shaw SPORTS TURF

MAINTENANCE MANUAL

THANK YOU!

Let me take this opportunity to thank you for choosing Shaw Sports Turf. We are proud that you have chosen to let us meet your synthetic turf needs. We look forward to many years of working together.

If you have any questions about your field or its maintenance, we invite you to contact us immediately by calling or emailing. We will be happy to assist you.

Shaw Sports Turf can also provide continued support through our field maintenance programs. Proper maintenance is critical to keep your field playing and looking like new, and can be customized for your specific needs.

Once again, thank you for your business.

Chuck McClurg
Vice President

MAINTENANCE PLAN DETAILS

Shaw Sports Turf has designed a multi-tiered maintenance program to support facility operators in the proper care and maintenance of their synthetic surfaces.

There are two levels of formal maintenance programs. They include the Shaw Sports Turf Basic Plan and the Shaw Sports Turf Plus Plan. Each plan will include field inspection and a maintenance summary report at each visit.

SHAW BASIC

- Field Inspection
- Standard Grooming Visit
  - Clean surface and level infill
  - Remove any ferrous material
- Written Maintenance Summary Report

SHAW PLUS

- Field Inspection
- Premium Grooming Visit
  - Clean surface and level infill
  - Remove any ferrous material
  - Remove and clean infill
  - De-compact infill
- Written Maintenance Summary Report

FIELD INSPECTION INCLUDES

- Infill Depth
- Visual Fiber Wear Analysis
- Seam Inspection
- Edge detail / Transition inspection
- Monitor High Use Areas
- Inspect Inlays

TWO TYPES OF GROOMING (DEPENDING ON SELECTED PLAN)

1. Standard Grooming

- Utilize synthetic turf equipment to level the infill and brush fibers upright for the entire field.

2. Premium Grooming

- Utilize synthetic turf equipment for deep cleaning to remove foreign debris and contaminants. During this process we utilize equipment with a large magnet to remove all ferrous metal from the field.
- Utilize synthetic turf equipment to decompact infill material. This will loosen the infill material to increase the shock absorbency and support the upright fiber.
- Deep cleaning removes dirt and contaminants and also improves surface drainage.
- Utilize synthetic turf equipment to level the infill and brush fibers upright for the entire field.

WRITTEN MAINTENANCE SUMMARY REPORT INCLUDES:

- Detailed documentation of the field safety inspection performed
- Detailed documentation of the repairs needed
- Thorough checklist of the maintenance plan provided
- Infill depth measurements at 10 locations from before and after grooming
- Ongoing maintenance recommendations
- Final inspection and walkthrough with the customer

INTRODUCTION TO

MAINTENANCE

Since 1989, Shaw Sports Turf has refined installation techniques and developed and manufactured synthetic surfaces that are extremely advanced, both in material and design. Your surface will perform, look, and feel better for a longer period of time if the maintenance procedures outlined in this manual are followed closely. This manual attempts to address and answer the most frequently asked questions regarding your surface. However, there are always new demands, uncertainties and unanticipated occurrences that may arise. Please do not hesitate to call us for any questions or concerns that you may have regarding specific care for your surface.

Following these simple suggestions will significantly extend the life and performance of your product:

- Keep it clean
- Do not abuse it. No vehicle traffic, no heavy static loads, or fireworks, etc.
- Make all minor repairs to your surface promptly
- Consult with a Shaw Sports Turf professional if your repairs and renovations are complicated
- Maintain proper infill levels in high-use areas

NOTE:

This manual is intended for customer use. It is important that the people who are responsible for field maintenance are thoroughly familiar with its contents and refer to it regularly. The contents of this manual represent the most current information regarding suggested procedures for the proper use and care of Shaw Sports Turf synthetic turf systems.

CONTACTS

sst.maintenance@shawinc.com

Maintenance & Warranty Coordinator: 1-866-703-4004 or 706-879-3517

www.shawsportsturf.com

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USAGE GUIDES

Each Shaw Sports Turf surface is specially designed for optimal performance and is suitable for the following applications:

- Football, soccer, lacrosse, field hockey, rugby
- Softball / baseball (non-metal cleats)
- Marching band
- Physical exercises
- Physical education activities
- Pneumatic rubber-tired maintenance and service vehicles
- Pedestrian traffic and other similar uses

DO's

Shaw Sports Turf synthetic turf systems are designed to resist both wear and exposure to the elements. The effectiveness of their materials, design, and construction is demonstrated by the long life of fields under heavy use in many climates.

- Control access to the synthetic turf system. Keep the synthetic turf system and adjacent areas clean and free of litter, mud, and debris.
- Post signs at all entrances to the field prohibiting smoking and carrying food or drink onto the synthetic turf system.
- Observe load limits for static and rolling loads, especially when the surface is wet.
- Use practice mats when possible or rotate practice drills to avoid wear in a single location.
- Repair minor damage promptly.
- Follow suggested maintenance and cleaning procedures. Inspect your field regularly for damaged seams, logos, and inlays. Contact your Shaw Sports Turf representative promptly for assistance with repairs or any other technical details.

DONT's

Do not abuse the synthetic turf system with:

- Any unauthorized use
- Heavy static loads
- Fireworks, open flames, welding, etc.
- Storage of materials such as drums, lumber, equipment, etc.
- Golfing, shot putting, javelin, or discus throwing
- Long metal spike shoes
- Use of wire brushes in any form
- Use of cleaning equipment, materials, and methods not authorized by Shaw Sports Turf
- High-pressure water sprays exceeding 300 psi
- Vehicles with non-pneumatic tires or tires inflated above 35 psi
- Introduction of infills or impregnated layers other than supplied or authorized by Shaw Sports Turf
- Use of bikes, lawnmowers, etc.
- Displace infill with direct water pressure
- You may notice individual fibers that stand up from the turf after initial installation. These may be present around inlays, or they may be fibers that are pulled up during de-compaction. These fibers should not be pulled up because that can damage the turf. High fibers should simply be trimmed using scissors

MAINTENANCE TRAINING

Upon completion of the turf field installation, a Shaw Sports Turf representative will conduct a maintenance training session with the appropriate parties identified by the end user. The training log displayed below will be used to document those present at this training.

Job #:

Job Name:

Start Date:

MAINTENANCE TRAINING LOG

By signing below, you are acknowledging you have received proper maintenance training for the project listed herein.

	1. **Name** (Please Print)	**Company**	**Phone #**
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

By signing this document the Owner confirms that they have received a copy of the Shaw Sports Turf Maintenance manual and that the items listed below have been provided in conformance with the project requirements and delivered/accepted by the owner.

SHAW SPORTS TURF

_____
Project Superintendent

Name: _____
Title: _____
Date: _____
Company: _____
Owner's Name (or Owner Rep)

EQUIPMENT AND ATTIC STOCK VERIFICATION FORM

The form displayed below will be completed upon completion of the turf field installation. The form is to document the handoff of the attic stock material and field maintenance equipment to the end user.

Job #:
Job Name:
Start Date:

Equipment and Attic Stock Verification Form

By signing below, you are acknowledging receipt of: (1) Maintenance Equipment, & (2) Attic Stock

Maintenance Equipment:

1. GreensGroomer
2.
3.
4.
5.

Attic Stock:

1. lbs Rubber
2. lbs Sand
3.
4.
5.
6.

