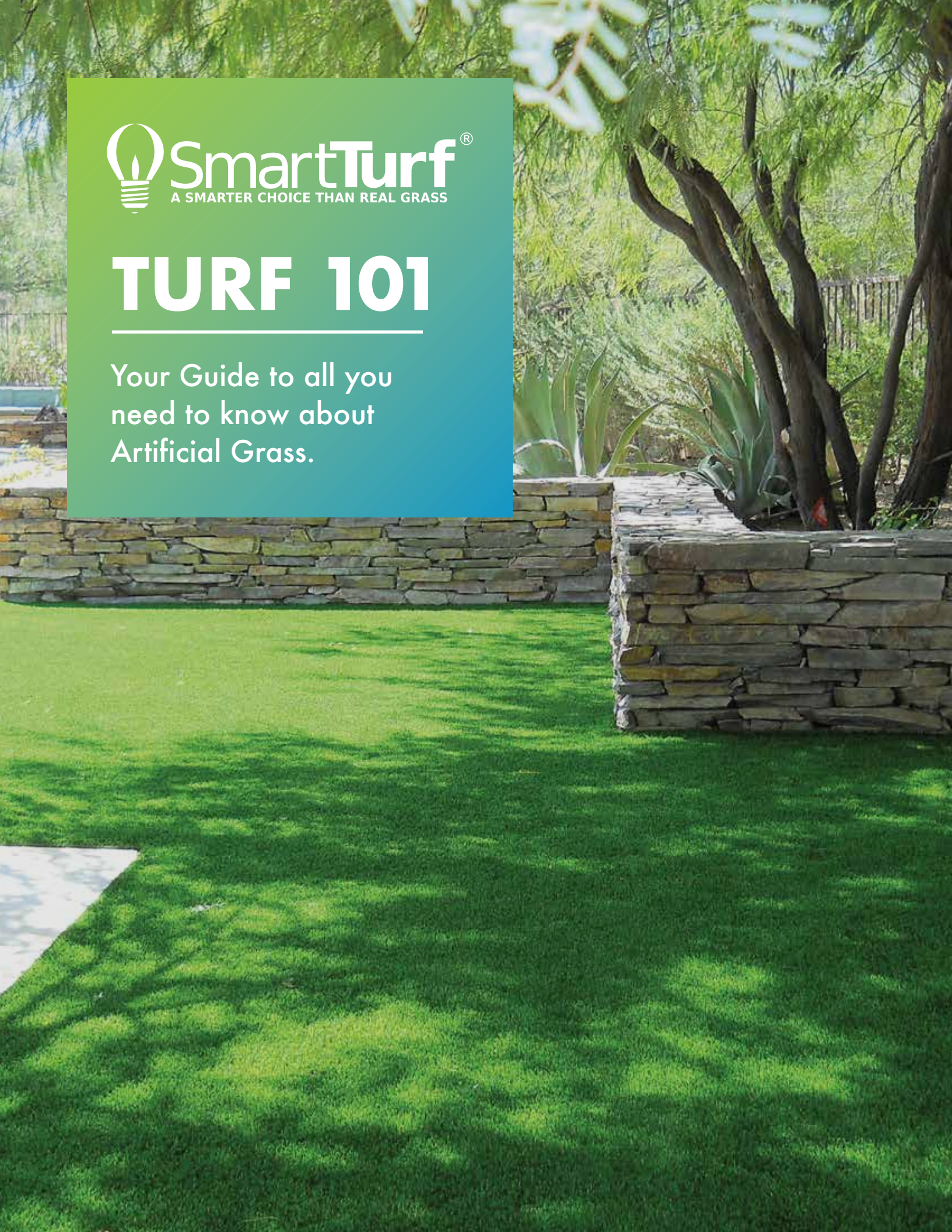


SmartTurf®
A SMARTER CHOICE THAN REAL GRASS

TURF 101

Your Guide to all you need to know about Artificial Grass.

Synthetic Turf

noun | (syn-thet-ic turf)

1. A surface of synthetic fibers made to look like natural grass

2. Is a realistic grass-like ground cover that replicates lush, natural grass in apperance and function.

INDEX

PART 01

WHO IS SmartTurf®?

Smart Turf® is a division of Catalina Home. Founded in 1975, Catalina Home is still owned and operated by the original founders. Catalina Home, the company behind Smart Turf, has more than 40 years experience tufting broadloom products, so it was only natural to begin making artificial turf. We wanted to be smart about our design, and even smarter about the quality of product we were distributing and manufacturing. Since the inception of our Smart Turf division in 2011, the number of turf qualities offered has expanded dramatically, along with our customer base.

About the Company

Smart Turf is a wholesale manufacturer of artificial grass, made in the U.S.A. with the finest raw materials available. The yarns have all the highest levels of ultra violet inhibitors available in the industry. For this reason, we offer the industry's longest warranty against ultra violet degradation and excessive fading.

We strongly believe that it is important to do our part to protect our environment to the best of our ability. For this reason we have made a commitment to continue pursuing sustainable options in our manufacturing practices, only using raw materials that will reduce or eliminate any negative impact on our planet and most importantly, recycling.

Smart Turf is respected as one of the highest quality and most innovative manufacturers in the turf industry. Artificial grass is an increasingly popular way to beautify residential and commercial landscape while conserving the earth's most valuable resource; water.

