



Synthetic TurfSM
COUNCIL

Guidelines: Considerations When Buying Synthetic Grass for Landscape Use



Published September 2013



Table of Contents

- Introduction & Summary of Critical Guidelines..... 1
- Quality Guidelines..... 2-3
- Guidelines for Infill..... 4
- Guidelines to Assure a Natural Appearance..... 4
- Guidelines for Prequalifying and Selecting a Professional Contractor..... 5-6
- Disclaimer 7
- About the Synthetic Turf Council..... 7

Introduction

The Synthetic Turf Council (STC) has created these guidelines to help buyers of landscape synthetic grass choose from a wide range of products available in the marketplace, some of which are of uncertain quality and durability.

Note: These guidelines apply to synthetic grass for residential, commercial, or municipal landscape lawn applications. For specialized synthetic grass landscape applications, such as putting greens, pet applications including dog parks and dog runs, playgrounds, rooftops, etc., these guidelines may not apply.

Summary of Critical Guidelines

To assure that the synthetic grass you select is of high quality, and will continue to perform as warranted, the Synthetic Turf Council suggests you take these simple precautions:

- **Most importantly:** Research the synthetic grass manufacturer and installation company with whom you may contract. Carefully check their warranty, website, references, and complaint record with the [Better Business Bureau](#) and the [local consumer affairs office](#). Visit some of their installations, particularly those that are several years old. Be sure to understand how customer questions, service issues, and warranty claims will be handled. Do business with companies that you believe are most likely to be in business to respond to a warranty claim throughout the warranty period;
- Insist on a quality product that meets or exceeds the STC's **minimum** specifications below, and that is identified as appropriate for its intended use;
- Review all documents, including work plans, construction schedules, and contractor warranties. Make sure all agreed terms and extras are in writing;
- Keep the synthetic grass sample you select, and compare it before installation to the product that is delivered.

Note: Turf manufacturers, suppliers, and installers who are Synthetic Turf Council members have agreed to abide by the STC's Code of Ethics and Code of Conduct. STC members who have earned the designation of "STC Certified" have made additional business and performance commitments to benefit their customers. For more information about the STC and its members, please visit www.syntheticurfCouncil.org and the STC's [Online Buyer's Guide and Member Directory](#).



Quality Guidelines

Note: In an effort to respond to the requests of municipalities, homeowners associations, and landscape architects, the Synthetic Turf Council has developed these **minimum** guidelines. However, the STC wants to emphasize that there are many styles and systems for the synthetic grass that is engineered for landscape use. Some styles and systems may not meet these minimum quality guidelines, and others may greatly exceed them; nevertheless, these products might qualify as a quality product for the intended application. This is why it is most important to carefully research the companies that you are considering to manufacture and install the synthetic grass you have selected. Do business with companies and people you trust because of their proven experience and professionalism.

Total Yarn Weight (aka Face Weight)

Total weight of the yarn above the backing. This will depend on several factors, including the length of the yarn above the backing (pile height) and the distance between the individual fiber tufts (density or tufting gauge). Generally, longer pile and denser synthetic grass will look more natural. **Most synthetic grass has a pile height of between 1½” and 2”, and a density of between ¼” and ½” for a total yarn weight of between 40 oz. and 100 oz. per square yard.**

Primary Backing

Used in the tufting process to provide initial dimensional stability for the synthetic grass system, the primary backing materials are of a woven or non-woven fabric in one or more layers. **The STC recommends a system with a dual primary backing with a weight of at least 7 oz. per square yard.**

Coating (aka Secondary Backing)

The back of the synthetic grass is coated with secondary backing materials to lock the fibers in place (tuft bind). Several different coating materials are used, including Polyurethane (PU), Hot Melt Polyolefin (HMP), and Latex. North American synthetic grass manufacturers currently use PU and HMP. The coating should be applied with a weight and thickness configuration that is dependent on the design of the system and able to meet or exceed the STC’s minimum tuft bind standard.

Tuft Bind

This term is used to refer to the force (usually measured in pounds) required to pull a tuft from the synthetic grass backing. **The STC recommends a tuft bind of ≥6.8 lbs., but the higher the tuft bind, the better.**

Water Permeability Rate (drainage)

Synthetic grass systems with infill and base materials should drain to accommodate local weather and rainfall patterns. **Permeable synthetic grass systems are typically designed to drain 25” of water per hour.**

Yarn Characteristics –Should be validated in report by an Independent Test Lab

Artificial Weathering– Turf Color Change	>Gray Scale 3	UV resistance of fibers 3000 hrs. UVA testing Test method: ASTM D2616-12
Artificial Weathering-Pile Yarn Tensile Strength	Reduction of no more than 50%	3000 hrs. UVA testing Test method: FIFA/EN 13864
Total Face Yarn Denier	8,000 total denier per bundle	Test Methods: ASTM D1577; D1907
Heavy Metal Content of Yarn, including Lead, Cadmium, Chromium, Mercury, Zinc, Tin	Compliant with State and ASTM International Standards	

Synthetic grass has been proven to provide a quality solution using a variety of grass yarns, including polyethylene, nylon, and polypropylene. Beware of unsupported claims against a certain yarn polymer type as all three polymers can provide the following features:

- Strength/Durability
- Elastic Recovery (Resilience)
- Softness
- Color Retention
- Resistance to Moisture
- Resistance to Retain Odors
- UV Resistance
- Resistance to Stains/Chemicals, e.g., dyes, oils, saltwater, and chlorinated pool water at safe concentrations

Guidelines for Infill

Synthetic grass systems with infill are preferred over systems without infill, except in certain special applications that are only available without infill. Infill is needed to help keep the synthetic grass installation from moving—infill provides an even distribution of weight that will minimize the expansion and contraction of turf when the temperature changes. **For safety reasons, we do NOT recommend using landscape spikes in the middle of the synthetic grass area to replace the need for infill or top dressing ballast.**

Among the acceptable infill materials are crumb rubber made from recycled auto or truck tires, and washed silica sands that are round, sub-round, or sub-round to sub-angular. Other types of acceptable infill include heat-treated acrylic coated silica sand or colored crumb rubber, TPE-coated silica sand, and TPE and EPDM granules.

