

PLAYGUARD

SAFETY SURFACING



PLAYGUARD TURF TILE

TECHNICAL MANUAL

Installation • Maintenance • Warranty

Manufactured in the U.S.A. By

ecore

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Supersedes all previous versions.
Check website for updates.

800-851-4746 | www.playguardsurfacing.com

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BASE PREPARATION

I. GENERAL INFORMATION

PLAYGUARD® Turf Tiles and accessories can be installed on concrete, asphalt or loose base surfaces with a protective fabric, utilizing the Quad Blok system, except for limitations noted herein.

NOTE: Dimensional tolerance for tiles is +/- 1/8" for thickness and +/- 1/8" in width. It may be necessary to hand select some tiles to make sure the course lines remain straight during the installation. Additionally, color tone and shading may vary to the extent that some hand selection is required to maintain uniformity throughout the site.

NOTE: Turf Tile is manufactured from recycled materials and slight variance in shade and color is normal. It is the installer's responsibility to inspect all products to ensure the correct style, thickness, and color. Any moderate to severe discrepancies should be reported immediately before beginning installation.

0 = Recommended	s- Acceptable	
	INTERIOR	
Surface	24" x 24" x 2-1/2"	
	Quad Blok	Full Glue
Concrete Surface	0	0
Asphalt Surface	0	s
Plywood	0	0
Compact Gravel	0	N/A
Wood or Tile	0	N/A
Resilient Flooring	0	N/A
Carpet	0	N/A

0 = Recommended	s- Acceptable	
	Exterior	
Surface	24" x 24" x 2-1/2"	
	Quad Blok	Full Glue
Concrete Surface	0	0
Asphalt Surface	0	0
Compact Gravel	0	N/A
Wood or Tile	0	s
Resilient Flooring	0	N/A
Indoor/Outdoor Carpet	0	N/A
Rooftops	0	N/A

N/A = Not an approved installation method

BASE PREPARATION

II. TOOLS/MATERIALS REQUIRED

- | | |
|---|--|
| <ol style="list-style-type: none"> 1. Two tape measures - one 25', one 50' 2. Chalk line 3. Saber saw or band saw 4. Blades for saber saw (7-10 teeth per inch, wood type, min 4.5" in length) 5. Utility knife with heavy-duty blades 6. Framing square 7. Silver or gold color paint pencils 8. Standard size caulk gun 9. 4" slot blade screwdriver 10. Silicone Spray Lubricant 11. Notched trowels (1/8" square notch - 2 minimum plus 1 for each additional 400 sq. ft.) | <ol style="list-style-type: none"> 12. Linoleum knife (Foam Installation) 13. Safety glasses 14. 1-1/2" flexible putty knife 15. Coveralls 16. Kneepads 17. Solvent safe rubber gloves, long cuff style 18. Rags 19. Trash bags 20. Push broom or high velocity blower 21. Mineral spirits 22. Installation instructions 23. String line 24. Cutting table (shipping pallet) 25. Dustpan |
|---|--|

III. SITE WORK

A. Site Elevation

1. On grade installation - The finished installed height of the tile surface will be equal to or slightly higher than the perimeter grade but not more than 1/4" higher unless approved by the project engineer.
2. Above grade installation - The installation of Turf Tile over existing decks or slabs is referred to as an "above grade installation" and will usually require the use of reducers around the perimeters of the area to transition smoothly back to the floor elevation, unless the site terminates at a wall or other vertical surface.

B. Site Slope / Drainage

1. When preparing a new hard base, a minimum slope equal to 1" per 10' of run shall be applied to the finished surface with slope toward the drain basin, drain trough, or down grade side of the site, whichever applies to your project.
2. An acceptable drainage system needs to be put in place to eliminate standing water.

IV. BASE OPTIONS

C. Hard Base Construction

1. Concrete Base
 - a. The base will be constructed of cast-in- place, non-structure, Class A concrete that will develop a minimum compressive strength of 3,000 PSI after a 28 day cure (minimum thickness = 4"). Care should be taken to provide for the stated slope. The base should be free of depressions that would pond water. A light broom finish is best for maximum adhesion of the Turf Tile. New concrete slabs should cure for a minimum of 28 days before installing the Turf Tile by the adhered method.

