoe may have various reinforcements, such as an elastic layer between the upper and the lining, penetration resistant sole, or non-slipping soles. Safety shoes intended to protect the foot against the risk of accident by crushing, impact, possible penetration and falling.

Sandal An open type of footwear where the upper part does not cover the entire foot. The upper part of the sandal consists of one or more components, including the strap and vamp. These are assembled together by various methods. The bottom part of the sandal consists of components such as an insole, sole and heel.

SATRA Abbreviation of Shoes and Allied Trades Research Association.

Scouring soles and heels. Giving a smooth surface to footwear bottoms and heel edges with the help of various kinds of abrasive.

Scuffs A style of footwear that has no back part or back strap. The foot can slide in and out of the shoe without adjusting any fastener. Also known as slip-ons.

Seam The joins where two or more components of a shoe are stitched together.

There are several types of seams:

- butted seam
- closed seam
- cobblers seam
- gypsy seam
- lapped seam
- piped seam
- saddle seam
- welted seam
- zigzagged seam.

Related terms include seam:

- durability
- rubbing
- strength.

Seam rubbing Flattening a seam by rubbing down the closed seam when it is opened up. This is done to prevent the seam forming a ridge that would hurt the wearer. It also makes it easier for the closing operations.

Seat The area of the footwear under the wearer's heel.

Seat lasting. Lasting the seat of the footwear after toe lasting.

Seat level lasting. A method of lasting where the upper is put level with the seat of the last.

Seat nailing. Nailing or riveting the seat portion of the sole in the seat of the footwear after attaching the sole.

Seat of the shoe. The portion of the shoe at the back where the heel is fixed.

Seat ploughing. Removing the surplus material around the heel seat using a ploughing knife.

Seat shaping A machine process that removes any lasting pleats and wrinkles to obtain correct shaping of the seat.

Seat socks Sock linings covering only the seat portion of the insoles of footwear. They are generally used in welted construction and cemented construction shoes.

Seat wheeling. Decorating the heel seat of footwear at its upper edge with a heated metal wheel.

Sewn and riveted construction. A method of construction where the uppers are **tack-lasted and the sole is sewn on.**

Sewn and stitched construction. A method of construction where the upper is lasted to the insole with tacks, as for machine sewn work. Then the sole and the middle sole, or the sole and a rand together, are sewn to the upper and insole. Finally the sole is attached by lock stitch in the same channel as the projected portion of the middle sole or rand.

Shank A piece of material, such as steel, wood or fibreboard, which is inserted between the sole and the insole. It extends from the heel seat up to point behind the ball line. It is used to stiffen the waist portion of the shoe so that it can support the arch of the foot.

Shawl tongue A fringed tongue that holds down the instep and conceals the eyelets of the footwear.

Shoe last Shoe lasts are made very thin along the sides, which allow the quarters of the shoe made on them to fit closely around the ankle. The back curve of the shoe last is more pronounced than that of a boot last. These lasts are made flatter on the outside waist and are made hollow at the vamp.

Shoe durometer An instrument with a calibrated dial where the scale runs from 0 to 100 degrees of hardness. It is used to measure the hardness of rubber.

Shoes and Allied Trades Research Association Abbreviated to SATRA.

Side-laced A shoe laced down over the ankle on either the inner or outer side instead of in front.

Side lasting The lasting of the sides of footwear after the pulling over process.

Side lining A stiffened fabric lining generally put at the sides of the vamp in between the lining and the upper to give it additional strength and a better appearance.

Silhou-welt construction. This method is the same as welted methods up to bottom filling. The welt required is lighter and narrower than normal. The sole is attached by cement.

Skived An area reduced in substance, generally where an overlap of two pieces of leather join, such as a tongue to vamp junction.

Skiving is also used to minimise discomfort or manufacturing difficulties, such as at the fold top line of the footwear. Skiving. The method of reducing the thickness of an edge of a leather component by slicing off a tapering section.

Skiving stiffeners and puffs. Reducing the thickness of the stiffeners and puffs at the edges by slicing off a tapering section to minimise difficulties in lasting them, and to prevent them from becoming visible through the upper.

Slide A footwear ornament described as a buckle without the tongue.

