

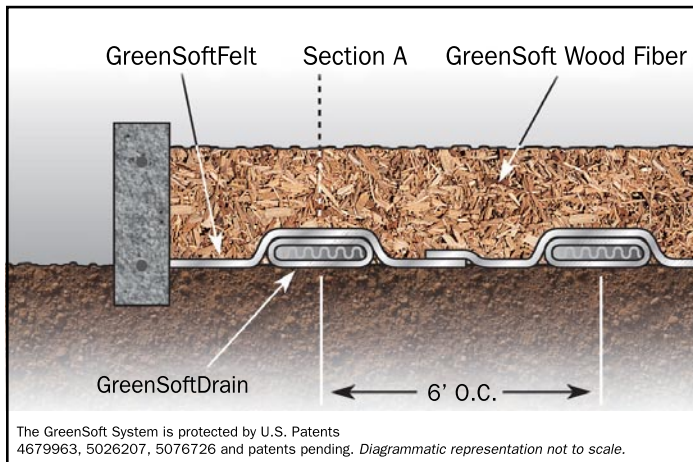
greenSoft® System 300

Specifications, Installation and Maintenance Instructions

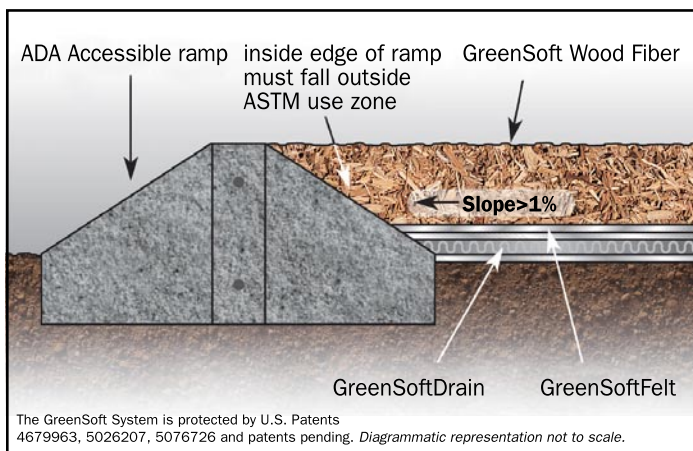
GreenSoft Systems are unique playground surface products, covered by one or more patents owned by TFG Installations, Inc. Award contractors *must obtain a license* from TFG Installations, Inc., prior to construction.

GreenSoft System 300 comes with a **25-year Warranty**.