SHAW SPORTS TURF

_____
Project Superintendent

Name: _____
Title: _____
Date: _____
Company: _____
Owner's Representative
(If signed on behalf of Owner)

MAINTENANCE LOG

The form displayed below will be used as the end user performs maintenance on their field. This provides documentation that the owner has completed the maintenance on the field necessary to fulfill warranty requirements.

shaw SPORTS TURF

Maintenance Log

Field Name: _____

Location: _____

For Year: _____

Submitted by: _____

Groom Field -

Date	Signature	Date	Signature	Date	Signature
Date	Signature	Date	Signature	Date	Signature
Date	Signature	Date	Signature	Date	Signature
Date	Signature	Date	Signature	Date	Signature

Sweeper -

Date	Signature	Date	Signature	Date	Signature
Date	Signature	Date	Signature	Date	Signature
Date	Signature	Date	Signature	Date	Signature

General Maintenance

Date	Signature	Reason / Comments
Date	Signature	
Date	Signature	
Date	Signature	

Send the completed form to Shaw Sports Turf
Via Email: SST.Maintenance@shawinc.com Via Fax: 706-879-4045

FIELD EXPECTATIONS

FIELD LIFE CYCLE

NEWLY INSTALLED

After the field has been installed, all of the fibers will be upright and have an appearance similar to freshly cut grass. The field may appear a bit darker since the infill level is slightly higher and looser than it will be after use.

MIDLIFE

After initial use, the fibers will establish a more grass-like appearance with the tips moving in multiple directions. The infill will also settle down to the field's specified level. The time frame for this change to occur varies based on the amount of use. Areas of the field with frequent play may have this appearance after as little as one season. Areas with less frequent play may take years to reach this appearance.

SEASONED

After your field has been in use for several years, the fibers will lay over even more. Following our maintenance guidelines and maintaining proper infill height will help maintain the safety and performance qualities of your field even as these normal appearance changes take place.

GROOMING

OF INFILLED TURF

Shaw Sports Turf recommends that every turf system has a routine grooming after every 80 hours of use, or a minimum of once per month. Additional grooming may be necessary based on frequency or intensity of usage. Routine grooming is accomplished with a commercial turf brush suitable for use on the surface.

If you do not have a commercial turf brush please contact your Shaw Sports Turf representative to purchase one.

Infilled surfaces do require grooming. Additional grooming may be necessary when the infill has become displaced due to excessive use in certain areas of the surface such as a goal and heavy traffic areas.

ROUTINE GROOMING

Routine grooming keeps the surface free from debris and also maintains your Shaw Sports Turf synthetic turf system at its optimum performance. Routine brushing simultaneously achieves three objectives:

1. Keeps infill layer uniform in its distribution
2. Ensures that the fiber is protected and that the exposed part of the fiber is uniform in its direction and stays erect
3. Helps remove litter, leaves, dirt, etc.

The realized benefits from routine grooming are:

1. Consistent footing and ball bounce throughout the surface
2. Maximum aesthetic appeal
3. Lengthened life expectancy

Maintaining proper infill depth is critical to your field's long life and performance. Follow the instructions below to periodically measure your infill level with a tool available from Turf Tec International, available at www.turf-tec.com. Your measured infill level should then be compared to the minimum infill depth for your field's pile height shown on page 9.

1. Turn black knob to loosen depth gauge
2. Place white foot plate firmly on infill surface
3. Slide center shaft down until it makes contact with turf backing
4. Lift out and read gauge in inches or millimeters
5. Note, you should check 2 or 3 areas at each location to get the average infill for that test area
6. Test wear areas more frequently as these areas are usually where the infill is dispersed more frequently

Also keep in mind that infill does not break down, it often is just redistributed to other areas of the playing surface. Proper grooming may even out the infill better than the addition of more infill.

FREQUENT CARE

The amount and frequency of care is dependent on not only the surface, but also by the volume and the type of use. Shaw Sports Turf recommends that every Shaw turf system shall be periodically groomed and swept to remove litter and debris, etc.

SWEEPERS

When using pull-behind or self-propelled sweepers and groomers, several points should be observed:

Bristle Type

The sweeper should have synthetic fiber bristles such as nylon or polypropylene. The minimum brush length should be 2.5". The maximum bristle diameter should be .030". The brush must contain no metal or wire. Metal fibers can fall out and cause injuries to players and can also damage the surface.

Brush Setting

The brush setting should be monitored. The actual setting will depend on the model and type of sweeper. The sweeper will work best, however, when the brush is set so that it barely touches the tips of the fibers of the turf. The weight of the groomer should be supported by the wheels and not the bristles. Steel tines should not be used when grooming the field. ***Do not set the brush so low that it digs into the turf pile or backing.*** Too low a setting will pull up excess infill and result in an uneven infill level. Vacuum cleaners are not recommended to remove mud. Contact your Shaw Sports Turf representative if you have any questions about the type of machine to use or brush settings.

NOTE: When a sweeper is initially used on a new field, you may notice many loose fibers are collected. This is normal. The fibers are the result of the many seams and inlays on your field. The loose fibers will diminish after a few routine brushings.

Turf Loading Limitations

Brushing and brush cleaning may require several trips over the field to finish the operation. Any sweeper that weighs more than 300 lbs. should have turf type low pressure tires (pneumatic tires) with a maximum tire pressure of 35 pounds per square inch (psi). Do not park vehicles on the turf, especially in the heat of the day, or leave vehicles on wet turf for long periods of time.

Exhaust Fumes

For indoor use we recommend either electric or propane powered sweepers. The type of fuel or power used by a sweeper is of no major importance for outdoor use. However, if the sweeper has an internal combustion engine, make certain that the hot engine exhaust is not discharged down toward the playing surface. Hot objects can damage the field and engine exhaust may melt fibers. Also check to make sure that the sweeper is designed in such a way that a hot muffler or exhaust pipe cannot drop onto the surface.

Oil Spillage, etc.