Guidelines to Assure a Natural Appearance

Select landscape synthetic grass that replicates the grass varieties that are most prevalent in your locality.

Note: There have been random instances of fiber shrinkage and melting of polyethylene fibers due to high heat from reflective surfaces, particularly so-called Low-E or low emittance glass, which reflects solar rays to reduce heat gain and cooling costs in a building. If an installation has Low-E windows and doors facing south, we recommend that before installation you:

- visit the site in the middle of a hot, sunny day to determine where the reflected energy is focused, even from the second story;
- if screening of the windows and doors is not feasible or desired, devise a landscape plan that includes planted areas or hardscape in the areas affected by reflected heat energy.

Guidelines for Prequalifying and Selecting a Professional Contractor

Installation companies, turf suppliers, and turf manufacturers should be:

- Well-established businesses that comply with all applicable federal, state, and local contractor laws, and show evidence of being licensed in your state, if a license is required;
- Check the company's complaint record with the [Better Business Bureau](#) and the [local consumer affairs office](#), and that it is in good standing with the [licensing board for your state](#).

The installation contractor should provide you with the following:

- Several references you should talk with, and several projects completed during the past several years that you should personally inspect;
- A sample of the warranty or warranties prior to signing the contract. Carefully review and understand:
 - ⇒ the history and stability of the company providing the warranty—the warranty is only as good as the company that stands behind it when a warranty claim is submitted, perhaps years after the synthetic grass is installed;
 - ⇒ warranty terms for defects in workmanship and material, including durability, fading, and premature wear or degradation from ultra-violet radiation from the sun;
 - ⇒ warranty limitations and remedies;
 - ⇒ conditions, if any, which might void or limit coverage under the warranty;
 - ⇒ person and company obligated to respond to a warranty claim and fulfill the warranty terms;
 - ⇒ procedures for filing a warranty claim, particularly against a foreign manufacturer;

Note: Some warranties are pro-rated, providing for a lower settlement as the synthetic turf ages. Non-pro-rated warranties are usually written for a shorter period of time, but cover the full cost of repair or replacement.

It will likely be harder to successfully prosecute a warranty claim against a non-U.S. manufacturer that does not have a U.S. legal representative.

- Complete contact information for the person and company responsible for responding to customer questions, and service issues;
- It's refund, return, and cancellation policies;

- A contract that specifies base preparation details. The water permeability rate for the base materials and the synthetic grass should be high enough to accommodate the local weather and rainfall patterns;
- Turf and infill samples submitted separately. The turf sample should identify where the turf was manufactured, e.g., USA or China. When the turf rolls are received, make sure to check the shipping label on the turf rolls and bill of lading to verify that the country of origin is the same as was originally represented;
- Confirmation that an industrial adhesive formulated for synthetic grass installations and with proven weather resistance, a product usually not found in home supply stores, will be used to bond the synthetic grass seams. The adhesive should provide a strong, hazard-free, and durable bond between adjacent synthetic grass panels or sections. It should be water, fungus, and mildew resistant, and applied by an experienced, professional installer;
- A written commitment that the sample you select when you sign the contract will be the product that is delivered for installation. Many states have laws to protect against bait and switch, or the “swapping out” of the turf selected with a different, cheaper or inferior product;
- A Certificate of Insurance evidencing Workers’ Compensation and General Liability Insurance, including products/completed operations coverage.

Disclaimer

The *STC Guidelines: Considerations When Buying Synthetic Grass for Landscape Use* (“Landscape Guidelines”) includes selected guidelines to consider when purchasing synthetic grass for landscape use. However, these are not exhaustive and there may be other important items that should be considered for the buyer’s specific situation and intended use. The Landscape Guidelines are not, and should not be considered, as manufacturing minimum standards for synthetic turf for landscape purposes. This document does not imply, suggest, or in any way guarantee performance issues could not arise if the system, product or component meets these suggested Landscape Guidelines, nor does it imply or suggest that if any of the guidelines are not met that the product will fail to perform. The suggested Landscape Guidelines are not intended to be, and are not to be considered as safety standards, and this document does not imply that an injury is less likely to occur if the synthetic grass meets the suggested guidelines contained herein.

About the Synthetic Turf Council

Based in Atlanta, the Synthetic Turf Council was founded in 2003 to promote the industry and to assist buyers and end users with the selection, use and maintenance of synthetic turf systems in sports field, golf, municipal parks, airports, landscape and residential applications. The organization is also a resource for current, credible, and independent research on the safety and environmental impact of synthetic turf. Membership includes builders, landscape architects, testing labs, maintenance providers, manufacturers, suppliers, installation contractors, infill material suppliers and other specialty service companies. For more information, visit the STC’s Online Buyers’ Guide and Member Directory at www.syntheticurfCouncil.org.



Synthetic Turf Council
400 Galleria Parkway, Suite 1500
Atlanta, GA 30339
Phone: 678.385.6720 | Fax: 678.385.6501
www.syntheticurfCouncil.org

Online Buyer's Guide and Member Directory
www.stc.officialbuyersguide.net