

WHY Natural Series?

Sprinturf® Natural Series is a culmination of the experience, methodology, challenges and lessons gained from a full generation of Sprinturf's leadership in the synthetic turf industry since 1998. The result is our GEN 2 philosophy to establish new benchmarks for the sports industry. Sprinturf Natural Series is Sprinturf's system that incorporates Greenplay® organic infill designed to provide proven **solutions for heat and abrasion reduction, aesthetics, performance and overall safety** that the previous generation of turf did not.

WHAT is Greenplay?

Greenplay is a second-generation, specially fortified coconut fiber and cork infill for synthetic turf that is the culmination of **over ten years of experience working exclusively with plant-based materials in the USA**. Greenplay is a fully **proven turf enhancing organic infill for durability and turf heat reduction**, with over 60 installations in just the last 3 years. No organic infill has Greenplay's record of performance in the USA.

BENCHMARKS of the Natural Series:

1. TEMPERATURE REDUCTION

- The Natural Series systems provide the industry's lowest turf temperatures
- Absorbs and holds moisture to keep surface temps within 20° of natural grass
- Core temps are actually lower than natural grass for prolonged temp reduction
- Absorbs >150% of its weight in water
- Prolonged moisture retention = prolonged temperature reduction

2. LOW ABRASION

- The safest of any infill by minimizing field surface abrasion
- Eliminates scratches and scrapes that lead to infection
- ASTM F1015 Abrasion index average of 21, natural grass is 20
- Typical infills are all greater than 30
- Low abrasion infill prolongs the life of the turf fiber

3. GRASS-LIKE PERFORMANCE

- Enhanced foot stability
- Excellent energy restitution
- Shock absorption
- Rotational resistance
- Ball rebound

4. ENVIRONMENT

- Odor free
- Non-allergenic
- Natural aesthetics
- No chemicals, pesticide free
- Naturally resists mold and fungus
- 100% recyclable, can be re-purposed on site in the natural environment

5. STABILITY

- Best available, premium C8 and Metallocene polymer turf blade technology
- Fortified Greenplay organic fiber matrix locks the infill within the turf blades
- The cohesiveness of the infill and dual fiber design eliminates fly-out
- Turf system infill levels remain consistent throughout the playing field
- Proven durability with Sprinturf/Greenplay ensures long-term performance

6. VALUE

- All-weather design eliminates field-use restrictions during hot or rainy days
- Reduces the amount of water required by 90% over natural grass
- Low infill bulk density by volume reduces the field's carbon footprint and cost
- Re-purposing existing dense infill as ballast saves cost and the environment
- Optimized recyclability with minimal landfill transportation and disposal costs

WHAT'S the Natural Series?

The Natural Series encompasses Sprinturf's advanced fiber technology sports turf combined with Greenplay organic infill. It can be adapted to almost any project specification to satisfy a bid requirement. However, Sprinturf has designed and tested three specific value engineered sport systems that address a wide-range of performance, safety and environmental requirements:

PRONATURAL- Our best performing system comprised of 2" Sprinturf DFE Extreme 46 oz. turf, 2 lbs. Greenplay and 3 lbs. sand ballast over the ProPlay 23mm shock pad to maximize Critical Fall Height and head injury protection. Grass-like playability is enhanced with the superior sports performance currently available only in the professional sports level stadiums.

REPLAY- The innovative Sprinturf **Field 2 Field** design for field replacement that re-purposes the existing sand/rubber infill from an existing field as ballast under a full layer of Greenplay above. This Natural Series field replacement utilizes 2" Sprinturf DFE Extreme 46 oz. turf, 1 lb. of Greenplay with 2.8 lbs. of the recycled sand/rubber ballast without the need for a shock pad for a logical, value-based solution.