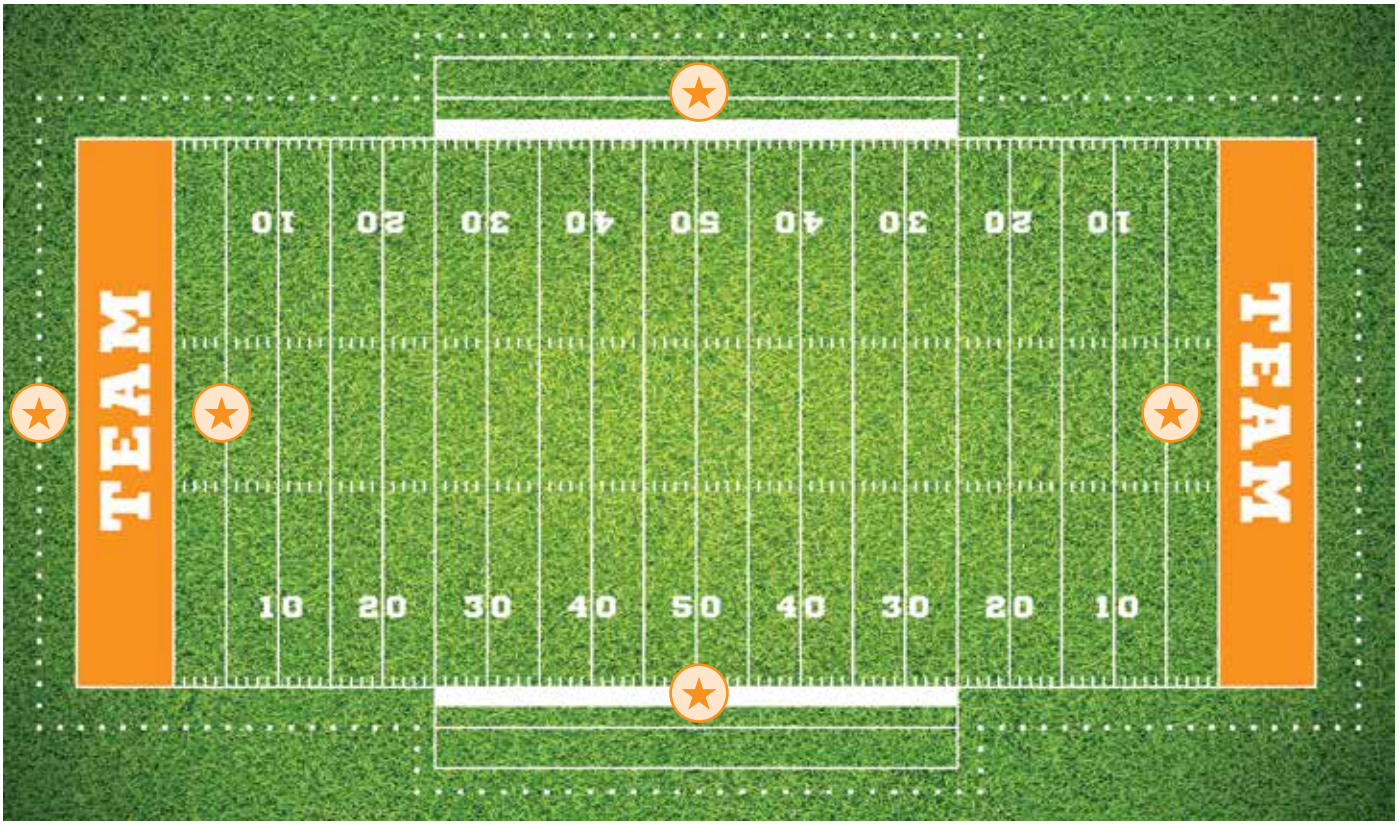
Care should be taken to prevent lubricating oil, gasoline, grease, transmission fluids, battery acid, brake fluid, etc. from dripping, leaking, or spilling on the turf surface during sweepings. Such spills can discolor the turf and damage the fibers and turf backing. Proper maintenance procedures should be observed in this regard. Battery acid and other fluids should not be allowed on the surface. Never change or add fluids to maintenance equipment while on the surface.

CAUTION: Electrically powered units may not be properly grounded. Do not use them on wet or damp surfaces.

LITTER REMOVAL

Light trash (paper, peanut shells, sunflower seeds, athletic tape, etc.) can be removed easily with a lawn sweeper or maintenance sweeper. A sweeper with magnet will also remove ferrous material such as pins, snaps, cleats, etc.

FOOTBALL



In addition to our standard maintenance guidelines, we recommend that you pay special attention to the following specific areas, which will need additional attention due to the high traffic:

- Extra point line
- Team sideline areas
- Entrance from field house
- Between the hash marks

SURFACE GROOMING

Surface grooming is recommended every 80 hours, or at least once per month, to maintain proper infill depth and place fibers in an upright position.

INFILL DECOMPACTION

Shaw Sports Turf recommends annual decompaction for high use (daily, multi-sport, tournament use or municipal fields/parks) fields with conventional infill systems. Fields with more typical levels of use will need to be decompacted every 3-to-4 years.

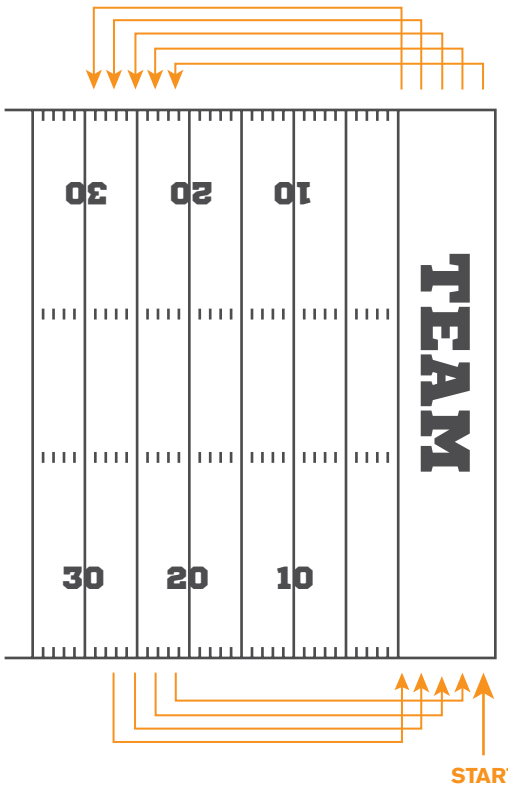
PROPER INFILL DEPTH

Add infill as needed to high traffic areas to maintain proper infill depth. Maintain the Shaw Sports Turf recommended infill level for your specific field and infill type. Proper infill level is critical to fiber performance and player safety.

ADDING INFILL

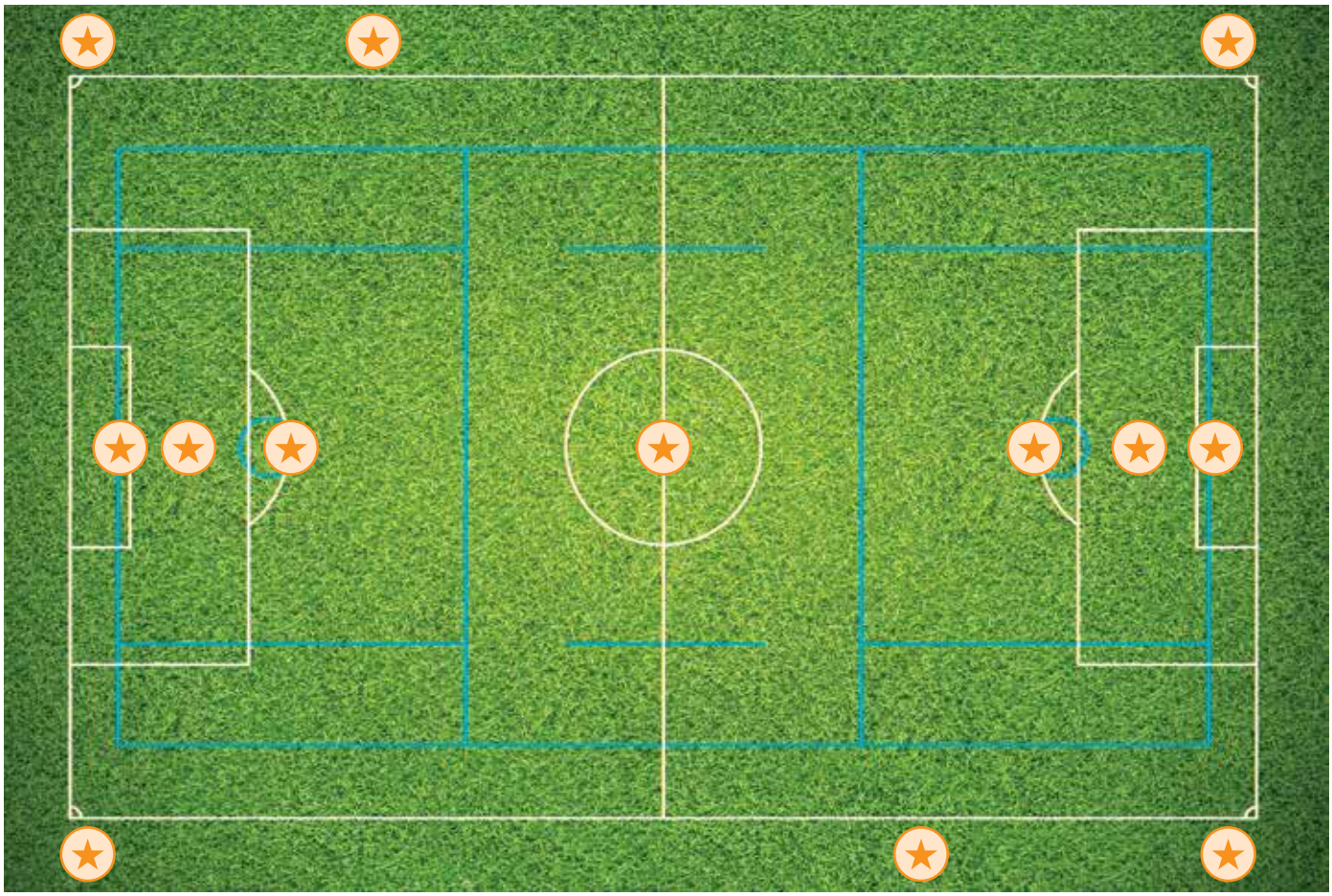
Infill can be added by hand and spread with a broom or flexible leaf rake in smaller areas, or spread with a powered groomer in larger areas. Contact SST maintenance if infill needs to be added to your entire field.