BASE PREPARATION

2. Paved Asphalt Base
 - a. Course aggregate mixtures will provide a stable base. The aggregate size best suited for the adhered system is 3/8" to 1/2". Do not use asphalt mixtures that contain a high percentage of fines, as they are not stable in hot weather and may become soft enough to allow the tiles to slide in high use areas.
 - b. The soil subgrade must be compacted with a minimum of two passes of a 10 ton vibratory roller with no soft or moving areas upon completion. The crushed stone base must also be compacted with a minimum of two passes of a 10 ton vibratory roller. The binder and wear courses of the asphalt must both meet 95% of the theoretical maximum density of the JMF (Job Mix Formula).

Analysis of Asphalt Wear Course

Total Passing Sieve	Percent by Weight
1/2"	100
3/8"	80-100
#4	45-90
#8	30-65
#50	5-25
#200	2-8
Asphalt Cement	6-8

- c. New asphalt surfaces should be allowed to cure for 28 days before the Turf Tile system is laid.

D. Preparation of Compacted Loose Base

1. In outdoor areas or areas with no walls or confines, a perimeter footer will need to be constructed to contain the compacted loose base.
2. The area inside the footer should be excavated to receive 6" of loose aggregate fill. The amount of excavation and fill can be adjusted to allow the Turf Tile and footer finished surfaces to have the same elevation.
3. By adding fill material and compacting to the top of concrete footer, the Turf Tile can be laid over the top of the footer concealing it, if so desired.
4. In all loose base areas, the base should be constructed of 6" of compacted limestone screenings mixture or equivalent aggregate common to your area. A screenings mixture is one having no aggregate larger than 3/8" and should conform to the following sieve analysis.

Total Passing Sieve	Percent by Weight
3/8"	100
#4	85-100
#100	10-30

5. Once the loose base has been installed and has achieved 95% compaction to the desired elevation, cover the entire area with geo-textile fabric, including the top of the footer where the Turf Tile extends over the footer. The minimum infield overlap of successive geo-textile sections is 4". The geo-textile should be adhered to the top of the footer on all sides to anchor the mat and keep it in place throughout the life of the installation.

INSTALLATION

I. SITE LAYOUT

- A. Sweep area clear of all dust and loose debris.
- B. Determine a starting point for the first course of tile to best suit the site area. For irregular site configurations, the best starting point is often in the center. This will ensure a symmetrical finish for tiles that require trimming along the perimeter. Other installations are best started in the corner or along the edge that represents the length or width dimension of the site.
- C. Mark two points on the base surface at an equal distance from the edge of the installation. These points should be located near the opposite ends of the site in the lengthwise direction.
- D. Snap a chalk line through the established points. When installing the Turf Tile over a geo-textile fabric, string lines must be used in place of chalk lines.
- E. Measure the length of the site along the chalk line. Mark a point at half the distance of the site.
- F. Using the 3-4-5 right triangle method, snap a chalk line to form a 90° angle to the previously established length-wise chalk line. These perpendicular reference lines will serve as a guide for laying the first course of tile.

II. GENERAL INFORMATION

- A. Turf Tiles can be installed using a variety of installation methods. The most common and secure method is full adhesion of tiles and accessories to the substrates using E-Grip III, an easy-to-use one part polyurethane adhesive.

NOTE: For rooftop and specialty applications, Ecore recommends the use of Turf Tile exclusive fastening system called Quad Blok. These tiles are adhered to the Quad Blok connector, eliminating damage to the roof membrane.

III. FULLY ADHERED INSTALLATION

- A. The tiles, accessories, and substrates must be dry before, during, and 24 hours after the application of adhesive. Application temperatures for E-Grip III adhesive are 40° F to 100° F. Higher temperatures and humidity levels will cause the adhesive to set faster and colder temperatures and low humidity will slow down the curing process. The installer should monitor on site conditions and adjust open times accordingly.

NOTE: Approx coverage rates for the E-Grip III adhesive are approximately 60 sq/ft gal on concrete and 50 sq/ft gal on asphalt. E-Grip III is available in 2-gallon and 4-gallon pails.

- B. Using a 1/8" square-notched trowel, apply the E-Grip III adhesive slightly wider than the tile being placed. Place tile into the fresh adhesive bed following pre-established lines. If applicable, place ramps into the fresh adhesive in a similar manner.
- C. Allow 24 hours for adhesive to cure before opening area for use.

