BrockFILL

Frequently Asked Questions



Rev. B December 4, 2020

What is BrockFILL?

BrockFILL is an engineered wood particle infill specifically designed for artificial turf. It's made here in the USA from a species of southern pine that is grown, harvested, and replanted in continuous cycles, making it ideal for a sustainable, renewable organic infill product.

Does BrockFILL break down?

BrockFILL does not break down in practical terms. The average particle size after 20,000 Lisport cycles (equivalent to 8 years of field use) is about 90% of its original size. BrockFILL is far more durable than cork or coconut husk infills and has a 10-year warranty.

How much does it cost?

A BrockFILL/sand system is about the same price as a proper sand and rubber mix. Our recipe for a typical 2" turf is approximately 4 lb sand and 1 lb BrockFill. But unlike crumb rubber, which is processed at many different sites, BrockFILL is made and quality controlled in a single factory in Georgia; depending on your project location, the shipping charges may add a few thousand dollars. BrockFILL is less costly than other alternatives to crumb rubber that can add $50,000 to the cost of a project or even more.

What kind of lead time will those buying it need?

Brock carries inventory of all our products and we typically ship material within one week of approved purchase order. Delivery will depend on location and shipping time. Full production began July 2019. The supply of BrockFILL is essentially unlimited.

How long is the warranty?

The BrockFILL warranty is 10 years. Turf lasts longer when installed over a shock pad than when laid directly over stone, so the BrockFILL warranty is longer than the typical 8-year turf warranty.

How much BrockFILL goes in my turf?

Please contact your Brock Representative for recommended infill ratios dependent on the type of turf and pile height being used. In general, 1 lb of BrockFILL covers about 1 square foot in a 2" turf. This equates to roughly 18mm of BrockFill (~3/4"). Below that is 4 lb of sand, measuring about 16mm in depth, for a total infill depth of approximately 34mm in a 50mm turf.

What is a recommended turf?

The most common system we foresee is a 2" turf height with 4 lb sand topped with 1 lb BrockFILL, all over a Brock shock pad, of course. This system leaves approximately 16 mm of exposed pile. It can be used in shorter pile systems, but the recipe changes. Contact Brock USA for the recipes for common turfs.

How much cooler will my field be compared to rubber?

A lot of the heat on a field comes from the fibers. When BrockFILL is dry, the field will typically be at least 20 °F cooler than rubber infill. When BrockFILL is moist from condensation or rain, the field can be 40 °F cooler or more, depending on the climate and weather conditions. When moist, BrockFILL can keep the field cool for the whole day.

Does it need to be watered?

No. BrockFILL doesn't break down when dry. BrockFILL particles are hydrophilic and will absorb moisture from rain and condensation. Moisture makes the material even better, but it will still perform well when dry and be cooler than a crumb rubber field.

How often does it need to be replenished?

This is variable and depends heavily on hours of use. The material doesn't really break down, so replenishment is only needed when the material "walks off the field." Keep an eye on heavy use areas for maintenance. Starting in 2021 we will supply small 40 lb. bale bags for maintenance so you can use a small fertilizer spreader, making it easy, fast and inexpensive to replenish. We encourage people to do maintenance on their field and replenish the infill to keep the field in top condition and get more years of use from it.

Does BrockFILL require any specific grooming equipment other than what is traditionally distributed by turf companies? If so, what equipment is needed?

No. The same equipment used for grooming rubber or cork can be used for BrockFILL. Refer to BrockFILL maintenance guidelines and talk to your turf company about their maintenance protocols and frequency.

What about footing and traction?

From a biomechanical perspective, BrockFILL is a more stable layer under foot than crumb rubber, giving athletes more power and better performance. This is what took us three years to perfect. All biomechanical testing reports are available upon request. As the leading advocates for safety in our industry, we started with athlete safety and performance and then engineered the optimal particle and process to achieve BrockFILL.

Can BrockFILL obtain FIFA Quality and FIFA Quality Pro certification?

FIFA certification is not given to individual products. It includes a comprehensive series of performance tests on the entire turf assembly, including turf, infill, and shock pad. Testing is performed on both laboratory samples and on the actual field after installation. https://football-technology.fifa.com/en/media-tiles/about-football-turf/ . As of 2020, several turf companies have obtained the FIFA pre-certification on their turf systems with BrockFill.

What about splash?

When tested, BrockFILL had the lowest splash of ANY infill, and it performs even better when damp. It also doesn't change the spin on the ball as much as crumb rubber and provides a more natural ball response.

How does it behave in cold climates?

All fields, no matter what infill is used, will freeze in extremely cold climates. The real issue is how fast they thaw out. BrockFILL is a hydrophilic, natural material that will retain moisture much like a natural grass field. This means an artificial turf field with BrockFILL will behave like a natural turf field in cold climates. But the fibers in artificial turf will still heat up and melt snow faster than natural grass. A salt solution or Magnesium Chloride for snowmelt can be used to accelerate the melting process.

Will it mold?

Mold will not typically grow in the infertile environment of artificial turf. Mold likes dark, wet, and static environments. An artificial turf field is the generally the opposite. Wood has been used in playground applications with weed barriers for decades because of this property. The turf and shock pad, plus the stone base, create the ideal usage environment for BrockFILL.