Made in the U.S.A

At Smart Turf, we really do manufacture the turf we sell. We are a wholesale manufacturer of artificial grass made in the U.S.A. We manufacture in our company owned facility located at Chatsworth, Georgia. We only use the highest quality, raw materials sourced in the U.S.A. We control every design and manufacturing aspect of our products. So make the smarter choice and select Smart Turf for your artificial grass project today!

Made in the U.S.A.

PART 02

Features & Beneifts of Artificial Grass

Save Water

Artificial grass will immediately reduce your water usage. Studies have shown that each square foot of natural grass replaced with synthetic turf saves 55 gallons of water per year. The average home has approximately 1,800 sq. ft. of grass which is 99,000 gallons of water each year. Imagine all the water that you could save by installing Smart Turf!

Save Money

Imagine the money you'll save on water expenses and reduction of labor costs to maintain your grass. www.SmartTurf.net has a cost calculator to figure out the ROI for any sod to synthetic grass project.

Always Green

Keep your grass beautifully green all year round!

LUSTER GUARD™ TECHNOLOGY

All of our turf products come with Luster Guard™ technology. When hit with direct sun light rays, the Luster Guard™ technology scatters the sun rays, giving our turf extremley low luster and a very natural looking apperance compared to other turf products.

MICROBAN® ANTIMICROBIAL TECHNOLOGY

Microban® is a global leader in antimicrobial andodor protection. Their technology inhibits the growth of bacteria, mold and mildew, keeping your yard cleaner and reducing odors.

No Mowing

No mowing means no waste. Each year grass clippings contribute to the massive amounts of waste filling our landfills and dumps where they also create methane gases that negatively affect our air quality. In addition, mowers create unecessary noise polution.

No Mud

Artificial grass is beautiful rain or shine. You will not have to worry about your artificial turf getting muddy and you pets and foot traffic won't drag dirt inside the house.

No Fertilizing

Your beautiful synthetic turf landscape will require minimal maintenance, which means no additional expense and labor on fertilizing.

No Brown Spots

Brown is NOT the new green! Artificial Grass will look green all year round and you will never have to worry about those brown spots.

No Pesticides

In order to keep your lawn a beautiful green you will most likely have to use a steady regiment of fertilizers and pesticides. As these products run off, they empty into our storm drains and sewers, leading to our oceans or back into our water supply, having a negative impact on our environment & personal health. Smart Turf will never require any of these chemicals. As your family enjoys your lawn, you will never worry about these harmful products coming into direct contact with them.