1. GreenSoft System 300: Above ground



2. GreenSoft System 300: Above ground, Section A

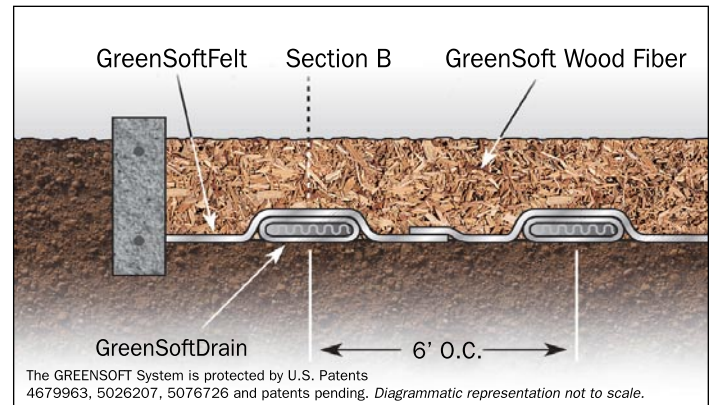


3. GreenSoftMat Wear Mats

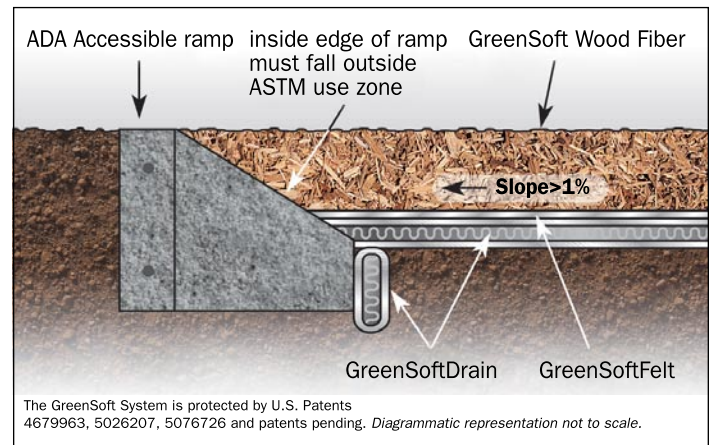


To prevent displacement of the GreenSoft in high-use areas, to preserve your warranty, and reduce maintenance, GreenSoftMat wear mats must be installed under all swings, tire swings, slide exits, and all other wear areas including sliding poles. This will help to ensure compliance with federal accessibility standards.

4. GreenSoft System 300: In-ground



5. GreenSoft System 300: In-ground, Section B



IPEMA CERTIFIED

In the interest of public playground safety, IPEMA provides a Third-Party Certification Service whereby an independent laboratory validates a surfacing manufacturer's conformance to ASTM F1292, **Standard Specification for Impact Attenuation of Surfacing Materials within the Use Zone of Playground Equipment** and for an Engineered Wood Fiber manufacturer, its certification of conformance, also, to ASTM F2075, **Standard Specification for Engineered Wood Fiber for Use as a Playground Safety Surface Under and Around Playground Equipment**, Section 4.6, for testing the presence of tramp metal and hazardous metals. The use of the corresponding logo(s) in GreenSoft® materials signifies that GreenSoft has received written validation from the independent laboratory that the product(s) associated with the use of the logo(s) conforms to the requirements of the indicated standard. Check the IPEMA website (www.ipema.org) to confirm product certification, its thickness, and critical height.

TFG Installations, Inc. is a member of IPEMA, the International Play Equipment Manufacturers Association. IPEMA is a member-driven organization whose mission is to assist in providing creative, fun, and safe play environments for children.



www.ipema.org

greenSoft® System 300 Specifications

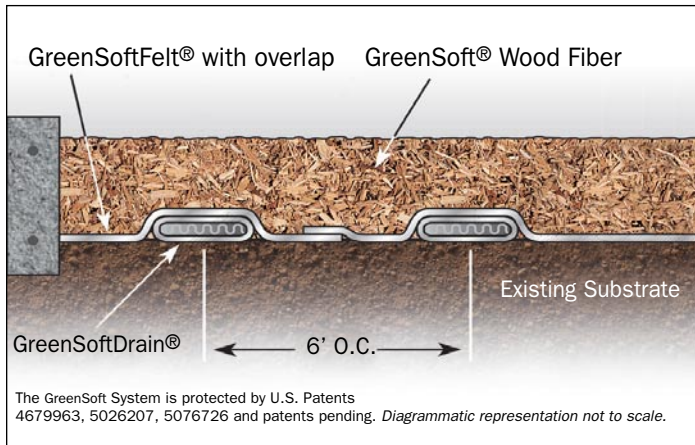
SYSTEM	DESCRIPTION	SPECIFIED FALL HGT.	USE
312 12"	GreenSoft EWF, GreenSoftFelt Geotextile, Drain Strip	Up to 12'	Playground
310 10"	GreenSoft EWF, GreenSoftFelt Geotextile, Drain Strip	Up to 10'	Playground
308 8"	GreenSoft EWF, GreenSoftFelt Geotextile, Drain Strip	Up to 8'	Playground
306 6"	GreenSoft EWF, GreenSoftFelt Geotextile, Drain Strip	Up to 6'	Jogging track
ALL	GreenSoftMat Wear Mat Minimum 36" x 36" x 1.5" with beveled edges for accessibility	Not Applicable	Playground

Note: Depth measurements are approximate after compaction.

PART 1: GENERAL

A license to construct a GreenSoft System according to these specifications must first be obtained from TFG Installations, Inc., as licensor of the patent rights reflected in U. S. Patent numbers 4,679,963; 5,026,207; 5,076,726; and other patents pending.

To prevent displacement of the GreenSoft in high-use areas, to preserve your warranty, and reduce maintenance, GreenSoftMat wear mats must be installed under all swings, tire swings, slide exits, and all other wear areas including sliding poles. This will help to ensure compliance with federal accessibility standards.