50 YARD GROOMING PATTERN



Continue this pattern until you reach the 50 yard line. Repeat to complete the other half of the field. Rotate between clockwise and counterclockwise each time you groom.

SOCCER / LACROSSE



In addition to our standard maintenance guidelines, we recommend that you pay special attention to the following specific areas, which will need additional attention due to the high traffic:

- Penalty spot
- Corner kick
- Goal mouth
- Center circle
- Face-off location
- Linesman paths
- Entrance from field house

SURFACE GROOMING

Surface grooming is recommended every 80 hours, or at least once per month, to maintain proper infill depth and place fibers in an upright position.

INFILL DECOMPACTION

Shaw Sports Turf recommends annual decompaction for high use (daily, multi-sport, tournament use or municipal fields/ parks) fields with conventional infill systems. Fields with more typical levels of use will need to be decompacted every 3-to-4 years.

PROPER INFILL DEPTH

Add infill as needed to high traffic areas to maintain proper infill depth. Maintain the Shaw Sports Turf recommended infill level for your specific field and infill type. Proper infill level is critical to fiber performance and player safety.

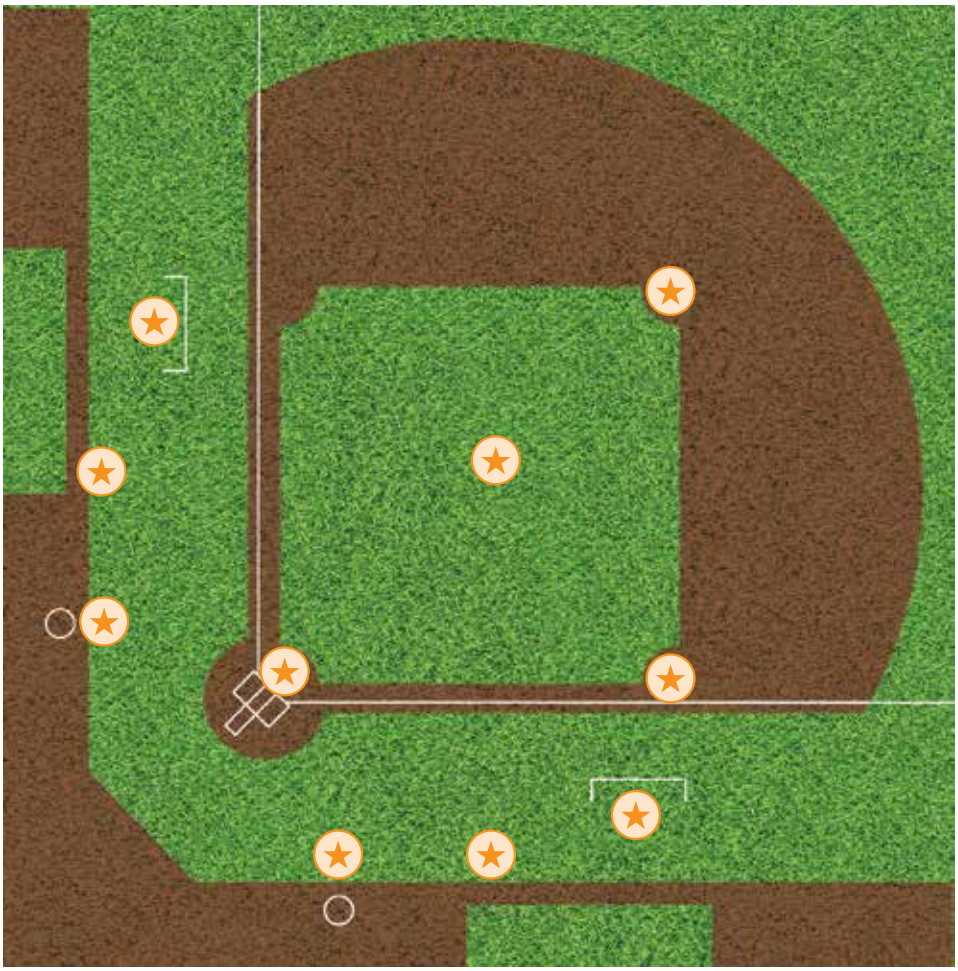
ADDING INFILL

Infill can be added by hand and spread with a broom or flexible leaf rake in smaller areas, or spread with a powered groomer in larger areas. Contact SST maintenance if infill needs to be added to your entire field.

SOCCER/LACROSSE GROOMING PATTERN

Continue this pattern until you reach midfield. Repeat to complete the other half of the field. Rotate between clockwise and counterclockwise each time you groom.

BASEBALL / SOFTBALL



SURFACE GROOMING

Surface grooming is recommended every 80 hours, or at least once per month, to maintain proper infill depth and place fibers in an upright position.

INFILL DECOMPACTION

Shaw Sports Turf recommends annual de-compaction for high use (daily, multi-sport, tournament use or municipal fields/parks) fields with conventional infill systems. Fields with more typical levels of use will need to be decompacted every 3-to-4 years.

PROPER INFILL DEPTH

Add infill as needed to high traffic areas to maintain proper infill depth. Maintain the Shaw Sports Turf recommended infill level for your specific field and infill type. Proper infill level is critical to fiber performance and player safety.