GREENSPORT- Ultimate environmental compatibility with the lowest carbon footprint of any turf system. A truly green system utilizing 2.25" Sprinturf DFE Extreme 46 oz. turf, 2.25 lbs. Greenplay and 3 lbs. sand ballast installed directly on gravel. The cohesiveness of a fortified coconut fiber matrix with cork granules performs similar to a pad within the turf for a true environmentally sustainable solution.

HOW well does the Natural Series perform?

The three specific Natural Series systems are designed meet or exceed the standards put forth by the STC One Turf Concept while replicating the performance and safety characteristics of ideal natural stadium grass.

Synthetic Turf Council STC/One Turf (STC). Stadium Turfgrass (STG). Recommended values provided as benchmarks.

NATURAL SERIES PERFORMANCE COMPARISON CHART					
PERFORMANCE TEST	PRONATURAL TURF SYSTEM	REPLAY TURF SYSTEM	GREENSPORT TURF SYSTEM	STC / ONE TURF STANDARD	STADIUM TURFGRASS VALUES*
Force Reduction	65%	65%	65%	55% - 70%	+/- 60%
Vertical Deformation	9 mm	9.8 mm	9.6 mm	5 mm - 11 mm	+/- 7 mm
Energy Restitution	33%	23%	19%	N/A	+/- 26%
355A "Flat" Gmax	75	103	109	N/A	+/- 70
355A "Flat" HIC	165	244	270	N/A	N/A
Critical Fall Height	1.6 m	1.1 m	1.14 m	1.3 m	+/- 2 m
Rotational Resistance	36 Nm	36 Nm	42 Nm	25 Nm - 50 Nm	+/- 37 Nm
Ball Rebound	0.80 m	0.88 m	0.85 m	0.60 m - 1.00 m	+/- 0.8 m

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DO the Natural Series Systems require a pad?

Pads can be utilized per the preference of a designer, but the REPLAY and GREENSPORT systems offer excellent results without the use of a pad, providing a greater value with affordable performance.

WHAT are the characteristics of Greenplay Organic Infill?

- Provides very low surface and turf core temperatures
- Natural brown coloring, odorless and non-allergenic
- Highly permeable
- Exceptional water retention
- Natural tannins resists mold and fungus
- 100% recyclable as a top-dressing for grass fields, landscapes or as a soil enhancement

HOW is it different from other plant-based infills?

Greenplay sole sources its virgin materials to ensure consistent purity and quality. Greenplay does not utilize dehydrated and compacted coconut bricks that are shipped from various countries like its competitors. The Greenplay production facility is located nearby the harvest to maintain the inherent durability of the natural fibers that are the backbone of the plant-based infill system. The virgin materials are sorted, naturally processed and blended in a proprietary and tightly controlled production sequence. After passing the quality controls it is shipped directly from our facility to the field installation.

DOES organic Greenplay break down more than other plant-based infills?

No, as long as the minimal moisture requirement is maintained through ambient rainfall, humidity or supplemental irrigation. The proprietary fiber blend has proven to be the most durable of all resilient plant-based infills by virtue of extreme testing with 1000 repeated impacts from a 20 lb. missile dropped from a fall height of 2'. Post-gradation variance averaged only +/- 2% with a bulk density increase of only 0.001g/cm³. Non-resilient plant-based infills such as walnut shells or wood particles would be susceptible to a much higher rate of failure.

ANY issues with nut allergies?

No. Coconut is considered a fruit, unlike walnuts. We utilize coconut coir fibers that are naturally allergy free and contain no coconut oil. There have been no incidences of a nut or coconut oil related illness to this specific type of coconut fiber and cork blended material since its 2006 introduction into the United States.

HOW much water does a typical 80,000 sf² field require?

