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Soccer boots and balls for different terrains

Our cut-out-and-keep series to assist retailers with product knowledge

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In certain areas of the country, and during periods of drought, soccer players are more likely to play on hard ground or artificial pitches, than on a pitch with good grass cover, which they may encounter during away games. Your customers will need advice when it comes to buying the right boots and balls to play on these different pitches.

To understand the products you need to also understand the different pitch types.

Hard ground

The turf consists of very dry grass (or none at all), dirt, gravel … a pitch that won't allow traditional studs to penetrate its surface.

Boots for use on hard ground offer enhanced traction and comfort on the unforgiving terrain.

- Lower profile keeps the player closer to the ground.
- Sole plate usually made from a harder TPU, for enhanced durability.
- Studs are short and evenly distributed across the entire outsole to distribute pressure.

Soft ground

A soft, natural playing surface that can be wet or muddy.

Studs are usually longer to allow the foot to dig into the surface and stop it from slipping. Simultaneously, the extra length will stop the boot from being bogged down in the mud.

- Traditionally soft ground boots have four big metal studs in the forefoot, and two big studs on the heel.
- Some boots combine the traditional configuration above with additional plastic studs or blades for more traction.
- These are not recommended for use on firm ground, even if the metal studs are replaced with plastic, because each screw-in area is a pressure point, that will be uncomfortable on the harder terrain.
- Studs are often replaceable.

Firm ground

A natural grass field that provides good traction.

Boots should have shallow conical studs or blades that don't dig too deep into the surface. If they dig too deep, the foot can get stuck in the terrain and lead to injuries.

Artificial/all-weather turf

A *carpet* made from synthetic fibres that create a surface resembling firm ground.

Often referred to as *AstroTurf*, AstroTurf is actually a trademark registered by Monsanto Company, which first invented the product.

It was first used by a soccer club in 1981, but has been in production since the early '60s and first installed in 1965 for use during baseball games.

Originally the artificial turf adversely affected how the ball performed (bounce and roll), but now turf has sand, water, and/or rubber infill that keeps the grass fibres upright, and offers ball movement more closely resembling that on natural grass.

Today it plays evenly and has the added benefits that it doesn't become muddy and is relatively maintenance free.

These grass blades tend to be abrasive, but there are those that are coated in silicone that are less abrasive.

There are different types of artificial turf, each rated with a number followed by a G indicating the generation of technology, for example 3G means *third generation*. The idea is that higher the number, the more technology the carpet is meant to contain, and the closer it *should* resemble real grass.

However, technology beyond 3G isn't yet *officially* recognised by soccer bodies.

- 2G: sand-based with a very short carpet pile. More commonly used for hockey; not ideal for soccer due to the lack of grip and hard surface.
- 3G: a sand or rubber granule-filled carpet with a longer pile that resemble blades of grass. It typically has an underlying drainage system and a shock-absorbing underlay.

Artificial turf boots provide players with the extra grip and cushioning needed on this turf. They are designed to handle the abrasive turf, help with traction, and can't be used on other soccer field types.

- Typically lighter than firm ground boots.
- Durable, rubber outsole.
- Studs: hollowed out, which keeps them lightweight and helps to absorb the impact from the harder terrain.
  - More densely concentrated, compared to those on *normal* soccer boots.
  - Small rubber studs of blades for improved traction. Alternatively, the outsole might be patterned to give grip.

These shouldn't be used on short pile turf, and firm or soft ground boots shouldn't be worn when playing on artificial surfaces.

If your customer insists that he wants to wear firm ground boots on artificial turf, recommend he doesn't wear blades or full studs, which can damage the playing surface.

Turf trainers: designed for 5-a-side games on artificial turf, these shoes don't offer as much grip as their boot counterparts.

- Low profile soles keep the feet close to the ground to reduce slipping.
- Extra cushioning in the heel, compared to boots.
- Outsole features multiple dimple-style studs.

Street soccer

Six-a-side street soccer is a trend that has been gaining momentum and is played on tarmac, paved areas, or other urban surfaces.

Shoes should have the following features:

- Enhanced traction, cushioning and comfort.
- A durable, hard-wearing, rubber outsole.
- Multi-lug or -stud configuration for **To p42**

Soccer boots and balls cont. from p41

extra grip.

