

Envirofill Installation Guidelines Landscape & Recreational Applications

Overview: The following recommendations are to provide our customers and constituents with proper, yet general guidelines when installing Envirofill in synthetic turf applications such as residential lawns, putting greens, bocce and tennis courts, playgrounds, and other commercial turf landscaping applications. The goal of these instructions is to promote a successful, efficient, and rewarding installation experience for you and your client.

This document may not be inclusive of all project types and/or synthetic turf product specifications so please consult your turf manufacturer for additional support and technical assistance regarding infill quantities as needed.

Section A. Recommended Equipment

1. Utility knife (for opening bags)
2. Duct tape (for sealing partially used bags)
3. Gloves (optional)
4. Safety goggles
5. Wheelbarrow
6. Forklift for unloading pallets or super sacks (when necessary)
7. Drop spreader
 - a. Large scoop shovels can be used for small applications
 - b. 36" (91.44cm) wide drop spreader for applications of 1,000 - 5,000sqft (100-500sm)
 - c. Power or pull behind drop spreader for applications over 5,000sqft (500sm) recommended
8. Power Broom or Grandi Groom
 - a. 24" (60.96cm) nylon handheld power brush for applications of 1,000-5,000sqft (100-500sm)
 - b. BCS power walk behind for applications of over 5,000sqft (500sm) recommended
 - c. Lawn rake or Grandi Groom for very small applications
9. Wire brush (for detailing edges and corners)
10. Broom and/or leaf blower for cleaning excess infill around perimeter of project site
11. Lawn roller for putting green, tennis, and bocce applications
 - a. 24-36" (60.96-91.44cm) Water roller for applications up to 1,000sqft (100sm)
 - b. 36-48" (91.44-121.92cm) Walk behind power turf roller recommended for applications over 1,000sqft (100sm)



Section B. System Recommendations by Turf/Application Type

1. Residential Lawns

- a. Artificial turf products designed for residential use are typically of medium to longer pile heights (1 $\frac{5}{8}$ " - 2 $\frac{1}{4}$ ", 41–57mm) and include a primary monofilament blade with a shorter, texturized yarn in between referred to as thatch. These products will be dense to replicate a natural seeded or sod lawn.
- b. Aside from the many inherent product benefits that Envirofill provides, it's critical to top dress the turf with the correct quantities to ensure adequate cushion under foot, ballast across the surface to avoid unwanted movement or wrinkling of the turf, UV protection of the primary backing and proper support of the grass blades.
- c. We recommend a ratio of 3/8"-1/2" (10-13mm) of Envirofill for every 1" (25mm) of pile height for the turf type described above. This equates to approx. 2-3.5lbs (.91-1.6kg) of Envirofill per square foot for every 1" (25mm) of pile height. Recommended mesh size for these applications would be 12/20 or 16/30.
- d. Depending on the tools used to properly power broom the Envirofill into the turf, you may experience a minimal amount of product waste. In our experience, the material loss is less than 1% if installed properly and with care.

2. Playgrounds

- a. Artificial turf products designed for playground and high impact/use areas are typically of short to medium pile (1 $\frac{1}{4}$ " - 1 $\frac{3}{4}$ ", 34-44mm). Similar to residential products they often include a thatch layer to provide more density and better wear over time.
- b. We recommend the 12/20 or 16/30 Envirofill with this application at a rate of approx. 3/8"-1/2"(10-13mm) for every 1" (25mm) of pile height or approx. 2-2.5lbs (.91-1.13kg) of Envirofill per square foot. It should be noted that if a safety pad is used under the turf, this does not change the Envirofill recommendations.

3. Dog Friendly Applications

- a. Synthetic turf for pet/dog applications typically used are of shorter pile (1"-1 $\frac{1}{2}$ ", 25-38mm) and may or may not include the thatch layer. Some products used for these applications will be a texturized PE or PP (Polyethylene or Polypropylene).
- b. For any non-texturized product (3/8"-5/8", 10-16mm), we recommend using Envirofill 12/20 or 16/30 mesh at the rates applied above. Tightly knitted, short, texturized products may require a smaller mesh for easier installation which would be the 16/30 or 30/50 Envirofill products. We would recommend 2-2.5lbs per square foot (.91-1.13kg per sq m) for these systems.

4. Putting Greens/Tennis and Bocce Courts

- a. There are two common types of synthetic turf designs for PG's, Tennis and Bocce. First, a longer pile (1-1 $\frac{1}{4}$ ", 25-32mm bent grass) slit film fiber and the much shorter texturized product above.
- b. We recommend the 16/30 and 30/50 for the longer pile slit film products and the 20/40 blend for tennis and bocce courts.



- c. Most bent grass putting green systems will be backfilled with approx. 5-6lbs of 16/30 raw sand per square foot (2.27-2.72kg per sq m) and then top dressed with approx. 1 lb/s of green 16/30 Envirofill per square foot (.45kg per sq m) to achieve optimal ball and surface performance. Short, texturized systems should be infilled with 100% 30/50 Blend (green and black) at a rate of 2-2.5lbs sqft (.91-1.13kg per sq m), depending on the pile height. We recommend the same rate of 20/40 on tennis and/or bocce applications.

Section C. Recommended Installation Procedures

The procedures below assume that all ground preparation, subbase, borders, and synthetic turf materials have been completed and the surface is ready for infill.