- 1.1 Provide GreenSoft System Playground Safety Surface in areas indicated on plans.
- 1.2 Provide Safety Surface immediately after installing playground equipment.
- 1.3 GreenSoft Systems and GreenSoftMats are available from your local Representative or directly from TFG Installations, Inc., 80 Business Park Drive, Suite 300, Armonk, NY 10504-1705. You can call ☎ 800-345-1953 ☎ 914-273-8658 or email info@greensoftsurfaces.com.

Part 2: Materials

- 2.1 Provide GreenSoft® Engineered Wood Fiber to a compacted depth, as specified by the system height, over GreenSoftFelt (100% polyester non-woven geotextile) and GreenSoftDrain drain strip (minimum flow rate of 10 gpm/ft.)
- 2.2 The amount of GreenSoft Engineered Wood Fiber necessary to provide the approximate depth, after compaction, is as follows:

DEPTH	QUANTITY (for 1,000 sq. ft. playground)
8"	38 cubic yards
10"	43 cubic yards
11"	46 cubic yards
12"	50 cubic yards

- 2.3 Provide GreenSoftDrain strip 6' apart over entire play area and overlay with GreenSoftFelt geotextile.
- 2.4 Provide one (1) GreenSoftMat wear mat (minimum size: 36" x 36" x 1.5" with 2" beveled edges on all 4 sides) under each swing seat, tire swing, slide exit, and sliding pole. Double and triple slides may require multiple GreenSoftMats.

PART 3: QUALITY CONTROL

- 3.1 Surfacing shall be **IPEMA-CERTIFIED** Engineered Wood Fiber. Standard wood chips or bark mulch will not be acceptable.
- 3.2 Supplier must provide test results for Engineered Wood Fiber and GreenSoftMats for impact attenuation in accordance with **ASTM F 1292 Standard Specification for Impact Attenuation of Surface Systems Under and Around Playground Equipment**.
- 3.3 Testing of Engineered Wood Fiber in accordance with **ASTM F 1292** must show G-Max value of less than 200G for a 12" system with a 12' drop height and HIC values of less than 1,000.
- 3.4 Supplier must provide test results for Engineered Wood Fiber in accordance with **ASTM F 2075 Standard Specification for Engineered Wood Fiber For Use as a Playground Safety Surface Under and Around Playground Equipment**.
- 3.5 Testing of GreenSoftMats in accordance with **ASTM F 1292** must show G-max values of less than 200G and HIC values of less than 1,000 for a 3' drop height.
- 3.6 Supplier must provide test results in accordance with **ASTM F 1951 Standard Specification for Determination of Accessibility of Surface Systems Under and Around Playground Equipment**.
- 3.7 Supplier must certify that the surface meets the intent of the *Americans with Disabilities Act (ADA)*.
- 3.8 Supplier must provide written manufacturer's **25-year Warranty** against loss of resiliency, lifetime warranty on GreenSoftFelt and GreenSoftDrain materials.
- 3.9 Supplier must provide **\$10 Million** product liability insurance certificate with project owner named as certificate holder, prior to delivery.
- 3.10 In Canada, supplier must meet CSA guidelines.

PART 4: INSTALLATION

- 4.1 Install the GreenSoftDrain System, GreenSoft Engineered Wood Fiber, and GreenSoftMats in accordance with manufacturer's instructions.

PART 5: MAINTENANCE

- 5.1 Maintain the GreenSoft Engineered Wood Fiber in accordance with manufacturer's instructions.

GreenSoft System 300 Specifications, Installation & Maintenance Instructions. © 2013 TFG Installations, Inc.

U.S. Patent Numbers 4,679,963; 5,026,207 & 5,076,726.

TFG Installations, Inc., 80 Business Park Dr., Ste. 300, Armonk, NY 10504-1705.

☎ 800-345-1953 ☎ 914-273-8658 Fax 914-273-8659

Email: info@greensoftsurfaces.com

Website: www.greensoftsurfaces.com

greenSoft® System 300

Installation

PLEASE NOTE:

In accordance with standard design and construction practices, TFG Installations, Inc. and its Representatives recommend using the services of a certified engineer, architect, or landscape architect who is familiar with local soil and climate conditions to evaluate and interpret any information provided by TFG Installations, Inc. and its Representatives.

