

# SHOE TERMINOLOGY

## **Achilles Dip**

A dip in the heel lining that allows the Achilles to be cushioned.

## **Achilles Flex Notch**

Area at the back portion of the heel to prevent irritation of the Achilles tendon.

## **Anatomical Fit**

A shoe that follows the dimensions, curves, contours and shape of the human foot. It provides a natural fit for comfort and performance.

## **Anatomical Last**

Shape construction where the top surface of the midsole mirrors the shape of the foot to promote stability.

## **Arch Lug**

Located on the medial side of the outsole to provide additional support. It helps reduce the rate of pronation.

## **Arch Support**

Protects and supports the foot's natural instep area.

## **Arch-lock**

Midfoot wrap provides superior control and support.

## **Asymmetric Heel Collar**

This type of heel collar reduces ankle stress and strain associated with high jumping.

## **Balmoral**

Oxford design where the laces come together into a "V" at the bottom of the vamp. (does not allow as much adjustment)

## **Bellows Tongue**

A folded tongue stitched in under the lace holes.

## **Blown Rubber**

Rubber that is expanded during the molding process. The result is a lightweight, flexible, rubber outsole material which provides added cushioning and maintains durability.

**Blucher**

Oxford shoe design using two separate lace stays allowing for better adjustment and easier access into the shoe.

**Board Lasted**

Fiberboard is glued to the insole of an upper, between the midsole and innersole for stability and firmness. Good for severe overpronators.

**Bootie**

A complete lining of the upper, from under foot to top lining. It is used to seal waterproof shoes. As in a "Gor-tex® bootie"

**Brogue**

An oxford shoe with ornamental perforations

**Cambrelle® Nylon**

This nylon provides exceptional comfort, wicks away moisture, and is abrasion-resistant.

**Carbon Rubber**

This dense rubber compound has a carbon additive that makes it more durable and resistant to abrasion.

**Clog**

A slip-on shoe distinguished from a mule by its higher vamp

**CM-EVA**

The compressed and molded form of sheet EVA, wherein the structure and shape of the material may be contoured for improved fit and function.

**Collar**

Material located around the top of the heel for added comfort and support.

**Combination Last**

A construction technique wherein the upper is slipped onto the last in combination with a 3/4 length fiber board reinforcement for stability. The forefoot is then stitched together by fabric before gluing it to the midsole. Provides rearfoot stability and forefoot flexibility.

**Composite Shank**

This epoxy and fiberglass shank replaces the steel shank in non-metallic footwear. Generally lighter than steel.

**CoolMax®**

This type of fabric is a tetra-channel polyester, which pulls, or "wicks", moisture away from your skin to the outer layer of the fabric. It offers fast evaporation so you stay dry and comfortable.

**Cordura®**

DuPont Cordura® is a durable textile material that is easy to take care of, yet is very resistant to abrasion, tears or punctures.

**Crumple Zone**

Designed to help absorb impact and center your foot at the point of heel contact. Achieved by adding angled flex grooves in the heel of the mid and outsole.

**Curved Last**

This refers to the shape or curvature on the base of each last. A curved last will reflect a bent-line or curvature from center heel to toe. A curved or semi-curved last is designed to work with the curvature of the human foot to promote a natural footstrike.

**Custom Made Shoes**

Refers to footwear that is manufactured from a 3-dimensional image of the foot and lower leg and made from raw materials.

**Customized Footwear**

Refers to the adaptation of stock footwear to accommodate deformities and improve function of the lower limb and foot.

**Decoupled Heel**

A segmented heelstrike area that deflects impact to help absorb shock and slow the rate of pronation. It provides a more efficient ride because of a smoother transition through the footstrike.

**Denier**

A measure of thickness for fabric materials on a 1-1000 scale. A higher denier represents a stronger material.

**Density**

Measure of firmness of the material in a midsole or outsole.