1. Prepare all tools and equipment and ensure all safety precautions are met.
2. Just before applying the Envirofill, rake or power broom across the surface of the synthetic turf so that the blades of grass are as vertical as possible. This will help “open” the surface so that the granules have easier entry in between the fibers. The goal is to fill the section from bottom up.
3. Cut open the Envirofill bag and fill the spreader hopper to a comfortable weight limit.
4. Start along one end of the lawn and move sideways in parallel rows.
5. Calibrate the spreader based on the application rates above for the respective application type (pet, golf, etc). We recommend spreading and raking the product into the fibers in lifts (1/4”, 7mm) at a time) to ensure proper distribution and quantity.
6. Once you have made the first pass over the entire surface, power broom the Envirofill deeper into the surface, making sure that there are no granules sitting on top of the grass blades.
7. Begin your second pass once you’ve power broomed the entire surface. Repeat this process until you have reached the recommended depth stated above for each application type.
8. Once completed, the grass blades should appear vertical (maybe a slight angle) and consistent across the surface. If some areas appear flat or matted, more Envirofill may be needed.
9. When using a thatched turf product, the Envirofill should not be noticeable at a glance. The top of the Envirofill should be buried under the thatch yarn slightly and only recognized when kneeling and spreading the grass bladed apart with your fingers.
10. Finally, use an infill measuring device to confirm proper recommended depth.

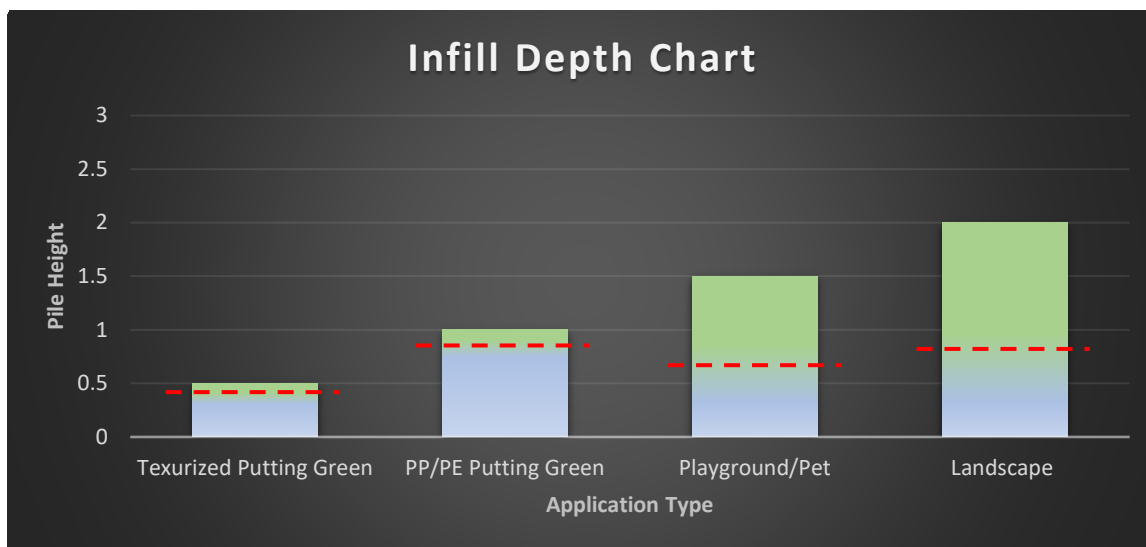
***Note:** Slit film putting greens will need to be rolled in order to bend the blades of grass over the infill. Client and contractor should consult each other to achieve the desired stimp speed. Generally, the Envirofill should be top dressed to within 1/8-1/4” (3-6mm) from the tips of the grass before the green is rolled.



The following chart provides depth and quantity ratios.

Please note that a variance of approx. ¼" (6mm) or .5lbs (.23kg) may be acceptable dependent upon the application type.

Product	Pile Height	Turf Spec	Depth	Lbs. Per Sqft.
30/50	½" (13mm)	Texturized PE/Nylon	7/16" – ½" (11-13mm)	1.5-2.0lbs (7.32-9.76kg/m ²)
30/50	⅝" (16mm)	Texturized PE/Nylon	9/16" – ⅝" (14-16mm)	2.0-2.5lbs (9.76-12.20kg/m ²)
20/40	⅝" (16mm)	Texturized PE – Tennis	⅝" – 11/16" (16-17mm)	2.5-3lbs (12.21-14.65kg/m ²)
16/30	1-1¼" (25-32mm)	PE/PP Putting	¼" (6mm) (Top dressed)	.25-.5lbs (1.22-2.44kg/m ²)
12/20 or 16/30	1-1¼" (25-32mm)	Pet/Playground	⅜" – ½" (10-13mm)	1.5-2.5lbs (7.32-12.21kg/m ²)
12/20 or 16/30	1½"-1 ¾" (38-44mm)	Landscape	½" – ¾" (13-19mm)	2.5-3.5lbs (12.21-17.09kg/m ²)
12/20 or 16/30	1⅞"-2 ¼" (48-57mm)	Landscape	¾" – 1" (19-25mm)	3.5-4.5lbs (17.09-21.97kg/m ²)



Pile Height: 0.5" (13mm); 1" (25mm); 1.5" (38mm); 2" (51mm); 2.5" (64mm); 3" (76mm)



Section D. Reference Library



1. Drop Spreader



2. Grandi Groom



3. Wire Brush
(Edge detail)



4. Lawn Roller
(Putting Greens)



5. Power Broom



6. BCS Walk Behind
(Larger installs)