Sling-back A court shoe with a strap around the rear.

Slip beading A kind of upper edge treatment. A prepared folded fabric tape or a leather strip is placed under the outside section of the upper to protrude slightly from the edge. It is stitched over the upper onto the lining.

Slip-lasted construction. A process of footwear making where the last is slipped or forced into a pre-fitted sewed upper. Refer to California slip lasted construction.

Sock The thick lining material that partially or completely covers the insole of footwear. Also known as insock.

Socketing

1. Inserting the sock lining into the footwear.
2. Pasting the sock lining to the insole.

Soft toe. A toe made without stiffeners.

Sole adhesion. The strength of adhesion between the upper and the sole.

Sole adhesion tester. A non-destructive tester used to assess a shoe's sole adhesion.

Sole attaching Permanently fixing the outsole of the footwear to the upper by stitching, riveting, screwing, pegging or cementing.

Solid celluloid head eyelets. The best quality eyelets. They have brass-shaped heads that specially take a moulding of solid celluloid to give either a round or flat effect on the head.

Specification sheet. A document that lists the key manufacturing criteria and tolerances for a particular shoe. The document includes specifications for materials, components and construction methods.

Split-backed boards. These are made by pasting leather splits layer by layer and pressing them together. They are generally used for cheap quality footwear insoles and heels.

Split lifts Split lifts are formed by taking a narrow rectangular strip and splitting it diagonally to form two taper strips. These are then nailed to the seat portions of the footwear before fixing the heel. This allows the heel to have a better fit.

Splitting. Dividing a component into two or more parts by cutting through its thickness parallel to the surface.

Sports shoe Refer to athletic footwear or style.

Spray dressing. Dressing the upper by spray gun or jet blowing.

Spring The amount of variation from a straight or horizontal line at a toe of a footwear or in the arch.

Spring heel This is a low heel with a slip inserted between the outsole and the heel seat.

Staple lasting. The lasting of the upper to the insole by staples.

Staples These are U-shaped metal pins hammered or punched into a surface to hold something in position.

Steel protective toe caps. Caps made of tempered steel to the required shape of the last. They are used in the toes of safety footwear. They form an in-built integral part of the safety footwear with the intention of protecting the toe of the user. They may be placed either between the upper and the lining, or externally over the upper of the footwear by means of upward flanges.

Stiffeners A material positioned between the upper and the lining at the backpart of the shoe to provide the foot with support and grip. Related terms include soft toe.

Stiletto heel. A thin high heel used on women's fashion footwear. The width of the top piece of heel may be less than 1 cm across.

Stitches Stitches can be made by hand or by machine. There are several types of stitching: • bristle stitch • chain stitch • lock stitch • saddle stitch.

Related terms include:

• stitching channel • stitch down • stitch gauge • stitch marking • twin-needle machine • parallel row stitcher

Stitching channel. A channel that is cut by keeping the knife in a slanting position, approximately at an angle of 45°, in accordance with the stitching line and at an equal distance from the sole edge from the grain side. The depth of the channel is usually one-third of the thickness of the sole.

Stitch down Where the upper is turned outward on the sole and stitched straight through.

Stitch gauge A scale employed on measuring the number of stitches on footwear to a given unit of length.

Stitch marking Providing necessary marks on uppers for ornamentation by stitching and perforating. This lets the operators perform their work accurately.

Stuck on construction. Refer to cemented construction or construction methods.

Stuck on sole A thin rubber or plastic sole stuck onto the outsole to prolong the durability of the footwear. Refer to cemented construction or construction methods.

Surface scouring of soles and insoles. Removing a thin layer from the grain side of the leather, leaving it cleaner and more flexible. It minimises the risk of grain cracking in wear.

Swing The curvature of the outer edge of the sole of a shoe.

T

Tabs. The front part of the quarters on derby lacing boots or shoes. They carry the eyelets and cover the tongue.

Tacks These are small, flat-headed nails that are used for attaching soles.

Tape A narrow strip of fabric that is included in the folded edge of quarters or other sections of the upper to strengthen it and prevent stretching.

Tapered nails Headless and pointless nails cut from steel sheets. One end of the nail is square and the other end is tapered to a thin end. The rough edges of the nails have the holding power.