**Diagonal Rollbar(TM)**

A wedge-shaped midsole component made of dense EVA designed for stabilizing the foot and minimizing excessive pronation. Seen on Brooks technical footwear.

**Dome TRB(TM)**

A concave TPU sphere that works with Saucony's GRID® Cassette to maximize cushioning and minimize rearfoot motion.

**Dri-Lex®**

Knit moisture management system designed to move moisture away from the foot, allowing for speedy evaporation and a dry, comfortable surface against the foot.

**Dual Density Midsole**

A midsole with two degrees of firmness. The firmness of the two materials is located on the inner (medial) side to help control pronation.

**Dual Density Outsole**

An outsole that features two materials of different densities. The result is greater traction and long-lasting wear.

**Durahide**

A synthetic material that is similar to leather. It is soft and durable.

**Durometer**

Scale of 1 to 100 that measures the firmness of a midsole.

**E.V.A. (Ethyl Vinyl Acetate)**

A soft, cellular foam material known for its lightweight, flexible and cushioning properties. Found in most athletic footwear.

**External Heel Counter**

Molded collar which supports the base of the heel counter for increased motion control. It is located on the outside of the shoe surrounding the heel area.

**External Heel Stabilizer**

Molded TPU device designed to cradle the heel and provides medial and lateral stability, keeping the foot centered at impact.

**Eyelet Lacing**

A traditional shoe lacing that consists of eyelets set in the throat, above the edges of the shoe's tongue, held closed with a type of string lacing.

**Eyestay**

Reinforcement around the lace holes of a shoe.

**Fabric Wrap**

A re-enforcement to the thin midsole sidewall that offers additional medial support against over-pronating.

**Fiberboard**

Flat, rigid piece of material that can be found in some uppers for support and stability.

**Flare**

Refers to the width of the heel at the bottom of the outsole in relation to the width of the heel at the top of the midsole.

**Flex Grooves**

Usually found in the midsole or forefoot for increased flexibility.

**Flex Notches**

Cutouts in the forefoot midsole that provide added flexibility to a shoe.

**Footbed**

A molded and contoured removable insole placed directly under the foot.

**Forefoot**

Area of the foot that extends from the middle of the metatarsals to the ends of the toe.

**Foxing**

Reinforcement on a shoe that provides medial and lateral support to the foot in a wrap-around way. It surrounds the entire toe area.

**Full Slip Lasting**

Moccasin construction technique where upper material is drawn around the last and the two edges are sewn together on the bottom of the form, providing maximum flexibility.

**Full-grain leather**

Top layer of cowhide. It is the strongest and most durable part of hide.

**Gait Cycle**

Mechanical process your body goes through while running or walking.

**Ghillie Lacing**

A system of webbing loops or rings to secure the lacing of the upper, used in place of eyelets.

**Gore-Tex®**

Gore-Tex® fabric is created by laminating the Gore-Tex® membrane between a durable liner and a protective fabric. The membrane is waterproof, yet allows sweat vapor to pass through it for breathability.

**Gore-Tex® Bootie**

This patented bootie is an all encompassing waterproof and breathable barrier that completely surrounds your foot. Water cannot penetrate, yet perspiration vapor can escape.

**Guidance Control**

The concept that stability can be created through various approaches within the shoe design.

**Gum Rubber**

Outsole rubber compound containing a high percentage of natural rubber. Found on volleyball and other indoor court shoes.

**Gusset Tongue**

Added padding to the tongue. It can be "v-shaped" or cut at an angle for mobility and flexibility

**Heel Counter**

Rigid piece of leather or synthetic material that surrounds the heel for stability and rearfoot control.

**High Rebound Compound**

A blend of polymer that eases the heel strike at the initial point of contact and reduces pronation.

**Hook and Loop Closure**

This type of closure provides a secure, easy closing system.

**Hytrel®**

A high performance plastic elastomer used in Saucony's GRID® Cassette and Instep Support Device™.