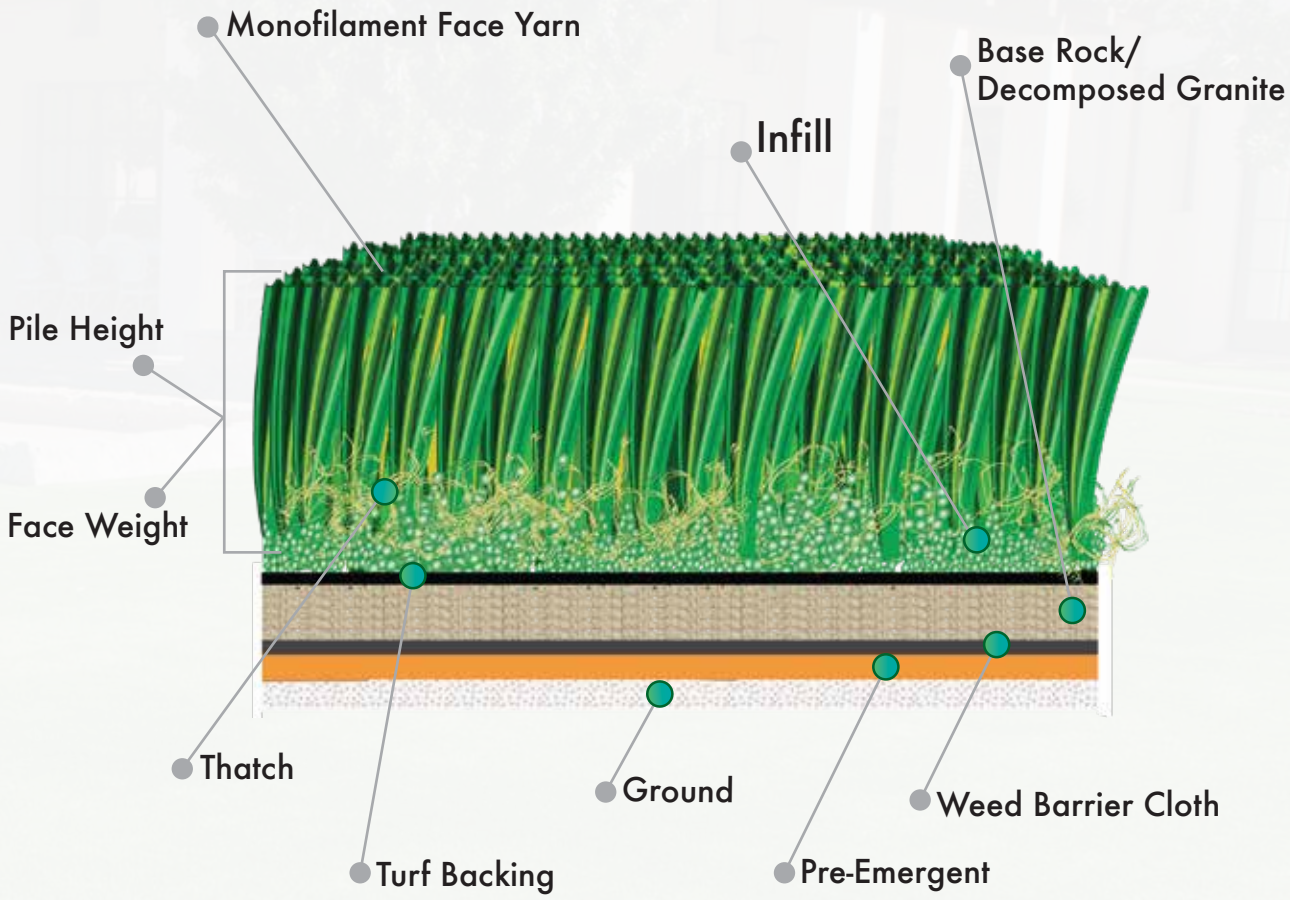
PART 03

U.S.A vs Imported: Why Does it Matter?

U.S.A. (Smart Turf)	Chinese
Yarn Fibers	
Only sources the most reputable yarn extruders in the industry	Extrudes their own yarn the least expensive way possible
Most blades have a profile to reduce shine and give dimension realistic look to finished grass product	Shiny, flat fibers/blades looks nothing like real grass
Pure resin material used to extrude yarn fibers: Polyethylene, Polypropylene & Nylon	Sub-standard, low grade resins with excessive fillers used to lower costs of their material.
Highest quality UV stabilizers mixed with the resin to prevent color fade	No evidence of UV stabilizers used in the plastic yarn resins
ASTM tests performed to confirm lead free yarn	No tests performed to confirm lead content in Chinese turf products
	Compromised resins in the yarn result in poor performing grass materials that won't stand up to the elements.
Coating/Backing	
Smart Turf backs their turf with Polyurethane	Rough, black shiny coating
Polyurethane lasts much longer than latex resulting in longer turf warranty	Uses latex material that won't stand up to the elements. Turf will start to deteriorate within 1-2 years.
Smart Turf uses 20 oz. per SY of urethane to hold the tufts of turf yarn in place for years to come	Not enough material coated to the backing resulting in poor tuft bind….the blades become loose and pull out.
Urethane is superior for households with pets because it is easier to clean and it does not absorb pet urine	Latex absorbs urine and odors. Your landscape will start to stink within days.

PART 04

Turf Specifications



Monofilament Face Yarn	*Multiple colors blended together to create color options.*
Pile Height	*The measurement of fiber length.*
Face Weight	*Weight of fibers within the product, not including weight of the backing. Usually weighed in ounces per square yard. Greater face weight means denser product. Most wholesale turf products are between 50 and 80 oz.*
Thatch	*Textured yarn used with different colors that is situated below the face yarn to enhance recovery.*
Turf Backing	*Materials that make up the back of turf and also secure fiber tufts.*
Ground	*Earth, Dirt.*
Pre-Emergent	*Prevents the germination of weed seeds*
Weed Barrier Cloth	*Woven cloth that prevents weeds from growing to the surface*
Base Rock/Decomposite Granite	*Put in place to form the sub floor which the turf will sit on and be nailed into. Should be 3-4"deep and compacted in place to a hard and solid base.*
Infill	*The sand or rubber used on top of turf between fibers for ballast and cushion.*

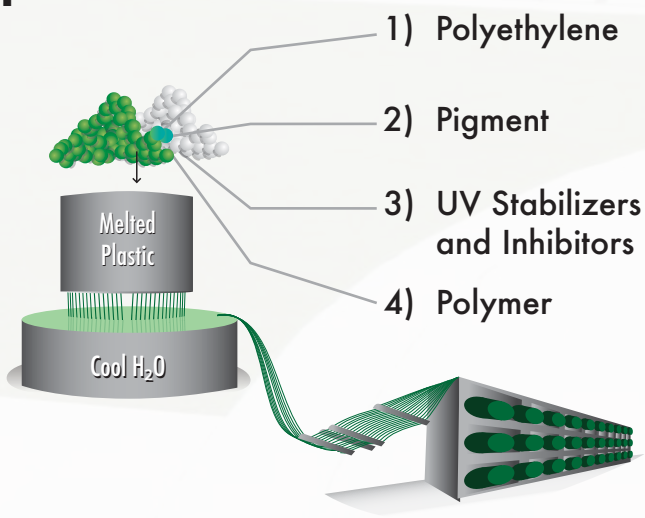
PART

05 How is Turf Made?

There are 3 main processes necessary to produce synthetic turf. These processes are yarn manufacturing, tufting and coating.

Step 1: Yarn Production

Yarn is produced through an extrusion process. Most turf yarn is made with polyethylene **(1)**. Polyethylene (PE) is the most common plastic made and is used to make plastic bags, bottles, and many other packaging materials. Other plastics used to make turf yarn are polypropylene (PP) and nylon. These 2 plastics are typically used as textured yarns for thatch, putting greens and batting cages. The process starts by melting down the plastic from a chip/pellet form. During this melting process additional materials are added which include pigment/color **(2)** and ultra violet (UV) stabilizers & inhibitors **(3)** and Polymers **(4)**. This melted material is then pushed through a metal dye called a spinneret. The spinneret has a particular shape that will form the profile of the yarn. Once the yarn leaves the spinneret it enters a cooling process that locks in the profile and solidifies the yarn. Once the yarn is cooled down, it is wound onto a cone and packaged.