Taping. Fixing a narrow tape around the ankle curve of the quarter before or after folding. This avoids distorting of the quarter during lasting.

Tassel A decorative feature sometimes attached to the vamp or sometimes at the ends of the laces. It is a common decorative feature of a moccasin.

Tempering soles Soaking soles in water to a particular degree to soften them for moulding, channelling and stitching.

Thermal conductivity of a footwear material. The ease with which a footwear material transmits heat.

Thermo cementing This operation is done by machine. It eliminates the need for cementing as a separate operation. A roll of thermoplastic adhesive is fed into the machine, heated and fed to the point of work where both cementing and folding are done simultaneously.

Thermo-plastic A plastic that softens when heated and recovers its stiffness when cooled. Refer to polyvinyl chloride.

Related terms include:

• thermo-plastic granular mixture
• thermo-plastic rubber.

Thermo-plastic granular mixture. A type of bottom filler based on granulated cork bonded with resin. It softens under heat.

Thermo-plastic rubber Abbreviated to TPR.

Thong Is a type of casual footwear.

Thread lasting. Lasting the upper and the insole with thread by sewing the upper edge to the flesh of the insole instead of using tacks. It is generally used for single-sole or cemented construction.

Throat The area of the top line or upper that is adjacent to the instep of the foot.

Through sole The piece of soling material equal to the size of the sole used between the outsole and insole.

Tip An extra piece of material that covers the toe of the footwear. It is separate from the vamp and is lasted under with it.

Toe bands A strap of leather or other material usually fixed over the forepart of the sole to cover toes.

Toe cap The portion of the upper that covers the toe-end of the foot, extending from the vamp up to the toe-end.

Toe lift The last bottom piece applied in making the heel of footwear. The butt portion of sole leather or synthetic materials are generally used as toe lift.

Toe plate A half moon shaped steel plate that is attached from the outside with nails at the toe-end of soles of boots and shoes. The toe plate prevents wear of sole at the toe.

Toe puff The piece of material inserted between the upper and the lining at the toe-end to stiffen that portion. The toe puff maintains the shape of the toe of the footwear.

Toe spring The elevation of the toe-end of the last from a horizontal surface, when the seat is raised to its correct height, so that the last stands on its tread line.

Tongue A piece of material placed below the facing and eyelets to prevent the direct contact of the foot with the laces. The tongue may be a separate piece or attached to the vamp.

Tongue pad A small cushioned pad fitted to the inner side of the tongue for comfort.

Top facing A binding or lining that is sewn around the inner part of the upper of footwear at the top.

Top lift The last bottom piece applied when making a heel. A portion of sole leather or a synthetic material is generally used as top lift. Also known as top piece of heel.

Top line. The top edge of the upper around the foot.

Top piece of heel. The outer-most material of the heel that touches the ground. It forms the wearing surface. Also known as top lift.

Touch and close fasteners. This is a type of tape used as a fastener. It comprises two strips of fabric, one with a dense arrangement of small nylon hooks and the other with a nylon pile. When the strips are pressed together, one hooks into the other sufficiently firmly to hold the fastening together. This product was invented by Velcro™ corporation, but it is not known as Velcro™. A variant on this component uses a loop tape in conjunction with a tape containing minute mushroom shaped protuberances. The preferred generic name for this component is hook and loop tape or touch and close fasteners. Use Velcro™ only when genuine Velcro™ corporation products are used or referred to.

TPR The abbreviation of thermo-plastic rubber.

Tread The floor surface of the sole of footwear.

Tread line A line drawn obliquely across the widest part at the bottom of the last between the fullness of the outside and inside joints.

Trimming allowance. The allowance that is generally allowed around the components for trimming during the manufacturing processes.

Trimming heels and soles. Cutting away the surplus material around the sole and heel edge.

Turn Construction. A method of footwear construction where the upper and the sole are sewn together with a horizontal chain stitch (or in the hand methods by lock stitch) with the wrong side out. The last is then removed and the footwear is turned.

Turn shoes A single sole, flexible shoe. The sole and upper are stitched together with a horizontal chain stitch with wrong side out on the last. It is then turned inside out.