INSTALLATION

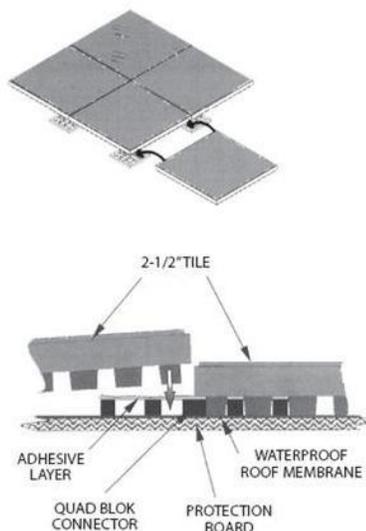
IV. QUAD BLOK INSTALLATION - 2 1/2" thick tiles only

- A. Follow the Site Layout instructions to prepare the roof for the installation of the 2-1/2" tiles.
- B. Once chalk lines are established, place the first tile at the intersection of two chalk lines, aligning adjacent edges of the tile with the chalk lines.
- C. Apply a continuous 3/8" diameter bead of E-Grip III adhesive along the center axes of all Quad Blok connectors. Working adhesive time is dependent upon environmental conditions.
- D. Fit the first tile with four prepared Quad Blok connectors by lifting each tile corner slightly, sliding the connectors under each corner and engaging the four corner legs of each tile with the respective apertures in the Quad Blok. Continue to sequentially lay the tile and to set the Quad Blok connectors along one chalk line until the first course of tile is complete.

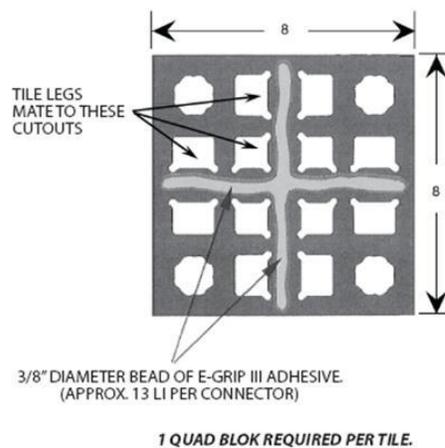
NOTE: In the field, cut the Quad Blok connectors in half to properly secure tile around the perimeter edge of surface area.

- E. Complete the other three quadrants of the roof deck in a similar fashion.
- F. Depending on manpower availability, one or more quadrants can be worked on simultaneously using the above method.
- G. Allow 24 hours for adhesive to cure before opening area for use.
- H. One 10.1 ounce tube of E-Grip III is required for approximately 10 of the Quad Blocks.

1. Typical Tile Field Placement



2. Connector Detail



INSTALLATION

V. CUTTING TILES & ACCESSORIES

- A. Avoid leaving a cut edge of a tile exposed to eyesight. To ensure a finished appearance, any tile that has its factory molded edge removed or cut for any reason should be positioned against a transition ramp, masonry, or timber edging unless the edge is to be placed against a wall or other vertical member. Use either a silicone sealant or a permanently elastic urethane sealant/adhesive for filling gaps, if any, between cut edges and walls.
- B. The most accurate cuts are made using a band saw, due to the thickness of the tile and conical feet. A saber saw utilizing a 7-10 TPI wood cutting blade may do an acceptable job, especially for free-form cuts. A saw with a 3-3.5 amp rated motor or greater, will produce the best results. Silicone spray lubricant will aide in the cutting and minimize heat from friction. Please note that battery operated saws will lose charge quickly.
- C. On larger jobs, a stand up band saw is recommended to make the most accurate cuts, and to minimize installation time. It is recommended to use a spray silicone to minimize friction and keep the blade from binding.
- D. When working beneath the play structure, it will be necessary to occasionally notch out portions of tiles so that the tiles will properly fit around the posts supporting the play equipment.
- E. Cut tile so that the cutout is approximately ¼" larger in all dimensions than the support it will surround. The extra distance is to prevent binding of the tile around the support. Voids between the equipment supports and tile cuts should be filled in with silicone sealant or a permanently elastic urethane sealant/adhesive.
- F. Tile cuts are normally laid out by referencing dimensions from the edges of tiles already in position. These dimensions are then transferred to and laid out on the tile to be cut.
- G. A lead-in cutting line is extended from the tile edge to the portion to be cut. The lead-in cutting line chosen usually represents the shortest distance from the cutout area to an edge of the tile or the one that is least noticeable.
- H. Reducers installed at the corners should be miter cut to allow reducers to fit together correctly.

MAINTENANCE

The following procedures are key in helping to preserve your Turf Tile Surface.