The optimal moisture level of the organic infill is between 30-40% with 20% considered dry and un-playable. It takes 0.083 gallons of water per square foot to bring the moisture level up from 20% to 30%, that's only 6,640 gallons, less than 10% of what natural grass would require. The moisture content should be checked periodically, especially when there is a lack of natural precipitation or humidity for over a week. Monitoring is achieved by a simple two-pronged moisture meter, such as the *Extech* model M0210 (or similar). There is a direct correlation between the watering requirements to the amount of rainfall and ambient humidity. For instance, the east coast, northwest and other regions where occasional precipitation and 30-50% humidity is the norm, there is typically no irrigation required. In dry regions such as the southwest or inconsistent climate zones, two watering's per week may be necessary. In either case, supplemental irrigation can be achieved with a *KIFKO Water-Reel* (or similar) in lieu of a fully integrated field irrigation system.

How much MOISTURE can it hold?

Each square foot of a 2.25" Sprinturf Natural Series turf system retains 0.612 gallons of water when fully saturated, that's +/-50,000 gallons of water in a typical 80,000 square foot field! Water management is optimized and water reclamation tanks unnecessary. With average ambient conditions of 70°F and 32% humidity, it takes 36 days for the fully saturated field to evaporate down to where the infill is considered dry at 20% moisture (SportsLabs USA "Water Retention Evaluation" 5/10/18).

MAINTENANCE?

A Natural Series field should be routinely groomed in accordance with the Sprinturf Sports Turf Maintenance Manual. Generally speaking, there is no reason to disturb the Greenplay infill layer once properly settled, which can take several weeks depending on the use and climate (moisture). It is advisable to start using the field upon installation to aid in the settling process. If there is an absence of rainfall during this time, it is also advisable to water the field until the infill is settled snugly within the turf fibers. Until then, it is possible that a heavy rain might displace some of the loose upper level infill, and if so, it is simply a matter of brushing the material back into the field for it to properly settle back in. There is no reason for normal play to be interrupted. Infill decompaction with tines may be necessary in instances where a heavy winter snow/ice load has compressed the field for an extended amount of time. Decompaction or topping-off should not be attempted when the infill is wet since excessive moisture will cause it to clump while in a bulk state. The facility maintenance crew should be properly trained by a Sprinturf representative to perform all types of maintenance so as not to damage the turf.

MAINTENANCE EQUIPMENT?

A specially designed Greenplay drag groomer with a combination of stiff tines, flexible tines and a tall, stiff brush is available for purchase and highly recommended to perform both routine and seasonal maintenance. This all-in-one unit is supplied with draw-bar so that it can be dragged from the hitch of a utility vehicle, it can also be converted to mount on a tractor's stationary 3-point hitch. A six-foot by six-foot tall, stiff triangle brush is also available for routine grooming.

TOPPING-OFF?

It has been observed with fields in play across the USA that as long as the moisture levels are properly maintained there was no topping-off required even after 2 years. In other instances where there is a lack of field maintenance or moisture, infill was required at about the same rate as crumb rubber. It is advisable to occasionally measure the infill level with a depth-gauge to determine the amount of material needed to restore the minimum free-pile height. On average, every 1/8" of infill depth equates to 0.2 lbs. of Greenplay per sf², or 16,000 lbs. (9 super sacks) for a typical 80,000 sf² field. Super Sacks are 1760 lbs. (800 kg) and delivered on pallets.

CAN it freeze?

Any turf infill as well as natural grass freezes during extreme wet/cold cycle conditions when a heavy rainfall occurs before a sudden drop to freezing temperatures. When it is necessary to utilize the field for play in this instance, a simple top-dressing of natural swimming pool salt can be applied. A quantity of as little as 700 lbs. for an 80,000 ft² has shown to be successful to last through the cold season. If required, additional salt can be applied with no lasting negative affects to the integrity of the turf or infill. For instances where it is a heavy snow instead of a saturating rainfall, it is simply a matter of carefully plowing the field (per the Sprinturf field maintenance guidelines) and letting the sun thaw it out for a minimum of two hours before play.

The TAKEAWAY from all this?

The Natural Series turf systems establish Sprinturf as the industry leader that mandates a new level of sports field safety, performance, durability and environmental responsibility!