ADDING INFILL

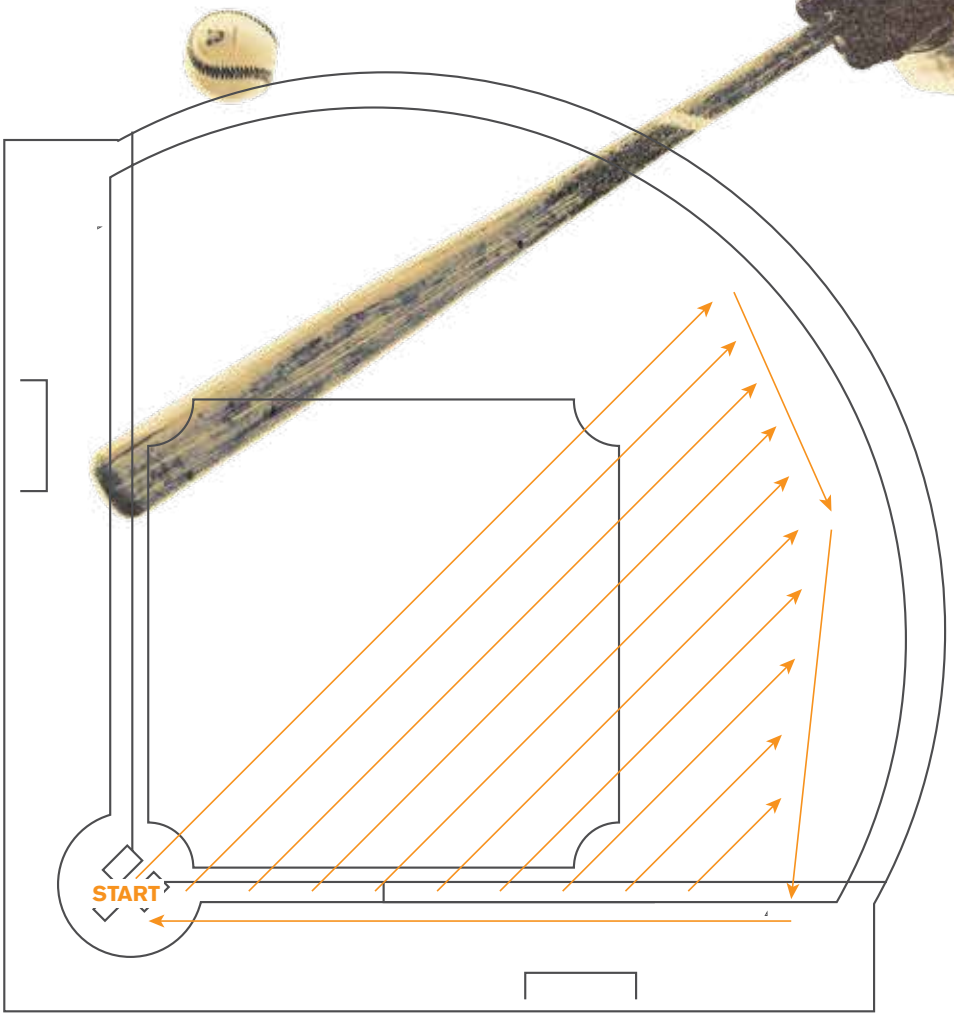
Infill can be added by hand and spread with a broom or flexible leaf rake in smaller areas, or spread with a powered groomer in larger areas. Contact SST maintenance if infill needs to be added to your entire sports field.

In addition to our standard maintenance guidelines, we recommend that you pay special attention to the following specific areas (if turf), which will need additional attention due to the high traffic:

- Batter's box
- Catcher's box
- Umpire's box
  (Shaw Sports Turf recommends protecting your home plate area with a temporary turf covering while conducting practice.)
- First base area
- Second base area
- Pitcher's mound
- On-deck circles
- Dugout entrance
- Coach's box

Shaw Sports Turf recommends that these areas be checked and remediated after every game and practice.

BASEBALL/SOFTBALL GROOMING PATTERN



Continue this pattern until you reach midfield. Repeat to complete the other half of the field. Rotate between clockwise and counterclockwise each time you groom.

HYDROCHILL

HOW TO GROOM THE FIELD

Grooming instructions remain the same as those described previously for conventional infilled systems.

WHEN TO GROOM THE FIELD

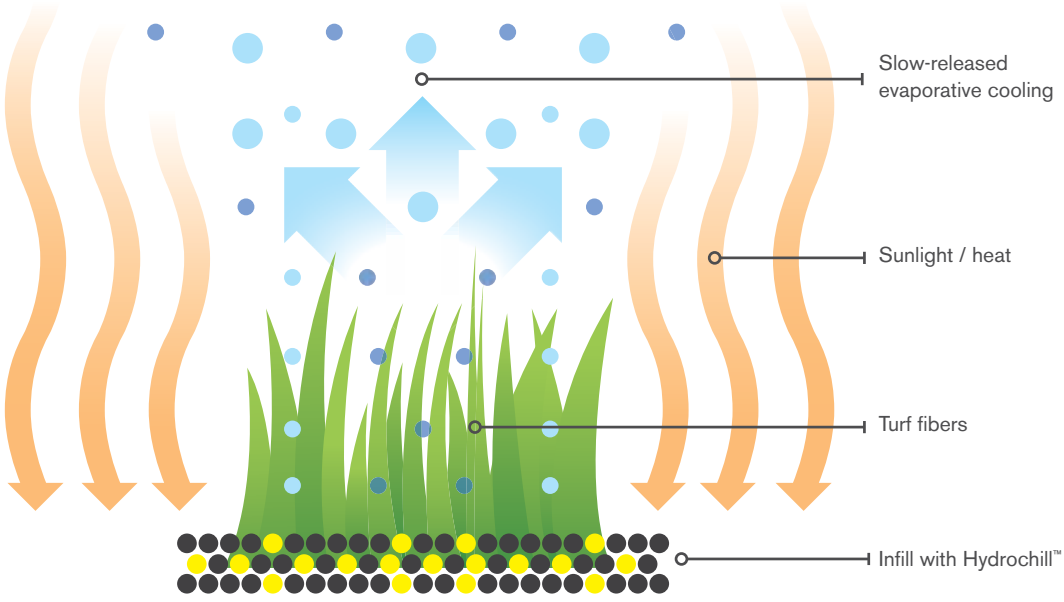
The most important point to note is that the field should NOT be groomed when it is wet (from rain, watering of the system, or dew).

USE OF ANTIMICROBIAL OR TURF DISINFECTANT TREATMENTS

We do not recommend the use of antimicrobial or turf disinfectant treatments for Hydrochill infill systems. If the customer intends to treat a field with an antimicrobial or turf disinfectant treatment, they should have a sample of the chemicals and the MSDS sheets sent to Shaw Sports Turf to determine what, if any, effect the chemicals have on the Hydrochill application. After testing, we will determine if the intended chemical will be allowed on the system.

SNOW AND ICE REMOVAL

Snow and ice removal instructions remain the same as those described previously for conventional infilled systems. It is important to point out that no removal method should dig into or gouge the surface. No salt or ice melting chemicals should be used on the field. We do not recommend breaking up ice from the surface and removing, as infill may be stuck in the ice. Removal of this infill removes the Hydrochill treatment.



PAINTING OF FIELD MARKINGS ON THE SURFACE

Painting instructions remain the same as those described for conventional infilled systems.

ADDING INFILL

Only Hydrochill infill should be used on a field originally infilled with Hydrochill. Infill can be added by hand and spread with a broom or rake in smaller areas, or spread with a powered groomer in larger areas. If you have any concerns regarding addition of infill, please contact Shaw Sports Turf.

HYDRATING THE SYSTEM (CHARGING THE SYSTEM)

When should the system be hydrated?

As a general rule, the system should be hydrated during periods of daily use every 3-to-4 days if there is no significant rainfall (significant defined as ¼"). This can vary depending on humidity and partial cloud cover. We recommend hydrating in the morning, before the field gets hot. Typically this should be done before 10:00 a.m. Every installation will need to be monitored to develop a customized watering plan specific for that site.

How much should it be hydrated?

As a general rule, 12,000 gallons of water for an 85,000 square foot field. That is the equivalent of ¼" of rain. Depending on the watering source, 300 gallons per minute over 10 minutes should cover ¼ of the field. We would not recommend anything faster than this. The watering process can be done slower than this. That would be dependent upon how much time the customer has to water and what watering methods are available.