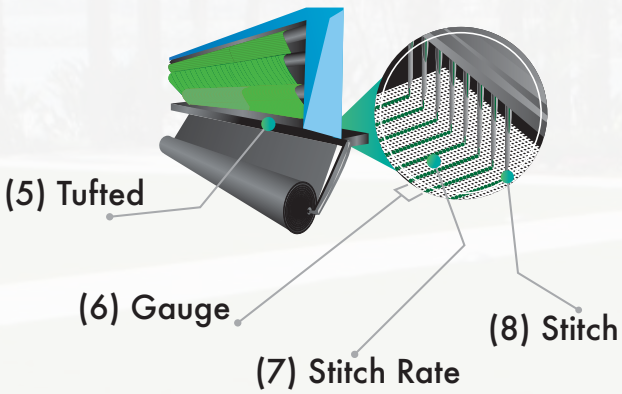
PART

05

How is Turf Made?

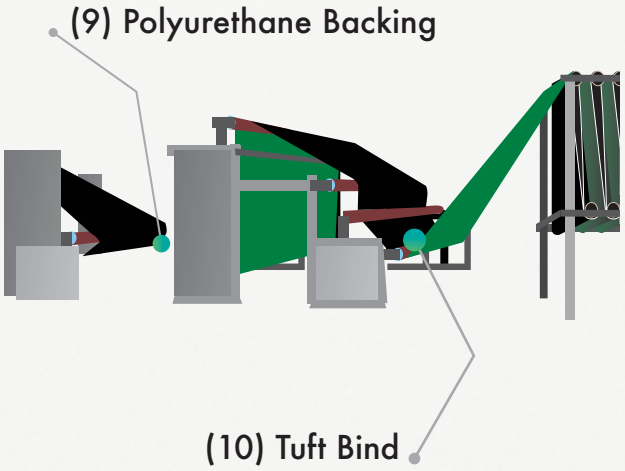
Step 2: Tufting

Tufting is a process used to sew yarn into backing. This is done with a large machine called a tufting machine. The tufting machine is similar to a sewing machine however it has a 15' wide row of needles. As backing feeds into the machine the tufting machine pulls yarn from a large number of yarn cones and simultaneously sews them into the backing. As these needles sew the yarn into the backing there are knives under the machine that cut each yarn before the needle pulls back out of the backing.



Step 3: Coating

Coating is the final process where the yarn tufting is locked into the backing. The tufted rolls are fed into the coater with the pile facing down. As the material goes through the machine Polyurethane (PU) **(9)** is spread over the backing. Once the material is completely covered it travels into a large oven where controlled heat is used to cure the polyurethane from a liquid state to a semi hardened state. The cured material remains flexible so the turf can bend and form to the landscape. At the final stage the cured back passes through a tunnel where heated spikes melt water drain holes in the back. From here the turf is inspected, rolled up and packaged. There are a number of new style backing systems in the market. These are all cheaper options than traditional PU coating. PU coating is the most tested, tried and true system in the industry. This is the same system that every NFL football team plays on as well as all other high profile turf projects.



