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## Outdoor footwear

# Understanding uppers

**T**here are various materials used for outdoor footwear upper manufacturing and the ideal choice will depend entirely on your customer's needs.

Uppers are usually made of various types of leather, or synthetic fabrics, which can include textiles, synthetic leather, or mesh and some shoes' upper may even be made of a combination of leathers and synthetics – but each have their own pros and cons for wear for various activities.

Upper materials can vary significantly, therefore what works for one may not work for all activities.

### Leather uppers

Leather is animal skin that has been put through a tanning process to give it stability.

Leather is breathable, as the animal skin has pores, which is ideal to reduce sweaty feet and odour over time. The pores can, however allow water to be absorbed and many leather shoes therefore come with a waterproof lining or are treated to be waterproof.

Leather shapes and stretches to the wearer's foot, but this may cause the shoe to wear out over time.

There are various types of leather, which would all be more or less suitable for specific activities.

### Full-grain leather

This is usually the most expensive and durable type of leather, made from the outermost layer of the animal's skin. It usually has a shiny and smooth surface, and because it is made from the animal's outer skin, it is tougher and thicker than other types of leather.

#### Good to use for:

- This form of leather is usually used in robust outdoor boots that will be worn in rough conditions, because it is durable and offers the stability and support needed for uneven terrain.
- Full-grain leather will offer support to the wearer who will be carrying a heavy

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pack that will put extra pressure on his feet.

- When trekking over rough terrain, the wearer's feet will endure various bumps and grinds – a full-grain leather boot gives the wearer abrasion-resistance and protects the foot.

#### Not recommended for:

- Full-grain leather is thicker and tougher

than other forms of leather, which means they take some time to be broken-in to be ready for use. It is therefore not recommended to wear new leather boots on an extended hike.

- Full-grain leather is relatively heavy and is therefore not suitable for trail running or speed hiking where the wearer needs to be light on his feet.
- Unless the leather has been treated to become water-repellent it will not be recommended for fishing, or activities where the wearer will come into contact with water, because it will absorb water.
- This material is usually used for longer activities where the wearer will carry heavy weight or need extra protection from the terrain, for light hiking where the wearer will not need as much support or protection, your customer will probably prefer a lighter upper.

### Reverse full-grain leather

This is the same as full-grain leather, but the material is turned rough side out to give it a similar look to suede, but it will offer the same qualities as full-grain leather.

### Nubuck

This is the outermost layer of the animal's skin that has been sanded to form raised hairs that give a velvety feel and textured finish. This material looks different, but offers the same qualities as full-grain leather.

Nubuck is stronger than suede and lasts longer because the outside skin (from which nubuck is made) of an animal is much tougher than the inner part of the skin (from which suede is made).

#### Good to use for:

- This form of leather is often used in light hiking shoes as they offer a different look, but the same qualities as full-grain leather boots. If your customer is looking for durability in a fashionable shoe, nubuck will perform the same function as leather, but its slight nap **To p38**



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gives it a modern look, but with added strength.

- Nubuck is also suitable for wear in wet and cold conditions.

**Not recommended** for the same activities that will not be suitable for full-grain leather.

### Suede (split-grain)

This is the deepest (innermost) layer of the animal's skin that has been split from the outermost layer and sanded to form raised hairs that give it its velvety feel.

Suede hairs are longer than on nubuck. Although the two leathers look similar, suede is not as strong as nubuck. It is less abrasion-resistant, softer and less stiff than full-grain leather. It is also more prone to stretching.

#### Good to use for:

- Suede shoes, in the traditional *velskoen* style, are currently very fashionable in Europe as a lifestyle shoe, and remains a favourite of many South Africans.
- Suede is flexible and offers greater stretch than full grain leather, which makes it the ideal material for comfortable, everyday use footwear, especially for people who spend a long time on their feet.
- It is also more cost effective than other forms of leather, making it a more popular choice for everyday lifestyle footwear, which does not require the technical qualities needed for activities such as hiking, trekking, etc.
- Its spongy nature allows it to dry faster and it is used in footwear for activities such as light hiking or combined with other materials, in trail running shoes.

#### Not recommended for:

- Due to its porous texture – even more than full-grain leather – this material would not be ideal for water activities such as fishing, multi-day hiking, where the wearer may encounter various weather conditions, muddy surfaces, etc.
- Suede shoes are not advisable for heavy-duty activities, due to this type of leather's flexibility – it may wear out or tear if snagged – and low resistance to water.
- Suede stains easily and will get dirty if worn in muddy conditions. It would therefore be advisable to sell a suede brush or special cleaning products with a suede shoe.