TFG Installations, Inc. assumes no responsibility for determining the size of the playground or the Use Zone between the equipment and the border. Installer must thoroughly examine the site and specifications, carefully checking the dimensions before starting work.

All instructions are subject to equipment manufacturers' installation specifications.

Read GreenSoft System 300 Specifications, Installation and Maintenance Instructions, all available from TFG Installations, Inc. ☎ 800-345-1953 or ☎ 914-273-8658 or email info@greensoftsurfaces.com or contact your local Representative.

A. IN-GROUND INSTALLATIONS

1. Excavate area to proper depth, based on Critical Fall Height, with a minimum 1% downward grade to ensure proper drainage to GreenSoftDrain strip. It is not recommended that a GreenSoft System be installed on a grade greater than 10%. All roots, stones, and vegetation must be removed.
2. The area should be well-compacted and accurately graded, especially in areas where additional fill has been brought in.
3. Cut a trench 2" wide by 6" deep all along the inside edge perpendicular to the grade and install GreenSoftDrain strip. Connect low end of GreenSoftDrain strip to storm drain or similar device to take water collected from the playground away from the site. (See Figure 5).

B. IN-GROUND (Cont.) & ABOVE-GROUND INSTALLATIONS

4. Install playground equipment.
5. Install retaining border, if required.
6. ADA Wheelchair Access Ramp must be installed to ensure compliance with federal accessibility standards.
7. Cut GreenSoftDrain strips and lay them on 6' centers in direction of grade.
8. Cover sub-grade with GreenSoftFelt geotextile. Overlap all seams 3". Make sure to cover the trench and GreenSoftDrain in step #3 (if applicable). It will be necessary to slit the GreenSoftFelt to fit around the footings of the equipment. Where possible, overlap all slits with next piece of GreenSoftFelt.
9. IMPORTANT: With an indelible marker, **mark off all the legs** of the equipment with the compacted System design depth.
10. Spread GreenSoft Engineered Wood Fiber, using a Bobcat or a small front-end loader. Operator should be careful not to travel on the GreenSoftFelt Geotextile or turn sharply on the wood fiber. It will also be necessary to use hand labor to spread. To allow for natural compaction, we supply additional material. Important: **Install all the wood fiber delivered.** The fiber will be several inches above grade or border until it compacts. Feather the edges to make a smooth transition to existing grade or border.
11. Hand-rake for a smooth & level finished surface. Natural compaction will occur over time and is dependent on the amount of playground use and environmental conditions. To

accelerate the compaction process, GreenSoft Engineered Wood Fiber can be mechanically compacted at an additional cost. The GreenSoft can be compacted in the accessible route to the equipment or the entire surface area. To mechanically compact the GreenSoft, install in 5" lifts using a plate compactor or other mechanical device. Change direction 90 degrees between each layer. Optional: Wet the surface before compacting. Repeat these steps until the desired level finished thickness is achieved. This accelerated compaction method, without wetting the surface, was used in the laboratory for the ASTM F1951 test procedure

12. Install GreenSoftMat wear mats on top of the Engineered Wood Fiber. To preserve your warranty, reduce maintenance, and to help ensure compliance with ADA accessibility standards, GreenSoftMat wear mats must be installed at all heavy-use areas including swings, tire swings, slide exits, and sliding poles. GreenSoftMat wear mats are available through your local GreenSoft Representative.
13. After two weeks of active use, surface should be raked again.
14. For complete information on Use Zones, contact the Consumer Product Safety Commission (CPSC) and ASTM.
15. See GreenSoft System 300 Maintenance Instructions for requirements with respect to inspections, raking, top-off, and other maintenance advice.



Compliance with Federal Law.

To prevent displacement of the GreenSoft in high-use areas, GreenSoftMat wear mats must be installed under all swings, tire swings, slide exits, and all other wear areas, including sliding poles. This will help to ensure compliance with federal accessibility standards.