**Injected-molded EVA**

A process that injects EVA foam into molds to make it uniform and durable.

**Instep**

The prominent area above the arch and the highest point on the foot.

**Integrated Lacing**

A variation on Ghilly lacing which utilizes logo stripes in the lacing system to improve lateral stability.

**Kevlar®**

Manufactured by DuPont®, Kevlar® is a highly abrasion-resistant compound used to reinforce high-impact wear areas such as on the toe of a steel toe work boot.

**Last**

The 3-Dimensional foot form around which the upper of the shoe is built. The last determines the size and dimensions of the shoe. A shoe's last is commonly described in relation to its construction and / or shape. All shoe manufacturers use their own unique lasts.

**Lasting**

Procedure in which the upper of the shoe is joined to the midsole.

**Lateral**

Referring to the outer side of the shoe or foot.

**Leather Upper**

Leather upper provides natural comfort and durability.

**Mary Jane**

A term for a kind of strap shoe or sandal that typically has low heels, broad and rounded closed toes, and a single-buckle strap across the instep and/or around the ankle.

**Medial**

Referring to the inner side of the shoe or foot.

**Medial Midsole Post**

A stabilizing device made of denser EVA foam or plastic that is located on the medial side of the rearfoot area to limit excessive pronation.

**Memory Foam**

A high density foam which maintains the shape of whatever it comes in contact with. It provides custom fit capabilities to collar and tongue linings.

**Mesh**

Material in the upper that allows breathability. It is also lighter than leather.

**Metatarsal**

The five long bones of the foot that form the instep.

**Microfibre**

A breathable synthetic material that is soft, supple, durable and easy-to-clean.

**Midfoot**

Middle of the foot between the heel bone and the metatarsal heads.

**Midfoot Shank**

Reinforcement on the midsole for additional torsional stability.

**Midsole**

The portion of the shoe between the upper and the outersole that provides cushioning.

**Midsole Post**

A stabilizing device made from a more dense or rigid material found on the medial side of a shoe. It controls the maximum angle of pronation.

**Motion Control Device**

A stabilizing device made from more dense material which acts to control pronation and guide the runner into a proper gait cycle.

**Mule**

A backless, slip on shoe

**Neoprene**

A polychloroprene elastomer developed as a thin layer of closed cell foam.

**Orthopedic Shoes**

Orthopedic or "comfort" shoes are made with pedorthic and anatomically-correct comfort qualities, such as padded removable footbeds, wide toe boxes and arch support are made especially for those with problematic feet.

**Orthotic**

A corrective device made primarily of leather, cork or plastic which is placed inside a shoe to help correct biomechanical problems.

**Outsole**

The bottom layer of the shoe that consists of one or more rubber compounds. The outsole design is usually configured to enhance traction.

**Overboot**

Footwear designed to cover shoes, boots and sandals to protect them from the elements.

**Overpronation**

Excessive pronation or over rotation of the foot. Can cause or aggravate many common foot and lower limb problems. Requires the use of footwear with maximum support.

**Oxford**

A style of leather shoe with enclosed lacing.

**Patent Leather**

Patent leather is leather that has been given a high gloss, shiny finish

**Poliyou®**

Constructed of open cell high-polymer PU foam which allows air to circulate freely, this breathable foam air insole is known for its superior technical performance.

**Polyethylene**

Synthetic material used to make some midsoles and innersoles.

**Polyurethane**

A cushioning foam used for extra cushioning, it is heavier than EVA.

**Poron®**

A lightweight cellular urethane that can be used in sockliners for added cushion and comfort.

**Pronation**

The natural inward rotation of the foot as it relates to the gait-cycle. A normal foot lands on the outside heel and pronates slightly to help absorb shock.

**Protective Toecap**

An additional layer added to the toe area of a shoe or boot.

**Pump**

Pumps are heeled shoes with low cut fronts and usually no fastening.