Does it burn?

BrockFILL does not sustain combustion in a turf system. The reason is that when a flame source is removed, the small particles don't generate enough heat to ignite other particles. BrockFILL has passed all the flammability tests and if you'd like to see a demonstration, watch the "Torch" video on our website. BrockFILL has been tested and passes ASTM D2859 Ignition Characteristics of Floor Covering Material.

Will it float?

Scientifically speaking, anything less dense than water will "float." Because BrockFILL is hydrophilic, it absorbs water and gains weight when exposed to rain or irrigation. This means BrockFILL is much less prone to floating and migration than cork. When fully saturated with moisture, BrockFILL particles become denser than water and will not float. BrockFILL is as stable as rubber in heavy rains, if not more.

How does it compare with cork?

BrockFILL is about 30% heavier when dry, and 60% heavier when wet. Since cork repels water, it floats in heavy rains. BrockFILL holds water, so it is more stable and won't float or migrate to the extent cork will. But extreme weather conditions or poor field drainage can create migration with any infill. When tested for abrasion at a leading third-party lab, BrockFILL was found to be less abrasive than cork. It's also far more durable. Cork is sourced overseas and is much more expensive than BrockFILL.

Will BrockFILL cause splinters?

BrockFILL itself does not splinter. Splinters normally occur when contact is made with fixed, rough wood material such as lumber. BrockFILL particles are mobile and move under load to prevent splinters from lodging into skin.

Will BrockFILL cause allergies?

The likelihood of allergic reaction to BrockFILL is insignificant due to the way BrockFILL is processed and the absence of known allergens in southern yellow pine wood. The process used to manufacture BrockFILL includes several steps that remove the materials that could cause allergic reactions or irritation. Fresh logs are chipped, then dried in a rotary kiln that exposes the wood to air temperatures in excess of 700 degrees F. The drying process destroys all bacteria, mold, and fungus spores that may have been present in the wood when harvested. Drying also removes moisture and some of the low molecular weight terpenes, resins, and carbohydrates that could conceivably be skin irritants or could provide nutrition for fungus spores that are present in outdoor environments.

Will BrockFILL absorb blood and become a biohazard?

No. blood is about 50% a water solution that will quickly evaporate causing the blood to dry. The process of blood drying causes the red cells to break apart killing bacteria and viruses in the blood which need live cells to survive. The risk of being infected by a virus through the contact with dried blood on a sports field, natural or artificial, is almost zero.

How will sweat affect BrockFILL?

Human perspiration or sweat is typically 99-99.8% water, 0.1% minerals and salts, .002% trace elements, lactic acid and urea. When the water in sweat evaporates, the residue consists primarily of salts and other minerals. If BrockFILL particles absorb human sweat, the water component will eventually evaporate leaving traces of minerals and salts that are invisible, odorless and harmless to the material and athletes.

How will pet urine affect BrockFILL?

All artificial turf systems should be rinsed with water and periodically cleaned with an enzymatic cleaner following exposure to pet urine. When tested by an independent ISO 17025 accredited laboratory for pet odor retention, BrockFILL was reported to have the lowest animal urine character and least unpleasant odor when compared with other turf/infill systems by the lab panelists. The full test report is available upon request.

Will it attract termites?

BrockFILL does not attract termites. Drywood termites need a significant volume of solid wood in which to live and feed. BrockFILL is made of particles that are too small for termites to inhabit. In addition, termites are not able to withstand the temperatures encountered on outdoor artificial turf fields even on a BrockFILL field that's cooler than your typical field. Just thirty minutes of exposure to 120 °F temperatures would kill any drywood termite nymphs that are present.

Do weeds grow in BrockFILL?

Under normal conditions weeds do not grow in BrockFILL. There is not a good source of nutrition to promote plant growth. However, weeds are tenacious and can even grow in crumb rubber, so if they do grow refer to BrockFILL maintenance guidelines.

With 4 lb of sand, will sand fuse together at the bottom over time? If so, will it continue to drain properly?

This concern was raised from those who have replaced old turf fields where there is sand on the bottom. They say the bottom layer fuses together like peanut brittle, becoming very hard and loses its resilience. Any infill will compact over time, but that is the reason we use a shock pad as an integral part of the system. Shock pads help prevent compaction of materials and provide an essential level of safety even as some compaction occurs. Fields with high sand content, even after years of use, still provide Gmax results similar to natural turf (below 100 g) when installed over quality shock pads.

Can game lines be painted on BrockFILL?

Yes, you may paint lines on BrockFILL with turf manufacturer approved chalk-paint products. The material will hold the colors as well as any other infill and may preserve the definition slightly longer due to the lower splash and the absorption of the paint color.

What is the best method for snow removal?

Use a rubber tipped snow plow and follow the BrockFILL maintenance guidelines and turf manufacturer recommendations for removing snow.

Customer Assistance

Please contact Brock USA customer service for any unanswered questions that you may have at telephone (303) 544-5800, 8:00 am - 5:00pm MST.



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THE PERFORMANCE INFILL FOR ATHLETES

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