WARNING

Incorrect installation or maintenance, failure to install all the materials delivered, failure to maintain original design depth, failure to use GreenSoftMat wear mats at slide exits, under all swings and tire swings (except enclosed or tot swings), other wear areas (a wear area is any area in the playground where the surface depth falls below the System design depth for the playground surface), use of the GreenSoft System and/or materials with others not provided by TFG Installations, Inc., abnormal use, lack of proper maintenance, or vandalism can result in serious injury or death. Be aware that no playground surface can prevent all accidents or injuries.



WARNING

Winter Conditions. Should there be moisture retention in the GreenSoft System, it will freeze when the temperature drops below the freezing mark. Please check your surface frequently in winter weather. When the surface is frozen, the impact attenuation properties of GreenSoft are lost and for this reason, the play area should not be used.



Reread the Installation and Maintenance Instructions periodically.

If at any time you are concerned about the surface and its performance, please contact us at ☎ 800-345-1953 or ☎ 914-273-8658 or email info@greensoftsurfaces.com.

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greenSoft® System 300

Maintenance Instructions

- 1. Visual Inspection.** Look for debris-especially stones, broken glass or other foreign objects and remove them. Check to make sure that the level or depth of the GreenSoft® Engineered Wood Fiber surface doesn't fall below the original design depth. The legs of the equipment should have been marked with a bold horizontal mark showing the design depth when originally installed. If they are not, take the time to mark the legs with an indelible marker at the original design depth, measuring from the bottom of the GreenSoft surface. This will allow you to readily see when GreenSoft needs to be redistributed or topped off to maintain proper original design depth. If the equipment was not marked, or you choose not to mark it, the surface must be checked at a number of points using a long-handled screwdriver marked in inches to determine the actual depth. If the actual depth is below the original design depth, redistribution and/or top-off is needed. See **Raking**, below, and top off if the depth of the GreenSoft is below the original design depth. Inspect the surface daily.
- 2. GreenSoftMat Wear Mats.** To prevent displacement of the GreenSoft Engineered Wood Fiber in high-use areas, GreenSoftMat wear mats must be installed under all swings, tire swings, slide exits, and all other wear areas, including sliding poles. This will help to ensure compliance with federal accessibility standards. GreenSoftMat wear mats reduce maintenance. If GreenSoftMats were not ordered when you ordered the GreenSoft System, please call your local representative or contact TFG Installations, Inc. ☎ 800-345-1953 or 914-273-8658 or ✉ info@greensoftsurfaces.com.
- 3. Top-Off.** Experience has shown us that installations typically require top-offs after three (3) years of use (in heavily used playgrounds, maybe sooner). The legs of the equipment should have been marked according to the specified depth when originally installed. The marks make it easy to determine when your GreenSoft surface falls below this level and requires topping off with fresh material. If the equipment was not marked, the surface should be checked at several points by using a longhandled screwdriver marked in inches to determine the actual depth. Top-offs can sometimes be scheduled with other deliveries to minimize the freight cost.
- 4. Raking.** Areas of constant wear and impact should be raked level. Pay particular attention to areas under swings, sliding poles, and at slide exits. When a GreenSoft System installation is close to a sand pit, the sand may get tracked into the Engineered Wood Fiber surface. This can change the impact attenuation of the GreenSoft System surface. The surface should be raked clean of debris.
- 5. Accessibility.** Depending on weather and usage, a GreenSoft surface will compact to provide access for wheelchairs, crutches, walkers, and wheeled vehicles.

At accessible entrances onto the playground surface, ensure that the GreenSoft material, accessible route or

the top of the access ramp is within ¼ inch of the top of the play area border. An ADA-compliant access ramp into the play area will help reduce maintenance in this area.

- 6. Drainage.** Check the performance of the drain system by ensuring that water is flowing from a drain system outflow pipe immediately after rain. Also, make sure there is no standing water on the playground surface. It is important to have a functioning drainage system to improve GreenSoft's life expectancy and the resilience of the surfacing.
- 7. Weeds.** On playgrounds that only receive light usage, conditions could occur that might cause sporadic weed growth. In such instances, the situation can easily be remedied by the use of a safe weed killer (call your local Cooperative Extension office) or remove weeds by hand.



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