GEOFILL

As with any synthetic turf system, maintenance is required–more so than SBR rubber fields, but much less compared to a natural grass field. The following maintenance procedures are required for Shaw Sports Turf systems with Geofill.

- Requires moisture for optimal performance. The amount of moisture is dependent on environmental conditions including rain, dew & relative humidity.
- The moisture requirement of Geofill extends to field maintenance. The field should be moist when groomed or brushed (but not wet, ideally in the early morning or evening) to prevent the infill from being displaced.
- Requires regular brushing as needed, or after approximately every 100 of use or every two months.
- Requires annual decompaction for high use (daily, multi-sport, tournament use or municipal fields/parks) fields. Typical use fields will need to be decompacted every 2-to-3 years when the Geofill infill is replenished.
- To maintain proper infill depths, as with all infilled synthetic turf systems, GeoFill requires a top dressing. The frequency and amount depend on use of the field, regularity of routine maintenance, and other environmental conditions. In most cases, as long as the proper moisture content is kept, top dressing should only be necessary every 2-3 years.
- Should you require additional infill, please contact Shaw Sports Turf.

How will Geofill react in harsh weather conditions such as extreme winters? With proper maintenance (regular brushing and an annual decompaction), Geofill can be used in colder climates. In order to prevent frost, salt can be used twice per year with no risks to the turf, players or quality of play. For severe climates, Geofill can be customized in a special blend of infill materials.

Watering requirements for the Geofill system are directly related to the amount and frequency of rainfall and the relative humidity at a given location. The optimal level of moisture in the Geofill system is between 30% and 40%.

the infill materials are placed in the turf in layers

an initial watering results in a uniform infill layer

Geofill's internationally patented technology ensures a durable, easily maintained, playing surface

CLEANING

AND STAIN REMOVAL

For outdoor surfaces, rain is the best cleaner. Rainfall gently cleans the fibers of pollen and airborne pollutants in a way that is difficult to duplicate. In areas where rainfall is scarce – or during prolonged periods of drought – an occasional watering is beneficial to clean the synthetic surface. Listed below are the suggested precautionary maintenance practices:

- Keep trash and litter containers on site
- Minimize mud/dirt tracking on the field
- During field activities, set up drinks for breaks off of the synthetic surface, if possible
- Enforce a smoke-free environment and discourage the use of chewing tobacco, gum and sunflower seeds

HELPFUL HINTS FOR REMOVING STATIC ELECTRICITY & SURFACE TENSION

The static electricity level on a synthetic turf field can reduced by using a a fabric softener, ie, Downy. The recommended distribution level is 1.5 fluid oz of fabric softener per 1,000 square feet of turf surface. The fabric softener is typically diluted 1:150 in water (a 64 oz bottle of fabric softener will mix with 75 gallons of water to treat 43,000 sq ft of turf). There should be an immediate reduction in static once applied. The treatment may need to be repeated after it rains as the fabric softener is water soluble.

Newly installed synthetic turf fields may experience ponding after it rains as a result of high surface tension on the new rubber infill. A solution is to apply Liquid Tide. The recommended distribution level is 1.5 fluid oz of Tide per 1,000 square feet of turf surface, diluted 1:150 in water (a 50 oz bottle of Tide will mix with 60 gallons of water to treat 33,000 sq ft of turf).

STAIN REMOVAL

General Instructions

Shaw Sports Turf fibers are among the most stain resistant in the industry. Most stains are actually residue of foreign matter that must be promptly and thoroughly removed.

The first rule in spot removal is promptness. It is always easier to clean up a fresh spill than one that has dried and hardened. Remove any solid or paste-like deposit with a spatula or table knife. Blot up excess liquids with a thick stack of paper towels or a dry absorbent such as kitty litter or Fuller's Earth. Dry absorbents can then be swept or vacuumed up.

Shaw Sports Turf surfaces provide good resistance to staining. However, it is important to realize they are only one part of a sophisticated system of various components designed for overall field performance. Some cleaning agents that are safe for the fiber can be harmful to other components of the system.

Nylon Fibers

Cleaning agents are grouped into two sets, one of which can be used in liberal amounts directly on the turf surface, and the second which should only be applied by rubbing a white cloth soaked in cleaner, in order to minimize penetration of possibly harmful agents below the turf fibers.

In the first group of cleaners, which generally can be applied to non-infilled systems without any special precautions, are the following:

1. A warm, mild solution of granular household detergent such as Tide or ALL in water, or any neutral low sudsing detergent that is recommended for fine fabrics. Use approximately one teaspoon of detergent to one pint of water. This will handle most stains.
2. Use three percent solution of ammonia in water for more severe cleaning problems. (NOTE: household ammonia is three percent. Industrial aqua ammonia is 33 percent. Dilute nine parts water to one part industrial ammonia, or the available supply as appropriate.) Thoroughly flush the surface and rinse with plenty of cold water afterwards.
3. Clean, dry absorbents such as paper towels or commercial kitty litter can be used for applicable stains.

Any other cleaners must be applied sparingly, and care must be taken to avoid penetration beneath the turf fibers. We recommend consulting a professional for application instructions.

Polypropylene & Polyethylene Fibers

Polypropylene & polyethylene fibers are among the most stain resistant fibers known to man. Hence, most stains on Shaw Sports Turf polypropylene and polyethylene fields are actually residues of foreign matter which must be promptly and thoroughly removed. (This is not the case with nylon and other fibers on the market.)

Most stains on polypropylene or polyethylene fields can be removed with water or soap and water. The first rule is promptness. It is much easier to clean up a fresh oil spill before it has time to dry and harden. Remove any solid or paste-like deposit promptly using a dull knife or spatula-like tool. Blot up excess liquids with a stack of white towels, cloth or paper. Dry absorbent clay-based materials, such as cat litter absorbers (kitty litter) can be very useful and should be stored on site. Such dry absorbers can be swept or vacuumed up.

The first group of cleaners can generally be applied to infilled systems without any special precautions.

Any other cleaners should only be applied by rubbing a white cloth soaked in the cleaner, in order to minimize penetration of possibly harmful agents below the turf fibers.

Waterborne Residues

Most stains commonly associated with polypropylene and polyethylene playing fields can be classified as “waterborne” stains. These stains are best removed using a warm mild solution of granular household detergent (non-abrasive) and water.

Typical Waterborne Stains

Acid	Blood	Dye	Glue	Milk	Urine
Alcohol	Butter Chocolate	Food Coloring	Ice Cream	Mustard	Water Colors
Alkali	Coffee	Fruit Juice	Ketchup	Tea	
Beer	Cola	Gatorade	Latex Paint	Thimerosal	

1. Brush the residue with a stiff brush
2. Scrub the area with soap and water
3. Rinse the area thoroughly with clear water to remove all traces of soap
4. Dry with absorbent towel(s), if necessary

A three percent solution of ammonia in water may be used in lieu of household detergent for more stubborn residues or stains.