Twin-needle machine. Refer to parallel row stitcher or stitches.

U

Ultraviolet Abbreviated to UV.

Under-edge of trimming. A machine operation where both the stitching and trimming of the lining are accomplished simultaneously. The trimmer cuts the lining very close to the stitching making the lining invisible from the outside of the upper.

Underlay allowance. The allowance generally provided for one component over which another component is placed. The allowance is generally 8 mm to 12 mm.

Unit sole 1. A pre-moulded sole that is attached to the shoe bottom using adhesive.

2. A single polymer unit consisting of sole and heel.

3. A single leather unit consisting of sole, bottom and toe lift.

Upper This is the section of the footwear that sits on top of and protects the top of the foot (as opposed to the soling). The upper comprises the top section, its lining, reinforcements and accessories.

Upper cleaners Agents used to clean footwear uppers that have become soiled during the manufacturing process. The upper cleaners remove dirt, paste and wax.

Upper closing Joining the various sections of the upper, usually with lining, with single, double or multiple rows of stitching.

Upper flanging Turning out the lasting edge of the upper instead of turning it in.

Upper preparation Carrying out various operations on an upper of footwear before or between actual stitching processes.

V

Vamp The section of a boot or shoe upper that covers the foot at the joint area. It lies between the toe cap and quarter. It is subjected to maximum flexing while walking.

Vamp curve The curvature at the vamp throat and the wings.

Vamp stay. A piece of material cemented on the centre of the throat of the vamp that is at the junction of the facing and the vamp. It gives strength at this vital point.

Vamping Stitching the vamp to the quarters.

Velcro™ Velcro is a trademark protected brand of hook and loop tape or touch and close fastener. It comprises two strips of fabric, one with a dense arrangement of small nylon hooks and the other with a nylon pile. When the strips are pressed together, one hooks into the other sufficiently firmly to hold the fastening together. Use Velcro™ only when genuine Velcro™ corporation products are used or referred to. A variant on this uses a loop tape in conjunction with a tape containing minute mushroom shaped protuberances. Hook and loop or touch and close tapes should not be confused with Magic tape, which is a clear adhesive tape that is not typically used for footwear.

Veld welt construction. A combination of the Veldschoen (country shoe) construction and welted construction methods.

In this method the lining is attached to the insole shoulder with staples, and the outside of the upper is turned outwards. The welt is sewn to the lining and insole, a through sole is stuck to the bottom, then the outside of the upper is stuck to the welt with cement. Finally, a lock stitch seam unites the upper, welt, through sole and the outsole.

Veldschoen construction. There are many variations to this method. The simplest type of Veldschoen footwear requires only two parts—the upper and the outer sole.

In this method, the lasting edge of the upper is turned out instead of turned in. It is then stuck to the sole with cement. The two units are secured permanently by lock stitch all round. A rand is often stitched above the upper with the sole.

Velvet bottom A dry finish used on very high-grade, light footwear bottoms.

This involves considerable hand labour to produce a napped surface. The application of a dry finishing powder gives it a velvety appearance.

Vertical trimming of lining. A method of cutting lining materials exactly perpendicular to the surface of the material.

Vulcanised footwear. Footwear which has a non-vulcanised rubber soling compound attached to it by heat pressure.

Vulcanising A chemical process used to melt, mould, then attach a rubber, plastic or polyurethane sole to the lasted upper by heat and pressure in a closed cavity.

W

Waist The smallest part of the portion of the foot that lies between the instep and the ball.

Waist line of the last. The line drawn across the narrowest portion of the bottom of last.

Waist of the last. The narrowest portion of the last at the middle.

Warp Threads lengthwise (machine direction of material).

Water-tight tongue. In certain types of ankle boots, for watertight purposes, the tongues are cut whole from soft leather and are blocked. Two wings of the tongue are stitched with the quarter facing and the bottom is stitched with the vamp.

Wedge heel A heel extending from the back of the footwear to the ball of the footwear. The sole of the footwear follows the counter of the wedge heel, making a flat treading surface from the tip of the footwear to the back of the footwear.

Weft Threads width wise (cross direction of material).