PART

06

MICROBAN®

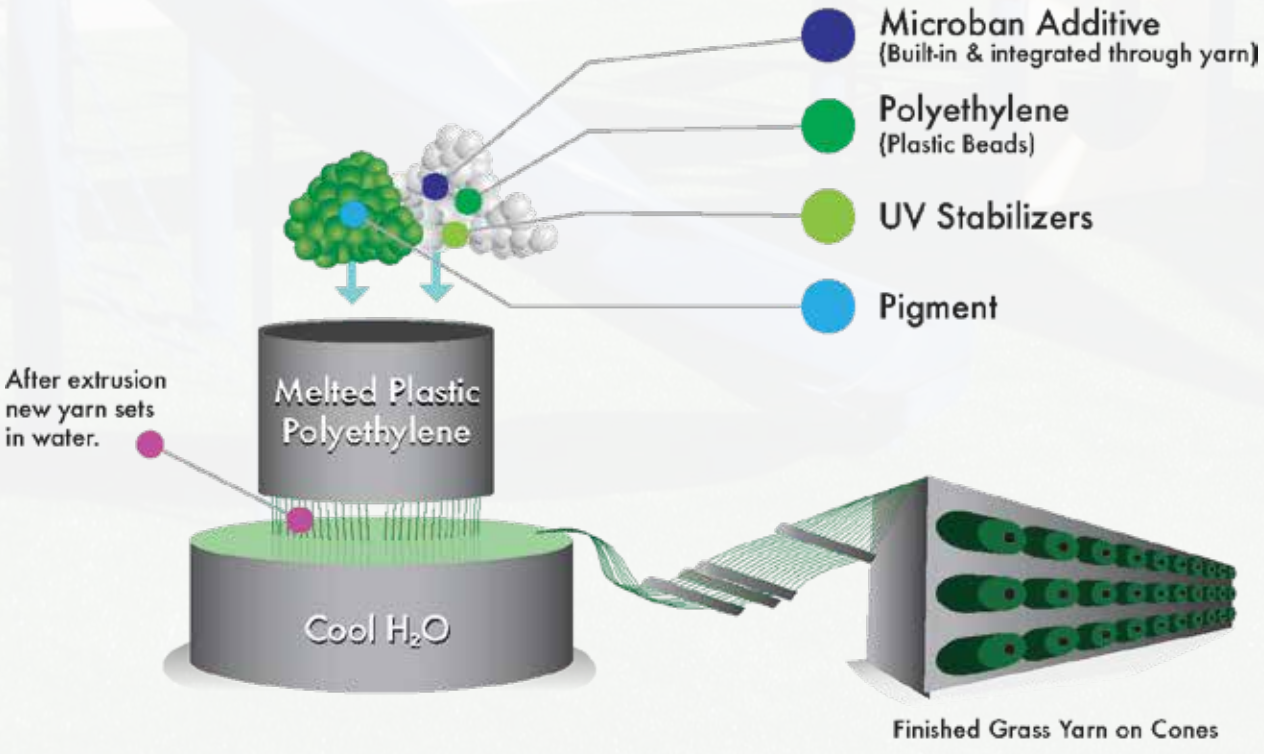
ANTIMICROBIAL TECHNOLOGY

What is Microban®?

Microban® is the global leader in built-in antimicrobial, odor control, and surface modification technologies that keeps products cleaner and fresher for longer, so you can worry less, enjoy life more, and Live On™. Microban® technology inhibits the growth of bacteria, mold and mildew, keeping your yard cleaner and reducing odors.

How It's Built In

During the extrusion process of turf manufacturing, Microban® technology is added alongside Polyethylene and UV stabilizers. As they all melt down together, Microban® becomes part of the molecular structure of the turf. It will never wash off or wear away.



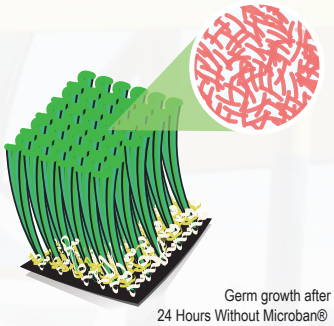
How It Works

• Microban odor-control and antimicrobial agents are integrated into Smart Turf during the yarn manufacturing process.

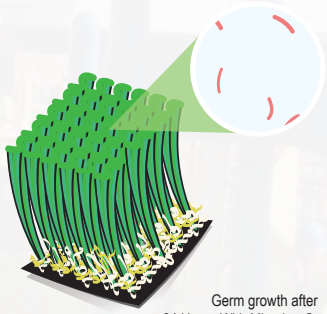
• This patented technology never washes off or wears away and stays active for the life of the product.

• Microban® antimicrobial agents prevent stain-and-odor-causing microbes from growing or reproducing. On an unprotected surface, bacteria can double in numbers every 20 minutes.

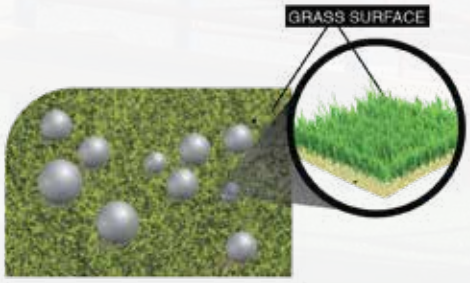
• By inibiting the growth of bacteria, mold, and mildew, Microban® technology keeps your turf cleaner between cleanings.



Germ growth after
24 Hours Without Microban®

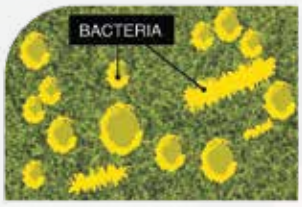


Germ growth after
24 Hours With Microban®



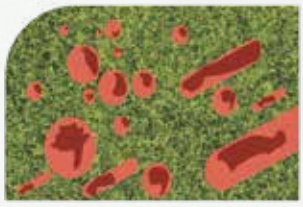
1. Full Integration

The technology is integrated during the manufacturing process and becomes part of the molecular structure of the product. It will not wash off or wear away.



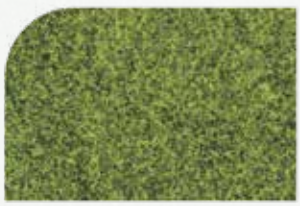
2. Contamination

The treated surface becomes contaminated with bacteria as a result of contact.



3. Technology at Work

The technology penetrates the bacteria and inhibits their ability to reproduce, make food, or eliminate waste.