I.	Keep it clean
II.	Brush periodically
III.	Do not abuse
IV.	Report any problems promptly

I. Keep it clean

A. Dust, pollen, and airborne pollutants

For lightly soiled areas, it may be necessary to use a rectangular microfiber mop with three (3) ounces of E-Cleaner per gallon of water. For heavily soiled areas, repeat procedure using a three (3) percent solution of household ammonia in warm water followed by a thorough rinsing with warm water. A wet vacuum can be used to remove excess water from the surface.

B. Stains and other blemishes

The first rule 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 paper towels, a clean cloth, or a dry absorbent, such as kitty litter or fuller's earth. Dry absorbents can then be vacuumed up afterwards.

Synthetic fibers have a high resistance to staining. However, it is important to realize they are only one part of a sophisticated system of various components designed for overall performance. Some cleaning agents safe for the face fibers can be harmful to other components of the turf system. Therefore, cleaning agents are grouped into two sets, one of which can be used in liberal amounts directly on the turf surface, and the second of which should only be applied by rubbing a cloth lightly soaked in the cleaner, in order to minimize penetration of possible harmful agents below the Turf surface. In the first group of cleaners, which generally can be applied without any special precautions are the following.

- A warm, mild solution of granular household detergent or any low sudsing detergent for fine fabrics. Use approximately one teaspoon to one pint of water. This will handle most waterborne stains including:

Coffee	Cola	Tea	Blood	Glue
Ketchup	Milk	Ice cream	Urine	Latex paint
Mustard	Cocoa	Butter	Fruit juices	Dye

- A three (3) percent solution of ammonia in water may be used in lieu of household detergent for more stubborn stains.
- Do not use cleaners that contain chlorine bleaches or caustic cleaners (ph above 9) or highly acidic cleanses (ph below 5). Use only neutral cleaners, such as E-Cleaner manufactured by Ecore.
- Rinse area thoroughly with clean, warm water to remove any traces of soap or ammonia.
- Blot up excessive liquid.

MAINTENANCE

The second group of cleaners, where agent must be applied sparingly and care taken to avoid penetration beneath the turf are the following:

- Mineral spirits or a grease spot remover like perchlorethylene (dry cleaning solution), which is the type sold by most variety stores and supermarkets. In general, cleansers in this category should handle most oil-based stains including:

Asphalt	Motor oil & grease	Chewing gum	Lipstick
Tar	Suntan oil	Crayon	Nail polish
Shoe polish	Cooking oil	Ballpoint ink	Floor wax

Caution: mineral spirits and other petroleum-based solvents are flammable. Do not smoke or permit open flames near where these are being used.

Be sure the area is well ventilated where solvent cleaners are used and remember to use sparingly.

C. Animal waste

Neutralize with mixture of white distilled vinegar in an equal amount of water. Flush thoroughly with water after application. And vacuum up excess solution with a wet vacuum.

D. Chewing gum

In addition to dry cleaning fluid, chewing gum can be removed by freezing. Aerosol packs of refrigerant are available from most carpet cleaning suppliers for this purpose, or dry ice can be used. After freezing, scrape with a knife.

E. Fungus or mold spots

A one (1) percent solution of hydrogen peroxide in water can be sponged on to the affected area. Flush thoroughly with clean water after application.

II. Periodic brushing

A. Matting of fibers may occur in areas of high foot traffic, especially if fibers have become soiled with dirt and other airborne pollutants.

B. Periodic “cross brushing” of the turf can help restore the aesthetic appearance of the turf. “Cross brushing” means all brushing activity takes place against the grain, nap, or sweep of the turf fibers. By brushing against the Turf, the fibers are “fluffed up”. A brush with synthetic bristles should be used. Never use a brush with metal or wire bristles, as these will change the Turf fibers.

MAINTENANCE

III. Do not abuse

Although the turf surface is made of tough, durable fibers, certain precautions should be taken to prevent damage to the turf.

- Lighted cigarettes cannot ignite the turf, but they can damage the turf by fusing the tips of the fibers together.
- Furniture and equipment with sharp or jagged edges should not be placed on turf as this may puncture or tear the turf.
- Water from sprinkler systems or hard water areas can leave mineral deposits on turf that may cause discoloration.
- Make sure turf is not exposed to reflected sunlight windows as this may fuse the turf fibers together.

IV. Report any minor problem

Minor problems can become major problems quickly, if not corrected. Any problem should be reported promptly to your Turf Tile dealer.

V. Conclusion

The proper care and maintenance program can enhance the aging, usefulness, and aesthetics of your Playguard Turf Tile.

