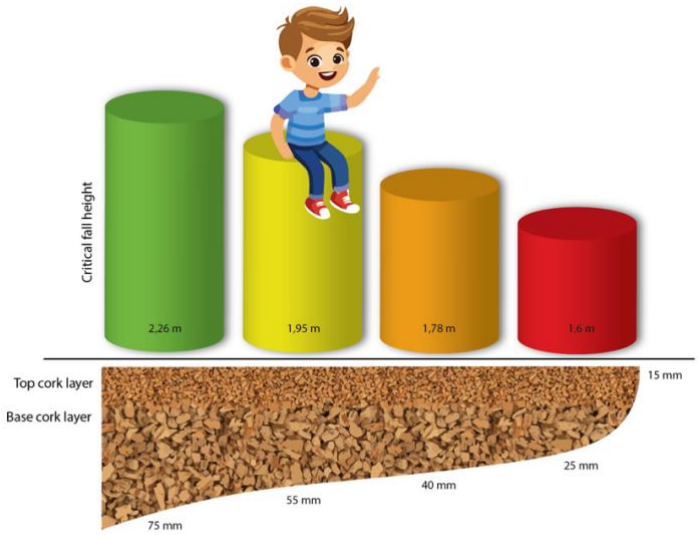
CORK PLAYGROUND



Cork playground is a fall protection surface made of cork granules that is used as a shock-absorbing surface in playgrounds and outdoor parks. Cork playground surfaces offer a unique combination of safety, environmental sustainability, accessibility, and comfort, making them an excellent choice for modern, eco-conscious playgrounds.

Safe fall height to surface base



Cork playground is divided into two layers, the base layer and the top layer. The base layer is the shock-absorbing substrate made of bigger cork granules. The top layer is made of smaller granules to get a smooth and nice surface. Cork granulate is mixed with a binder that acts as an adhesive, then it is laid out on the intended surface.

Cork playgrounds are 90% environmentally friendly and have the same properties as fall protection rubber. The fall height of cork playgrounds is up to 1.8-2 m depending on the exact specifications.

Cork is a completely natural material without toxins, microplastics. Unlike materials that are produced from plastic or oil. Cork granules are a very light material, which allows them to be used on surfaces where weight is important.

TOP layer cork - 24130150

Density: 130/150 kg/m3
Size: 2-4 mm mesh

Test	Specifications	Method
Compression	10 – 30%	ISO/DIS 7322
Recovery	65% min	ISO/DIS 7322
Thermal conductivity	0,042 W/m °C	EN12667
Sound reduction impact	Approx. 17 to 20 dB(A)	EN ISO 140 – 8
Fire resistance	Class B2	DIN 4102
Bulk density	130-150 kg/m3	ISO 2031
Moisture Content	<10 %	ISO 2190

BASE layer cork - 5107080

Density: 70 / 80 kg/m3
Size: 5-10 mm mesh

Test	Specifications	Method
Compression	20 – 40%	ISO/DIS 7322
Recovery	65% min	ISO/DIS 7322
Thermal conductivity	0,042 W/m °C	EN12667
Sound reduction impact	Approx. 17 to 20 dB(A)	EN ISO 140 – 8
Fire resistance	Class B2	DIN 4102
Bulk density	70-80 kg/m3	ISO 2031
Moisture Content	<10 %	ISO 2190

MSDS (Material Safety Data Sheet)

1. PRODUCT AND COMPANY IDENTIFICATION	Granulated cork 24130150, 5107080 Use: playground surface construction Company: PORTUGALIACORK S.A.
2. HAZARDS IDENTIFICATION	Not applicable
3. COMPOSITION / INFORMATION ON INGREDIENTS	Composition: Cork (Quercus suber) CAS N° 61789-98-8
4. FIRST AID MEASURES	Not applicable
5. FIRE FIGHTING MEASURES	Means of extinction: water, chemical powder, CO2. Special Fire Fighting Procedures: None required. Explosion risk: Not applicable. Protection equipment: Firefighters should use autonomous breathing devices for fires in closed areas.
6. ACCIDENTAL RELEASE MEASURES	Not applicable
7. HANDLING AND STORAGE	No special handling required Store the product at room temperature, away from rain and in a well-ventilated place.
8. EXPOSURE CONTROLS / PERSONAL PROTECTION	No special equipment required under normal conditions of use.
9. PHYSICAL AND CHEMICAL PROPERTIES	Physical State: Solid Color: brown Smell: Mild PH: Not applicable Boiling Point: Not applicable Melting Point: Not applicable Ignition Point: > 300°C Autoignition: Not applicable Explosive Properties: Not applicable Water Solubility: Insoluble
10. STABILITY AND REACTIVITY	Dangerous products resulting from decomposition: Carbon monoxide and carbon dioxide are released at temperatures above 300°C.
11. TOXICOLOGICAL INFORMATION	Not applicable
12. ECOLOGICAL INFORMATION	Destination and effects on the environment: Not established Natural product declaration
13. DISPOSAL CONSIDERATIONS	This product is cork material and un-used cork can be discarded into regular garbage, incinerated by approval agents or biodegraded via commercial composting. Do not discard to sewer. Empty product bags (plastic) should be recycled.