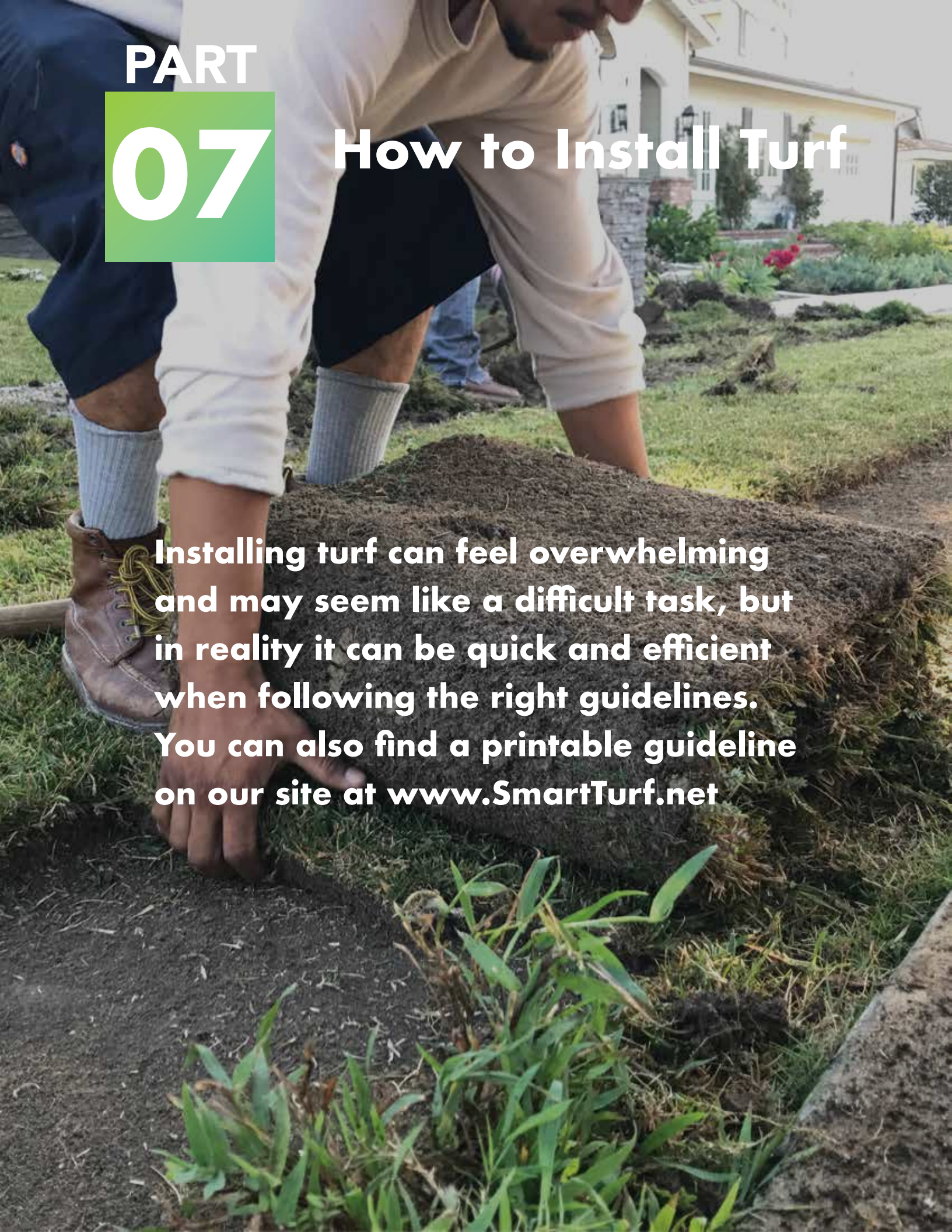
4. A Cleaner Surface

Ultimately, the treated surface remains cleaner and is protected against the proliferation of stain and odor causing bacteria.

PART

07

How to Install Turf



Installing turf can feel overwhelming and may seem like a difficult task, but in reality it can be quick and efficient when following the right guidelines. You can also find a printable guideline on our site at www.SmartTurf.net

Ground Clearing/Tear Out

Utilize a sod cutter, shovel and pick axes to remove grass, sod and vegetation.

Remove all unwanted tree roots, mulch and large rocks.

Clear the ground of any remaining construction debris, or obstructions.

Underground Hazards

Irrigation and electrical lines may be located just under the surface of the project area.

Locate and cap off or remove all unwanted sprinkler heads.

Turn on irrigation to verify everything works correctly before you start. Do the same with any existing electrical features.

Base Preperation

As we begin the sub-base process its recommended to lay down the weed barrier cloth first. Installing the base surface is critical to maintain the stability and integrity of the turf system.

First layer is 2"-3" of Class 2 Road Base. Begin dumping pile after pile and spread evenly.

Lightly water it thoroughly to allow it to settle while using a vibrating plate compactor. Ensure the base is firm throughout and is leveled.

Second layer is 1/4" (quarter of an inch) of Decomposed Granite.

Once again, water thoroughly and utilize the vibrating plate compactor once more to create a level smooth surface.

Turf Layout

Make sure to measure the project area and carefully design the layout to minimize the number of seams in the turf.

Unroll the synthetic grass and stretch across the top of the prepared base.

Do not drag across. If the synthetic turf has a wrinkle; allow it to acclimate in the sun.

Landscape and playground turf comes in 15 ft wide rolls, putting green material comes in 12 ft wide rolls.

Due to the natural direction of the grass blades, the turf must be laid out in the same direction.

Cutting the Grass to Fit

The artificial grass can be cut around your existing landscape whether it is a perfect square, or a winding path that is bordered by rocks.

The best method is to lay the grass out and trace from the top where you'll be making your cuts. There are 2 different tools you'll need for this,

1) Long Pile Carpet Cutter. 2) Carpet knife.

All cuts must be made from back side of synthetic turf to see the stitch rows.

Securing Turf

Secure the turf by staking the edges with 5"-6" nails. Space the nails along the perimeter edges approximately 3"-6" apart. Repeat the process for treated lumber, benderboard, or polyboard around the border.

Seaming the Turf Panels

A straight edge is required when seaming two synthetic turf cuts together. Make sure the stitch lines match. If the cuts are straight and the tuft lines match, the seams will be virtually invisible.