**Rand**

Strip of leather or rubber composition cemented to the margin of the sole, with bold stitching to simulate a welted construction.

**Resiliency**

A measure of the ability of a material to return energy or rebound.

**Scotchguard®**

Specially treated water-repellent nylon material that keeps the foot dry and the shoe light, even in wet conditions.

**Scotchlite® Reflective**

3M's reflective material for visibility during low light.

**Sculpted Heel Cup**

A contoured device that aids in power and leverage during push off.

**Semi Curved Last**

Shoe last whose shape falls between a straight lasted shoe and a curve lasted shoe.

**Shank**

Provides torsional stability and strength to the midfoot of the shoe

**Shock Dispersion**

Ability of a shoe to absorb or distribute the shock of a shoe strike which is caused when the body lands with each foot strike.

**Slip Lasted**

Shoe construction with the upper of the shoe being attached to the midsole without the use of a fiberboard. It offers increased flexibility. Good for Supinators / underpronators.

**Sockliner**

Pre-formed liner on the inside sole of the shoe to reduce internal friction and offer cushioning.

### **Solid Lugged Outsole**

Provides long-wearing durability and traction.

### **Stability**

Degree of support and motion control a shoe gives to the foot during the gait cycle.

### **Stability Last**

A last that adds medial (inside) stability. It is often used in shoes designed to prevent excessive pronation and provide motion control.

### **Steel Shank**

This is a reinforcing piece of steel which runs from the center of the heel to the front of the arch, laminated within the lasting board, providing support.

### **Stitched Toe**

Rubber material at the front of the shoe is stitched, as well as glued for increased durability.

### **Straight Last**

Little or no curve from heel to toe. It provides excellent support on the inner portion of the foot. Good for severe overpronators.

### **Stretch Upper Materials**

Molds to the foot to enhance fit and performance.

### **Strobel Lasted**

Constructed with a thin material acting like a sockliner stretched along its perimeter, providing an excellent blend of stability and flexibility.

### **Supination (underpronation)**

Foot strike where the runner puts most of their weight to the outer side of the shoe. Requires the use of footwear with less medial support and more cushioning.

### **Synthetic Leather**

A strong, light polyurethane-based leather substitute that allows for easy maintenance.

### **Thermoplastic medial post**

The thermoplastic stability post aids in controlling the foot through the gait cycle and prevents over pronation.

**Thinsulate®**

This thermal insulation is lightweight, warm, moisture resistant and breathable, and made by 3M®.

**Toe Box**

The frontal portion of the upper that surrounds the toes.

**Toe Bumper**

Rubber tip of the outsole that wraps up and on to the front of the toe box.

**Toe Cap**

Protective section added to the exterior of the big toe area of the shoe for durability.

**Top Line**

The upper most portion of the collar that rests under the ankle bones

**Tongue**

Flap that starts at the vamp of the shoe and goes the length of the top of the shoe. It is padded to offer cushioning from the laces.

**TPR**

Thermo plastic rubber is often used to provide durability and stability.

**TPU**

Thermoplastic urethane used in devices to prevent overpronation.

**Underpronation**

Less than average degree of pronation or under rotation.

**Upper**

Top part of the shoe above the midsole and outsole that encase the foot.

**Vamp**

Front part of the upper that covers the base of the instep and toes.

**Variable Width Lacing**

A system of lacing where the lace holes alternate in an off-set pattern along the eyestay. Variable lacing allows for a custom fit on a variety of foot types.

**Vibram®**

Special rubber compound which insures high abrasion resistance and optimized grip.

**Waffle Sole**

Rubber sole is formed with lugs on the bottom that provide traction and shock dispersion.

**Wear Plug**

Extra dense materials placed in the heel or ball of some running shoes to provide heel and ball durability.

**Welding**

A process of directly fusing material onto mesh or synthetic uppers without the use of seams or stitching, making for a seamless construction.