Non Waterborne Residues

With other cleaners, where agents must be applied sparingly, care must be taken to avoid penetration into the turf fibers. We recommend consulting a professional for application instructions. Ensure that the turf is rinsed thoroughly after cleaning

Non Waterborne Stains

Asphalt	Cooking Oil	Grease	Paraffin wax	Shoe Polish
Ball-point	Crayon	Lipstick	Rubber Cleat Marks	Suntan Oil
Chewing Gum	Floor Wax	Motor Oil		

DISINFECTING TURF CONTAMINATED WITH BODY FLUIDS

Synthetic turf surfaces that have come in contact with blood, vomit, or other body fluids should be disinfected to eliminate bacteria including Methicillin-Resistant Staphylococcus Aureus (MRSA). The Centers for Disease Control and Prevention (CDC) recommends* treatment of surfaces that may be contaminated can be accomplished by treating the area with a solution of sodium hypochorlite (household bleach). The bleach should be diluted with cold water (1 part bleach to 9 parts water). For small areas, mix ¾ cup of bleach with 1 gallon of water. For large areas, combine 5 gallons of bleach with 45 gallons of water.

The diluted solution is sprayed onto the affected surfaces. The surface should be wet with the bleach solution. The surface needs at least 2 minutes of contact time with the bleach solution to be effective. The surface should be sprayed with water after the treatment period to remove any residue or it can be left for the bleach to naturally decompose. The diluted bleach solution is only stable for 24 hours and should be discarded.

*** http://www.cdc.gov/mrsa/community/environment/athletic-facilities**

FIELD MARKING, LOGOS, ADVERTISING & DECORATION

PAINTED LINE & MARKING SYSTEM

NOTE: Inlaid line and marking systems are preferred for optimum performance. Inlaid line and marking systems are constructed utilizing the same material specifications, and are inset in such a manner to ensure a good bond, an even finished surface, and physical strength equal to the material prior to introduction of the line and marking system. Permanent inlaid line and marking systems are more attractive than painted systems because of the reduction in maintenance and quality of image.

Alternative painting of line and marking systems and their care is explained in this section. Many facility owners like to use elaborate line and marking systems, including facility logos, league logos, sponsor logos, mid-field, and end-zone designs, in assorted colors. Others prefer the simpler approach of sharp, well-defined game markings with no extraneous markings. In either instance, the materials and techniques used in applying paints will determine the life of the markings and the ease of removal when these need to be changed. In marking, do not apply paint too heavily. Light applications give good visibility and adequate life and are less abrasive than excessive layers of caked-on paint. Also, where possible, do not paint over inlaid lines and logos.

Dry Markings

Chalk markings are not recommended for infilled systems. Dry chalk can be captured by the infill which can degrade a field's performance and drainage. There are some aerosol chalks that have proven to work well on synthetic turf. Some brands can stain inlaid lines and logos. We recommend Pioneer's Aerosol chalk as it fades to white over time and will not stain turf.

Paints

Regardless of the type of paint used and design required, best results will be obtained when paint is applied to a clean, dry, dust and grease-free base. It is extremely important that old, degraded paint and dirt be washed off any area that is to be repainted if the best appearance and traffic resistance are to be obtained.

If your field needs this type of attention, we recommend contacting a Pioneer Athletics representative for quotations and scheduling at 800-877-1500.

Temporary Paint

The recommended paints in this category are designed to be easily removable after usage in a limited number of games on infilled systems. Usually, the removal can be achieved by applying a special paint remover solution, agitating with a deck brush or remover machine and rinsing thoroughly with water. We suggest a top quality water-based paint designed specifically for synthetic turf such as Pioneer Athletics Game Line paints. One day curing of these paints, at moderate temperature and dry weather, is sufficient. Traditional grass paints or household paints can be very difficult to remove.

Durable Paints

High quality latex based permanent paint is highly durable. Once applied and cured, this paint may require special chemicals and equipment to remove. Thus, it is imperative that use of this paint be restricted to carefully chosen areas. For each of the above paints, it is recommended that 24-48 hours be allowed for complete cure. Paint should always be applied to dry turf at moderate temperatures. We recommend Pioneer Athletics' Extreme Line paints for infilled systems and Titan for non-infilled systems.

Striping and Painting

The application procedure for applying temporary and permanent paint is as follows:

Remove excess paint existing on field. Test application procedure before going on the field (use a scrap of turf fastened to asphalt, plywood, or use a corner of the field.) Use no more paint than absolutely necessary. Keep water on hand and readily available to rinse any spills or mistakes before they dry.

The paint should be applied lightly to the tips of the turf fibers–not the entire length of every fiber. Applying the paint too heavily makes for a very rough, abrasive surface and will make the removal job very difficult. An airless system is recommended as it provides a superior look, while using less paint. Follow the paint supplier's guidelines for paint application. Sprayers that do not atomize the paint are not recommended as paint will flow into the infill and negatively impact removal and field performance.

When applying paint, use large templates and cardboard or wood windshields to minimize paint over-spray.

For logos and other markings, always use a guide such as templates or straight edges. Applying more than one coat of paint may make removal significantly more difficult. Therefore, we recommend a single coat be used where possible.

Painting Shaw Sports Turf systems with brushes or rollers is not recommended. Spraying equipment is recommended for the following four reasons:

1. Spraying can make a more uniform paint application
2. A more intricate template can be used if the paint is sprayed
3. Paint can be applied more rapidly with spray techniques
4. Paint can be removed more easily from areas that have been correctly sprayed than from areas on which the paint has been rolled

PAINT REMOVAL

The main key to efficient removal of temporary paint from surfaces is initial control in the application. The use of excessive amounts of paint is wasteful, presents abrasion hazards to players, and requires extra work in removal.

Either of the following two techniques should result in clean removal of temporary paints within a reasonable time and without excessive labor.

Equipment needed for Paint Removal:

Use a street broom, deck brush, small sprayer, or watering can, water hose, medium-sized tank or bucket for mixing, and a couple of wet vacuums.

Materials Needed:

Paint removal method requires the use of 8 % ammonia. The solution should be prepared in advance and access to water outlets provided. The percent ammonia solution is prepared from aqua ammonia (33 percent ammonia) by diluting with three parts water to one part aqua ammonia.

CAUTION: Aqua ammonia is a strong chemical. Follow the seller's instructions for handling – including eye protection, avoiding skin contact, etc. Ammonia is very corrosive to copper alloys. Do not use brass nozzles or fittings. For mixing, use galvanized watering cans and a sprayer tank at all times.

Procedures

1. Hose down the painted area with water until the surface is saturated. Using a sprayer or a watering can, apply the ammonia solution on the painted area. It is important that the ammonia solution be metered out uniformly at the rate of one gallon per 45 to 50 square feet. Scrub the wet area with a street broom until the ammonia solution turns to foam. A sweeping motion similar to sweeping a floor is sufficient. During this step, the paint will start to loosen and the pigment will begin to run. However, do not shorten the sweeping at this point.

2. Wait about 10 minutes to allow the foamed ammonia to work. Apply the same amount of ammonia solution on the area a second time. Thoroughly scrub the area with a street broom. This scrubbing is not intended to be a light scrub, scrub vigorously.

3. Hose down the area with water and simultaneously pick up the water and dislodged paint residue with the wet vacuum. Do not let the water and paint residue seep across the field. If the residue and water start to spread, stop the hosing and let the wet vacuum catch up. Repeat the process if necessary; however, if the paint was applied lightly and uniformly, repeating the process should not be necessary.

If the paint stubbornly adheres to the turf, take the following additional steps:

1. Repeat steps as above. Blast or fracture the paint loose with hot water from an industrial high pressure hot water sprayer. Set the water temperature at 150 degrees F (65C). Do not spray the water at point blank range – keep the wand at least 12 - 15 inches (30 - 40cm) from the turf. Use 10 gallons of hot water per minute and a water pressure of no more than 300 psi (21 kg/cm2). No solvent is required.

2. Wet vacuum the residue and water or immediately flood the field.

3. Rinse the area thoroughly with lots of water and pick up rinse water rapidly to avoid unsightly spots or paint residue.