Another option available is the "S" cut method using a custom stencil. This is a more advanced process but will give you the same natural appearance.

Once you have your seams cut and in place, pull both pieces of turf back exposing the subbase. Place the seam tape with half of the tape under each cut. Use a synthetic turf adhesive and apply to the seam tape. Fold the two sections of artificial grass over seaming material to form one seamless piece.

An alternative to seaming artificial grass together is to use 4" 20d or 5" - 6" 40d nails along the seam both sides with 3"- 4" spacing.

Infill

Round Silica Sand is the standard infill for artificial turf. Proper infill installation is critical to maintaining your artificial grass system. 1-3 lbs. per sq. ft. Infill helps to protect the synthetic grass from the elements while maintaining the blade structure and level design. Spread infill material evenly utilizing a drop spreader (the type commonly used to spread grass seed), or a flat

Do not attempt to install the infill material while the synthetic grass or the infill material is wet.

Once all sand is spread evenly on top of turf it will need to be broomed into the turf fibers. Use a power broom to brush up turf fibers and let the sand work down in between the turf blades. When the infill process is complete, water the entire area evenly with a hose to settle the material.

Clean Up

No job would be complete without the proper clean up. You can use a blower, rake, brush or broom to clean up the grass as well as water.

PART

08

Infill Options

Why use infill for synthetic grass?

Synthetic grass systems with infill are preferred over systems without infill. Infill is brushed into the turf and used to keep the grass installation from moving, and provides an even distribution of weight that will minimize expansion and contraction of turf when the temperature changes. Infill also has shock absorbing qualities and helps hide the bottom fibers and backing from UV exposure. Acceptable infill materials that can be used are washed silica sand that is round, sub-round or sub-round to subangular. Other types of acceptable infill include heat-treated acrylic coated silica sand or colored crumb rubber. Other benefits of infill include:

- Non-Absorbing. Silica absorbs liquid which promotes odors and bacterail growth.
- Highly rounded, keeping it from compacting over time.
- No dust – Prop 65 exempt
- Cooler Surface
- Non-flammable
- No leaching or VOC's
- Recyclable
- Anti-microbial options reduce ammonia odor from pet usage by 99%. It disrupts the bacteria process that coverts pet urine into ammonia odor.

PART

09

Care & Maintenance

Cleaning the Surface

Although Smart Turf will be the most maintenance free lawn you have ever experienced, there are still a few simple things you will need to know about caring for it. Loose debris such as leaves and twigs can be removed by using a leaf blower or a standard broom or rake.

Refreshing the Turf

Your turf will experience natural cleaning every time it rains. However, if you live in an area where rain is scarce then we recommend spraying down your turf when you begin to notice the turf appears dirty. Use a hose and spray nozzle. Be careful not to spray the turf with such pressure that it washes out the infill.

PART

09 Care & Maintenance

Deep Cleaning or Stains

If you notice stains on your turf that water will not remove you can use basic household detergent mixed with water or “Simple Green”. Visit SimpleGreen.com for complete details and range of products available. Do not use any cleaners that contain chlorine bleaches or caustic cleaners. Once you are finished applying cleaner, be sure to rinse your turf thoroughly with water to remove any traces of excess cleaner. Also note that it is always easiest to clean a spill when it happens rather than letting it dry and harden.

Pet Areas

If you have installed your Smart Turf with our “Ultimate Drain System” + Envirofill infill then it will be easy to keep your Smart Turf fresh and clean. Simply flush the turf areas that have been exposed to urine and waste with a hose once a week or as needed. If you notice any unpleasant odors a mixture of distilled vinegar and water or “Simple Green” can be used to neutralize them.

PART

09

Care & Maintenance

Brushing Your Turf

It is a good idea to periodically brush your turf with a stiff broom to keep the blades standing up straight. Over time you may need to add infill if you notice that it has been washed away. Simply sprinkle infill over the top of your turf and brush in with a stiff broom. Areas exposed to high traffic may require more brushing than others.

Protect From Burns

Keep any kind of flames away from the turf. This includes cigarettes, grills, fireworks, etc. Be sure that your turf is not exposed to any extreme heat created by reflective window glass that may magnify the sun light and burn the turf.

PART 10

Warranty

Who Backs the Warranty?

The Bottom Line: The Warranty is only as good as the company providing it.

In the event that Smart Turf elects to issue a credit in lieu of repair of replacement, said credit shall only apply to the affected area of the synthetic grass giving rise to the claim. The credit shall be issued to the dealer, as a percentage of the replacement cost of new synthetic grass of the same or comparable quality. The credit will be good only toward the purchase of Smart Turf artificial grass; there will be no cash payment.

Installer should have their own warranty for installation. We cover Smart Turf artificial grass products only. This warranty does not cover installation, labor, or any other accompanying costs.

Warranty Will Cover:

- *Color Integrity (excessive fading)*
- *Ultra Violet degredation (premature yarn breakage)*
- *Manufacture defect: lines in turf, defective or missing tufts.*
- *Cost of the artificial Turf*

Warranty Will NOT Cover:

- *Acts of nature (earthquakes, floods, hurricane, etc.)*
- *Improper installation*
- *Indirect or incidental damages (accidents of vandalism, abuse, negligence, cuts, burns or neglect)*
- *Damage that may occur during shipping/transportation*
- *Melting caused by low E windows or sun magnification*
- *Failure to properly maintain protect or repair the turf (improprer cleaningmethods use of harsh, caustic chemicals.*

For more info on our warranty, scan the QR code

PART 11

Frequently Asked Questions

- **How does Turf help the environment?**

With synthetic turf, you will conserve water, remove the need for pesticides and reduce carbon emissions from gas-powered gardening equipment used to cut and maintain grass.