Cork checks all the boxes!

Cork, derived from the bark of cork oak trees (Quercus suber) is an excellent material for playground surfaces due to its unique properties, which enhance safety, sustainability, and functionality. Here's why cork is well-suited for playgrounds.

SAFETY AND IMPACT ABSORPTION

Cork surfaces typically consist of two layers—a flexible base layer and a firm top layer—designed to maintain their shock-absorbing properties over time. They comply with safety standards like EN1176, EN1177, and ASTM F1292, ensuring effective fall protection. The natural elasticity and compressibility of cork provide a cushioning effect, reducing injury risk from falls.

ECO FRIENDLY AND SUSTAINABLE

Made from 90% natural, recyclable, and renewable cork (sourced from cork oak tree bark), these surfaces are free of toxins, microplastics, and harmful chemicals like heavy metals or endocrine disruptors. Cork oak forests sequester significant CO2 (up to 73 tons per ton of cork produced), and the production process often uses cork industry byproducts, following circular economy principles..

COMFORT AND ACCESSIBILITY

Cork's natural texture provides a comfortable, non-slip surface that's gentle on kids' feet and hands. It also supports accessibility, offering a smooth yet grippy surface for wheelchairs or mobility aids, meeting ADA standards.

THERMAL REGULATION

As a natural insulator, cork reduces surface temperature by over 20% compared to synthetic alternatives, allowing safe barefoot play even on hot days. It's hypoallergenic, odorless even at high temperatures, and fire-retardant.

WATER PERMABILITY

The porous structure provides excellent drainage, keeping the surface dry and non-slippery in wet conditions, making it suitable for areas prone to rain or flooding

LIGHTWEIGHT AND VERSATILE

Cork is very light (0.16 g/cm^3, with over 50% of its volume being air), making it ideal for applications where weight is a concern, such as rooftop playgrounds. It can be installed in various colors and configurations to suit design needs.

100% NATURAL

Cork is free from harmful chemicals like VOCs (volatile organic compounds) and doesn't off-gas, ensuring a safe environment for children. Its hypoallergenic nature reduces the risk of allergic reactions, making it ideal for inclusive play spaces.

EUROPEAN ORIGIN

Portugal is the world leader in the production of high-quality cork. Our materials are always made with 100% European cork.

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www.portugaliacork.com

Guidelines

Binder

We recommend a moisture-curing polyurethane binder specifically designed for outdoor surfacing applications. It should have a relatively low viscosity to ensure good penetration into cork granules, and it should cure under a wide range of temperature and humidity conditions.
For the top layer the binder should contain UV (PC 31-031) stabilizers, preventing premature breakdown from sunlight exposure.

Installation tips

- Ensure that cork granules are completely dry before mixing is crucial to prevent bubbling or improper curing.
- Binder mixing should be slow, thorough mixing helps minimize air entrapment, which can otherwise create voids or bubbles in the final surface.
- Installation should take place in moderate temperatures. Avoiding extreme heat or cold improves workability and prevents rapid curing that could lead to uneven surfaces.

Selection of cork granules

- Granule Size: Smaller granules create a smoother, denser surface, improving shock absorption and resilience. Larger granules can be used in a base layer to enhance drainage, but may lead to a rougher surface.
- Density: Lower-density cork tends to be more flexible and better at absorbing impacts, minimizing surface cracks. Higher-density granules provide increased durability but might be stiffer. Balancing these properties is key to achieving both safety and long-term performance.
- Lower density cork is recommended for base for shock absorption, while higher-density cork should be used for top layer for durability and wear resistance. This combination extends the surface's lifespan.

Maintenance and Care Recommendations

- Routine Cleaning: Remove debris, leaves, and dirt regularly to prevent mold growth and minimize wear. A gentle power wash can be used on a low setting if needed.
- Prompt Repairs: Address small cracks or damaged areas immediately. Quick patching prevents localized issues from spreading.
- Inspection Schedule: We recommend biannual inspections to identify any emerging issues, such as uneven wear, minor cracks, or binder breakdown in high-traffic areas.
- Avoid Harsh Chemicals: Use mild, pH-neutral cleaning agents to prevent binder deterioration and discoloration of the cork.
- Snow removal: do not remove snow with mechanical plows. Manual snow shovels should be used with care.

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