Welt A special strip of leather with one bevelled edge on the grain side and a groove on the flesh side for the welt stitches. It is attached to the insole and upper around the outer edge of the footwear. The out sole is attached to the welt afterwards.

Welt beating. Flattening the welt at a right angle to the upper.

Welt butting The action of skiving away the ends of the welt to meet the skived edge of the seat lift.

Welted construction. Refer to Goodyear welted construction.

Wheeling A decorative finish that imitates stitching. It is applied to the top of the edges of footwear by a corrugated wheel.

Width Same as girth, that is, a word coding for measuring footwear girth.

Wing cap A decorative finish consisting of an attached or imitation cap with a central peak and curve either side. The wing cap may be perforated.

Y

YKK An abbreviation for Yoshida Kogyo Ko—a company that manufactures zippers and other accessories. YKK is a registered trademark of the Yoshida Kogyo Ko company. Where YKK zippers are required, only genuine YKK zippers are to be used.

Definition of Sneaker parts and Components.

The Upper:

The top of the shoe with the laces, fancy designs and bright colours that holds the shoe together, usually come in one of three material, leather synthetic and mesh.

The Midsole

Midsoles are used to cushion and provide support and protection for the foot. There are four types of materials used in commercially produced sneakers; Midsoles are often constructed of a combination of materials. Midsole materials are Phylon, polyurethane, phyllite and EVA

Phylon.

Phylon is very lightweight, low profile and responsive. Phylon is made of EVA foam pellets that are compressed, heat expanded and then cooled in a mould. Compression- moulded Pylon midsoles can be sculpted into a variety of designs that are identified by their fine wrinkles

PU or Polyurethane.

PU is the most dense, durable and stable midsole material. PU is poured into a mould to create a firm midsole that provides maximum protection from impact. PU is identified by its smooth rubbery feel and tendency to turn yellow with age. PU is the heaviest midsole material, but it is also the most durable Phylite.

Phylite is an injection-moulded unit made of a combination of 60% Phylon and 40% rubber. Phylite is lighter than rubber, but heavier than Phylon and functions as both a midsole and outsole. By eliminating a separate midsole and outsole the weight of the shoe overall is greatly reduced and flexibility is increased.

EVA

EVA is soft, light and flexible; it is the least expensive midsole material and is often used in entry level shoes. Midsoles are cut and shaped from flat sheets of EVA foam. EVA will compress and become flat over time as the air trapped within the foam is squeezed out. Once EVA is compressed, it does not return to its original shape and no longer provides cushioning. EVA compresses faster than other midsole materials.

The Outer sole

The outersole, the part of the shoe that comes in contact with the ground, provides durability, and it is the first stage of cushioning for the shoe. Patterns on the outer sole vary according to the needs of the sport. The five most commonly used materials for outer soles are as follows:

BRS 1000 (Carbon Rubber)

Carbon rubber is a synthetic rubber with carbon added. The combination of these two materials creates an extremely durable outersole. The black carbon does not completely bond with the rubber so it can leave marks on surfaces, For example, black marks on a gym floor. Carbon rubber is mainly used in the running category.

Solid rubber

This is the most common outsole material used in shoes. This blend of synthetic rubber and natural rubber will not mark a floor or court surface. It also offers excellent traction and durability in all indoor surfaces, but it is not as durable as DRC on rough, outdoor surfaces. Solid rubber is mainly used in basketball and cross training shoes.

Durable Rubber Compound.

DRC is a blend of solid rubber with additives that offer extra durability for rough and abrasive surfaces. DRC is a heavy, dense and very hard material. Compared to other outsole materials, DRC is heavier, but offers increased durability. DRC is mainly used in tennis, walking and outdoor basketball shoes.

Duralon

Duralon is a lightweight, blown synthetic rubber compound that incorporates tiny air pockets for an incredibly soft, smooth and cushioned ride. Because this material is so soft it is not as durable as other outsole materials. Duralon is primarily found in the forefoot area of running shoes

Gum Rubber

This is a combination of natural rubber and synthetic rubber. It is easily identified by its natural tan colour. Gum rubber is soft and provides excellent traction on all indoor surfaces, but is not meant for outdoor courts. Its use is usually limited to indoor court play and volleyball shoes.