- **How big are turf rolls?**

Turf comes in 15 foot rolls that can be cut down to specified sizes.

- **Which infill do I use?**

There are many types of infills that can be used on turf but the most common ones are Envirofill, Silica Sand and Crum Rubber.

- **Will my turf fade?**

Our turf has built in UV stabilizers inhibitors that allows the yarn to hold its color even in the most harsh conditions. Turf colors are designed to last 10 to 15 years.

- **How long does turf last?**

High quality artificial turf can last between 10 - 15 years, depending on wear and tear.

- **How Do I Clean Turf?**

Since lawn mowers and other traditional gardening tools, a broom, rake, or leaf blower will clear away any debri. When cleaning after pets, you should avoid harsh acids, cleaners with alcohol and using pressurized water.

- **Different uses/applications for turf**

Besides being used for landscaping, turf has found its way to rooftop gardens, walls, and even been used to make household items.

- **Why choose turf?**

Purchasing turf brings many benefits like having a beautiful looking, low maintenance yard that eliminates the need for lawn mowers and is strong, durable, and long lasting. With turf you can also forget about weeds and fetilizer because of superior drainage capabilites. But most importantly it is environmentally friendly by saving water and reducing the carbon footprint leftbehind by lawn mowers.

GLOSSARY

Adhesive	*Water-based products used to bond synthetic turf seams and inserts and, at times, turf to the base. Synthetic Turf adehsives are made of urethane and/or epoxy.*
Base Rock/ Decomposite Granite	*Put in place to form the sub floor which the turf will sit on and be nailed into. Should be 3-4" deep and compacted in place to a hard and solid base.*
Compaction	*An increase in the density of something. Base materials should be thoroughly compacted to prevent any significant settlement across the area where the synthetic turf will be placed.*
Crumb Rubber	*Derived from recycled scrap car and truck tires, crumb rubber is metal-free and falls into two categories: Ambient and Cryogenic.*
Denier	*A unit of linear mass density of fibers.*
Density	*Mass per unit volume or the amount of pile fiber in the turf and the closeness of the tufts.*
Drainage	*Designed to carry away water that percolates through the turf.*
Durability	*The ability to endure, relates to the resistance of the synthetic turf system and the environment.*
Face Weight	*The weight of fibers within the product, excluding the weight of the backing.*
Fall Zone Safety Rating	*Meets the standards defined by the American Society for Testing and Materials (ASTM) Guidelines to particular heights or Head Impact Collision (HIC).*
Galvinized Nails	*A special type of nail coated with zinc used in construction to form a protective barrier in order to prevent oxidation or rusting.*
Gauge	*The distance between stitch rows. Depending on the product's weight, a ½ inch gauge or less is optimal.*
Ground	*Earth, Dirt.*
Infill	*The sand or rubber used on top of turf for ballast and cushion.*
Luster	*The state or quality of shining by light reflection.*
Memory	*Tendency for a material to return to a former state after a constraint has been removed.*
Microban®	*built-in antimicrobial & odor control technologies that keeps turf cleaner and fresher for longer*
Monofillament	*A singular type of thread.*

Non-Galvanized Nails	*Uncoated nail that is often used to secure turf.*
Perforations	*Series of holes in backing providing drainage for the turf.*
Permeable	*That which can be permeated or penetrated by liquids or gas.*
Pigment	*Added during the melting proces to add color.*
Pile Height	*The measurement of the fiber length.*
Polyethylene	*Softest of plastics used in most face yarns.*
Polymer	*Large chemical molecules from which synthetic fibers, infill, and back systems are made of.*
Polyurethane Backing	*Used as a coating on backing to lock in fibers.*
Powerbroom	*Tool used to brush up the turf and creates a new or resfreshed apperance and prevents the turf from flattening.*
Pre-Emergent	*Prevents the germination of weed seeds.*
Silica Sand	*Broken down quartz granules of minerals or rocks. It is one of the most common varieties of sand found in the nontropical areas of the world.*
Square Foot	*System of units used to measure areas.*
Stitch	*A loop of thread/yarn resulting from a single pass/movement of a needle.*
Stitch Rate	*Number of stitches per row.*
Synthetic	*Man-made; not found in the natural occuring environment.*
Thatch	*Tectured yarn placed under the turf fae to enhance recovery.*
Tuft Bind	*Force required to pull a tufted blade out of the backing.*
Tufted	*Term used to describe the process of manufacturing turf by the insertion of tufts through a backing fabric, creating a pile surface of cute and/or loop ends.*
Turf Backing	*Materials that make up the back of the turf and also secure the fiber tufts.*
UV Stabalizers & Inhibitors	*Added during the melting process to add color and strength protection to the yarn during extrusion*
Weed Barriers Cloth	*Woven cloth that prevents weeds from growing and surfacing.*

14418 Best Ave.

Santa Fe Springs, CA 90670

www.SmartTurf.net

(800) 421-6723

A division of Catalina Home

www.CatalinaHome.com

Made in the U.S.A.