5 YEAR PRO-RATED WARRANTY

Ecore (the “Seller”) warrants that the Turf Tile surfacing system will be free from defects in materials and workmanship.

What does the warranty cover?

- **WEAR** – Ecore warrants that the Turf Tile product will not wear more than 10% of its surface pile weight from abrasive wear for 5 years from the date of installation. Abrasive wear is defined as fiber loss from the wear layer through normal abrasion, not crushing or flattening the fiber surface pile in any area, or abnormal use of the fiber surface.
- **DELAMINATION** – Ecore warrants that the Turf Tile product will not delaminate during the 5 year warranty period of the fiber surface, when maintained according to our published procedures. The delamination warranty excludes tile edges that have been modified by cutting and being exposed in open areas.
- The tiles, when installed according to the manufacturers’ specifications, will ensure the surface remains fixed and functional.

How long does the warranty coverage last?

- This is a 5 year limited warranty, prorated as outlined in the warranty coverage schedule shown below. This warranty may be transferred with the property.

What will we do?

- Any segment of the Turf Tile surface that meets the warranty criteria will be repaired or replaced, at the Seller’s option and in conjunction with the warranty coverage schedule below.

How do you submit a warranty claim?

- A warranty claim should be made directly to the Seller. Make claims via telephone by calling 800-851-4746. Please provide this information: a description of the claimed defect, the date the defect was discovered, sales order number, photographic images (if applicable) of the claimed defect, the date of the original installation, the project name, and your name, address and phone number. The Seller will provide notification of any additional information and physical evidence that may be required to process your claim.

Warranty Coverage Schedule:

- The Seller shall be responsible for 100% of the cost of the repair or replacement of any product found to be defective or not in compliance with the warranty herein within the first year following the original shipment of the product. Where any product is found to be defective or not in compliance with the warranty herein more than 1 year following the original shipment of the product, the Seller shall only be responsible for a portion of the cost of the repair or replacement of such products as follows (and the buyer shall bear and pay the remaining portion of such costs).

5 YEAR PRO-RATED WARRANTY

<i>Number of years from date of original shipment to date of claim</i>	<i>Percentage of purchase price of product for which Seller is responsible</i>
<i>0-1 -----</i>	<i>100%</i>
<i>More than 1, but less than 2 -----</i>	<i>60%</i>
<i>More than 2, but less than 3 -----</i>	<i>40%</i>
<i>More than 3, but less than 4 -----</i>	<i>30%</i>
<i>More than 4, but less than 5 -----</i>	<i>20%</i>

Warranty Exclusions

This warranty does not cover:

- Product failure caused by accidents, misuse, natural disaster, vandalism, improper installation, or maintenance and the like (see installation, care, and maintenance instructions).
- Failure due to improper sub-surface preparation.
- Disfigurement or damage caused by abnormal use or any damage to the Turf Tile resulting from a product defect. For example, the warranty does not cover burns, cuts, or damage in transit.
- Differential fading due to light exposure, shading, pile crush, dye lot differences, and soiling.
- Any condition that would have had a visible defect upon inspection, prior to installation.
- Damage to Turf Tile from any use for which the product was not designed.
- The exact matching of shade or color.
- Any express or implied promise made by any salesman or representative.
- Problems caused by uses, maintenance, and installation that are contrary to PlayGuard specifications, recommendations, or instructions.
- Material installed with obvious defects.
- Damage to flooring products from pallet jack and tow-motor or vehicular traffic.
- Environments where the product will be exposed to animal fats, vegetable oils, grease, or petroleum based materials. (i.e.: commercial kitchens or auto repair facilities)
- Premature wear and deterioration from spikes or natural grass cleats.
- Differences in color between products and photography.

Additional Considerations:

- The Seller's liability is limited to the material and transportation costs of repair or replacement of the product at the Seller's option. The Seller shall be responsible for installation costs and the costs of other work in connection with such repair and replacement only if such work was performed by Seller in the original installation. Where Turf Tile is installed only in high traffic areas or installed in combination with other surfacing products not sold by the Seller, such Turf Tiles are excluded from this warranty.
- In the event of repair, or replacement under this warranty, the warranty applicable to the replacement material or to the repaired products will extend only for the time remaining under the original warranty.
- The Seller reserves the right to discontinue or change any design or color of any products at any time and without notice or liability. If, for any reason, products of the type originally purchased are no longer available at the time a warranty claim is made, Seller may substitute another product determined by Seller to be of comparable quality and price.



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