LOAD LIMITS

As a general rule, no long term static load of more than 3 psi (300 lbs./sq.ft), nor any transient rolling load of more than 35 psi should be applied to any Shaw Sports Turf surface (foam pad or elastic layer underpad). Rolling loads of up to 35 psi are acceptable on an occasional basis, or under 3,000 lbs vehicles using balloon/turf tires. (The loading of a pneumatic-tired vehicle is approximately equal to the air pressure in its tires.) Make turns slowly when driving vehicles on synthetic turf.

It is good practice to eliminate any unnecessary, long-term static loads.

NOTE: Under static loads, the surface should first be covered with a load spreader such as polyethylene sheeting to keep it clean. New plywood may contain materials that will leach out and stain the turf if it is exposed to water therefore a polypropylene barrier should be used under the plywood to prevent this from happening.

SNOW & ICE

MANAGEMENT

Snow and ice are not harmful to Shaw Sports Turf synthetic turf systems and can be left to melt and run off on their own accord. Sometimes, however, it becomes essential to clear away snow and ice to permit scheduled use of the surface. When this happens, the working principle for snow is to leave it in place until as near to time of use as possible. Doing so will minimize the risk of ice build up from cold wind blowing across a damp snow-cleared surface. Ice removal is more difficult, especially if a heavy layer has built up following freezing rains (see below). Two methods are used for snow removal:

Snow Blowers

If the snow is dry and powdery, it can be swept or blown from the field using a rotary brush or snow blower. Be sure that any machinery used is set so as not to dig into the turf or gouge the surface.

If using a blower:

1. The first pass of the blower should be down the center of the field.
2. Second pass should be made at the edge of either side of the first pass.
3. The blower then continues down one side and up the other.
4. Clean off remaining snow with a mechanical broom.

Snow Plows

Snow that is wet and sticky may be more easily pushed off the field by using a snow blade with a 4" to 6" wide rubber tip mounted on a light tractor. If such a blade is used, extreme care should be taken to avoid digging into the surface. The best blade setting is one that barely "kisses" the top of the surface and rolls the snow ahead of the blade.

In this procedure, the snow itself will maintain contact with the surface. Wood, metal or other rigid surface blades should not be used. Adjust the blade to proper height taking care that it will not gouge or dig into the surface. Shaw Sports Turf recommends wheels on each side of the blade to ensure the blade can not possibly dig into the surface.

If using a plow:

1. Push snow into piles off playing surface.
2. Scoop into truck using front-end-loader., also with rubber tipped blade. Use extreme caution.
3. Use a rotary mechanical broom to clean off the remaining snow.

Severe cases of ice can be removed by using a small lawn roller to break up the ice and then proceed as above. It is recommended that all of the equipment used as described above be moved on pneumatic tires. Lugs, studs and chains are damaging and should not be used.

Snow removal equipment may be stopped momentarily on the surface, but do not park such equipment on the field overnight or for several hours. Tire pressure should be below 35 psi.

IMPORTANT: Keep tarps or field covers off the field in freezing weather. They are difficult to remove when frozen to the surface. Avoid using a tarp on the field during freezing weather. Tarps can freeze to the turf by means of condensation and thus can be very difficult to remove for a scheduled event.

SPECIAL EVENTS

ON SYNTHETIC TURF SYSTEMS

Facilities with synthetic surfaces are often used for graduation and other ceremonies. The basic precaution is to keep long-term static loads below 300 pounds per square foot by the use of load spreaders. There are products available from many third-party vendors to accomplish this task. Landscape fabric can be laid over the turf, under the load spreaders to avoid staining or spoilage of the turf.

MINOR REPAIRS

TO TURF SURFACES

Your playing surface has been carefully engineered to provide many years of service. In the case of vandalism or unusual abuse, limit your maintenance staff to performing minor repairs. For more serious problems, consult your Shaw Sports Turf representative.

When to Repair

To properly maintain a synthetic playing field, be aware of day-to-day activities, usage, and condition of the field. It is very important that any minor damage be repaired immediately because a small problem may eventually grow into a major repair. In addition to routine awareness of field conditions, once or twice a year, each field should be given a careful and thorough inspection, preferably in the spring with a follow-up in early fall. All seams should be inspected and any loose areas noted and repaired. Go over the body of each panel of fabric and note any rips and/or tears. Assess the status of the under-padding and the condition of the surface. In the case of an older and/or heavily used field, inspections should be made more frequently. For instructions on how to make minor repairs to your turf surface, consult the digital instructions located on the flash drive provided with your repair kit. If further information is required, contact Shaw Sports Turf for assistance.

Shaw Sports Turf Minor Repair Kit is above. If you would like a repair kit, please contact SST maintenance at 1-866-703-4004 or sst.maintenace@shawinc.com

Why a Spring inspection?

Fields endure their heaviest scheduled activity during the fall months. Once your inspection has been completed you may require the assistance of a professional Shaw Sports Turf crew. Your Shaw Sports Turf representative is always available to assist in the case of an emergency, but planned visits permit more efficient and cost effective service. If repairs are required they are easier to make in warm, dry weather. Adhesives will hold better and cure faster when there is more opportunity to leave the repaired area undisturbed. Gluing repairs should not be attempted if the field is wet.

What Are Minor Repairs?

An open spot in a sewn or glued seam, where the loose area in the seam extends from a few inches to one or two feet (along a glued seam line where at least one of the turf edges is still attached to the seam tape).

Cuts, rips or tears in the surface fabric that are less than six inches or so in length do not generally require a special trip by our service staff and can be repaired by the owner without much effort. These can also be regarded as minor unless allowed to become larger. All of these problems can be handled by sewing or adhering the repairs. To repair minor seam openings or loose seam areas:

NOTE: Consult your SST thumb drive provided with your repair kit for detailed repair instructions.

1. For infilled systems, vacuum sand or rubber from the turf to be repaired.
2. Be sure that the fabrics to be adhered are dry, free from loose sand, dirt, old adhesive, and other foreign matter.
3. Remove the area of debris.
4. Position the fabric to check for satisfactory final placement.
5. Be sure the seaming tape to which the fabric will be adhered is itself adhered to the underlying pad (if system uses an underlying pad).
6. Apply a small amount of caulk onto seaming tape. Avoid excessive adhesive to reduce the possibility of bleed through or bleed out. Spread the adhesive with a trowel and trowel so that the entire fabric is coated lightly and evenly.
7. Press the fabric into the adhesive bed uniformly.
8. Weigh down the area and allow to cure for a minimum of two hours.
9. For in-filled systems, spread appropriate rubber or sand on the repaired area and brush into the turf thoroughly until even with surrounding playing areas.

OTHER TYPICAL REPAIRS

Cigarette / Firework Burns

Use a hand-held metal brush (such as is used to remove paint) and brush the spot vigorously to separate the fibers. If brushing the turf does not remove the damage, take a razor knife and cut the fused area away.

Smoking should be strictly prohibited on your field!

KEY POINTS

TO REMEMBER

Call for help or advice when you have questions about your field and its use. Your representative can assist with your questions and inquiries and we are always eager to help you experience your field to its fullest potential.

Following the exact recommendations and procedures shown in this manual, will assure that your Shaw Sports Turf surface will give you years of good service with minimal maintenance.

Shaw Sports Turf makes no representations, warranties or guarantees of any kind, expressed or implied; regarding the information contained herein and disclaims liability for loss or damage arising out of its use.

CONTACTS

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