Studs and blades

Studs are used to help keep the player balanced: the more studs there are, and the bigger the playing surface they cover, the better the grip. Where they are placed and the number of studs on each outsole impact on how the boot performs and what terrain it's appropriate for.

Number of studs:

- 6-8 studs: for running positions, where the player wants less grip.
- More: good for use on dry, hard fields; don't give traction in wet, muddy conditions.

Where the studs are placed on the outsole:

- Forefoot: better traction.
- Midfoot: while running these don't dig into the ground, but at the start of the player's run the studs on the side will dig in and provide better traction, which allows for faster acceleration.
- Backfoot: for balance, keeping the foot stable on the ground, and to support the heel.

Blades are designed for speed (penetrate and exit the surface quicker than round studs), grip and improved turning capability.

Choosing the right ball

Balls used in official matches have to be FIFA-certified match balls. To receive the FIFA Quality (previosly Inspected) or Quality Pro (previously Approved) rating, balls have to undergo stringent tests.

The following brands supply balls to the local market that have achieved the FIFA certification: adidas, Diadora, Joma, Mikasa, Mitre, Molten, New Balance, Nike, PUMA, Sondico, Umbro, Uhlsport, Under Armour and Wilson. Adidas has been supplying the official African Cup of Nations and FIFA Club World Cup balls (among most other official balls) for many years.

Clubs and schools will, however, be inclined to purchase more affordable non-certified balls for training purposes. Your customers who buy balls for home will most likely also not aim for the top end certified balls, but will probably aim for something more durable.

The construction will impact what the ball is used for.

- Outer:
  - The outer is made from synthetic leather, with a PVC or PU coating.
    - PVC: more affordable and durable than PU, and used for street soccer balls. Scuff-resistant PVC is often used with training balls.
    - PU: softer and more responsive than PVC balls. Used for higher end match balls.
  - The number of panels affect how the ball moves through the air. The fewer there are, the more aerodynamic and faster the ball.
  - On a premium match ball, panels can be stitched with polyester, which is durable and non-absorbent. For enhanced durability and water-resistance, kevlar thread can also be used.
  - The more expensive type of soccer ball is thermal bonded to retain its shape and for a low water uptake.
  - The less panels a ball has, the fewer seams there typically are, which can create a rounder shape and less water uptake.
  - A glossy coating will help reduce water uptake, as well as scuffing on softer PU balls.
- The inner lining material determines how responsive the ball is.
  - Premium match balls will have several layers (often four) of polyester and cotton: polyester for durability and responsiveness, and cotton for softness.
  - Cheap soccer balls will only have about two layers of polyester, making them harder to control.
- Bladders are usually butyl or latex.
  - Latex bladders: soft and responsive.
    - Used for premium balls.
    - Do not retain air and shape as good as butyl bladders, and require more frequent inflation.
  - Butyl bladders are durable and offer very good air retention.
    - Can become deformed easily, and less responsive.

Street soccer is often played barefoot, so the ball should have a soft outer casing, but also be made to withstand rough playing conditions.

- Stitched seams are stronger and tighter. These can be hand or machine stitched, but the latter is more reliable and consistent.
- Rubber materials give a stronger grip.

Hard or artificial ground balls should be durable and molded or laminated – not stitched. This construction lends itself better to hard ground as it is more durable and seams can come apart on the rough surface.

Looking after the ball

Post-game, your customer should take the following steps to properly care for the ball:

- Remove dirt from the stitching with a brush, or similar tool, or wipe the surface with a soft cloth.
  - If he can't remove the dirt, he can wipe the ball with a moist cloth and then dry the ball after.
  - If this doesn't work, he can use a mild detergent that has been diluted with water. It's important to remove any detergent from the ball surface afterwards, as it can cause the ball to discolour.
- The ball should be dried out of direct sunlight, in an area that is well ventilated.
- Do not clean or wipe the ball with solvents, for example benzene, which can damage the cover.

When not in use:

- Deflate the ball. It can expand or distort if the air pressure remains the same after use;
- Store the ball in a well ventilated area;
- Dry it regularly.
- Do not leave the ball where it will be exposed to direct sunlight, or store it in hot or humid conditions.