### Pigskin leather

This material is made of pig skin and offer unique colour variations, but does not offer the same durability as other forms of leather.

Some customers will object to wearing pigskin leather on religious grounds – and they might be offended if they find out that a salesperson had sold them a pigskin

shoe, without pointing it out.

### Synthetic materials

This includes any material that has been man made, like textiles, nylon, mesh and synthetic leather (PU). Synthetic uppers are usually more cost effective and lighter than their leather counterparts.

With the current trend of making shoes lighter for all activities, synthetic uppers are becoming increasingly popular for outdoor footwear. Several materials are often used in combination, also combined with leather.

Using synthetic materials such as synthetic leather and mesh together can improve a shoe's ventilation.

### Mesh

This is an open-textured fabric that is knitted or woven together, forming holes. It is lightweight and is often used in combination with other materials in strategic positions where breathability is required.

#### Good to use for:

- Mesh provides excellent breathability and is therefore often strategically placed on outdoor footwear worn for high levels of activity, like trail running or vigorous hiking.
- Footwear with mesh uppers are ideal for outdoor activities that involve water, such as fishing, because the holes allow water to drain and they will dry faster than other fabrics.
- Mesh uppers are easy to wipe and clean, which is ideal when worn in muddy conditions.
- Mesh can be treated to ensure a hydrophobic upper, which can help keep a shoe dry, lightweight, breathable and easy to clean.

#### Not recommended for:

- Holes in mesh allow small particles, such as sand, into the shoe, which could cause blisters. This material would therefore not be ideal for shoes used for trail running or walking on the beach – unless there is a lining under the mesh.
- Mesh inserts in the upper will not be recommended for long hikes over rough terrain where the foot needs protection, or when your customer wants to keep his feet dry on a long hike.

### Synthetic leather

Synthetic leather is cheaper and lighter in weight than full-grain leather. It is made to mimic leather and often used to reinforce, or replace, it.

#### Good to use for:

- Synthetic leather is often used in trail running shoes as it offers a lighter weight than leather material shoes. A synthetic material does not soak up water as leath-

er does, which means that the shoe stays lighter for the duration of an activity.

- Synthetic uppers are better suited to water-related activities, such as fishing, than leather, because they will not soak up water.
- Synthetic materials do not stain as easily as leather uppers, which makes them ideal for even the dirtiest conditions, as they can easily be cleaned.
- This material is ideal for short hikes, because they are not as heavy as leather boots.
- Synthetic PU is often used in the ankle area and toe-rand of footwear, to give the shoe extra support.

#### Not recommended for:

- Synthetic leather does not have pores like leather and therefore will not offer the breathability of leather. It is not advisable for longer treks or hikes where feet may get hot and sweaty.

### Linings

A lining assists with temperature regulation and moisture management.

Physical outdoor activities will result in the foot sweating. This moisture must be allowed to escape, to prevent overheating and blistering.

Some linings also help to waterproof the shoe by preventing water from penetrating.

A lining is there to add comfort and should therefore be fast-drying, feel good on the foot, and fit without creases or folds that can chafe the foot. Many brands are now using seamless linings.

- Membranes such as Gore-Tex allow breathability and offers waterproofness as it contains microscopic holes that allow water vapour to escape, but does not allow outside water to penetrate. It therefore creates the ideal temperature-regulated environment during any activity.
- Gore-Tex is, however, very expensive, and was developed for the extreme cold of European winters and snow activities – which South African hikers might not always need. There are, however, other moisture-wicking and water-proofing membranes that are not as expensive.
- Synthetic fabrics, like polyester and polyamide, are used in linings because they can reduce heat, wick away moisture, have high abrasion-resistance and are durable. They also feel good to the touch.
- Thin, soft, nappa leather is also used as linings in leather outdoor footwear. When undyed, it retains its pores, and therefore absorbs the moisture in the shoe, keeping the foot dry and cool. During long treks, your customer would, however, have to leave his leather-lined boots out to dry for a period of time.
- Synthetic rubbers such as neoprene are sometimes used for lining outdoor sandals and shoes. It is heat, oil and weather resistant and provides padding and protection for the wearer's foot.