



**MORE
CHOICES**

**MORE
FLEXIBILITY**

**MORE
CONTROL**



**PRODUCT
INFORMATION**

BUNKER PROTECTION AT TODAY'S COURSES

At every level, builders, architects, and facilities plan and execute construction projects far differently than just a few years ago. With continued budgetary pressures and high player expectations, every facet of operations requires careful scrutiny. This is especially true for labor costs associated with bunkers.

COST JUSTIFICATION

While golf greens and tees are the greatest play features, facilities continually spend more on bunkers. The savvy professional addresses the bunker challenges by incorporating drainage plans and Sandtrapper to achieve high performance.

PROJECT CONTROL

The Sandtrapper product line has given course professionals the options they need to create aesthetic bunker complexes while also affording them low maintenance. Sandtrapper is recognized as critical to reaching these maintenance savings and delivering performance over the long haul. More importantly, the costs associated with bunker renovation are quickly recouped from these savings.



1-888-970-5111



THE SANDTRAPPER DIFFERENCE

Sandtrapper is the only bunker renovation product on the market designed specifically for applications in bunker settings. It is not a re-application of an existing product or a copied design. Each Sandtrapper product is a complete "ground up" design, incorporating over 40 years of erosion control expertise.

PRECISE PRODUCT CHARACTERISTICS

During the development of the Sandtrapper product back in the late 1990's, considerable analysis was performed on the mechanics of water flow in bunker settings. The result was a specific selection of synthetic fibers and binders to create precise product characteristics that combat washouts or contamination.

The selected fibers and binders create a "matrix" that is very distinct from one style to the next. This matrix is what defines each product and delivers the washout and contamination fighting properties professionals require. The guiding principle behind Sandtrapper was to deliver high performance and value for the selected application.

PRODUCT CHOICES

Since the launch of Sandtrapper I and Sandtrapper II, we added Sandtrapper GEO for contamination-only use. New for 2006 is Sandtrapper MD, a product that has high performance characteristics matched with budget-conscious pricing.

Sandtrapper MD gives facilities and builders a product that is more comparable to competitive products, yet carries better performance characteristics and value.

Now available in four different styles, Sandtrapper I, II, MD and GEO give the golf course professional more choices, more control, and more flexibility. Sandtrapper is available in 56" and 90" widths to further increase flexibility and control. As real-time applications have shown, this flexibility is what today's professional demands.

UNRIVALED PERFORMANCE

Sandtrapper is specified and used on more courses around the world than any other product in the market. And it's not just used on prestigious, high-end courses.

With well over 1,400 installations worldwide, Sandtrapper has been used on small, public tracks and Top 100 courses alike.

Each facility has achieved the performance they desire knowing that Sandtrapper has experienced zero product failures. With durability built into every roll, Sandtrapper will provide this performance for many years to come.



SANDTRAPPER II



In project settings where performance is paramount, Sandtrapper II is your only choice. Where heavy weather is a constant factor or seasonal conditions unleash large amounts of precipitation, Sandtrapper II insures your bunkers from washouts and contamination.

THE BEST IN THE INDUSTRY

Sandtrapper II utilizes heavy synthetic fibers and a rigid binder system to create a matrix that will not compact. This allows sand to be held in place and provides high performance over the long haul.

No other product in the industry can compare. Some may try, but take a look and feel for yourself, it's obvious, Sandtrapper II is built to perform.

EXTREME APPLICATIONS

Dramatic, high-flashed bunkers are common in many of today's TOP 100 Modern courses. The extreme nature of these aesthetic hazards can wreak havoc on maintenance budgets. With Sandtrapper II, maintenance is significantly reduced and Superintendents have more money to spend on other important course features.

IMPLEMENTATION

For many, the choice is easy -- use the best available product and get what you pay for. In fact, over eighty percent of all Sandtrapper installations, facilities have made that very decision.

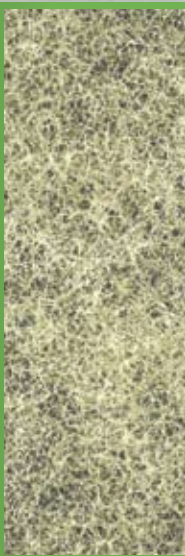
Sandtrapper II is also used with other Sandtrapper products in hybrid configurations. It is used along the high-flashed areas and carried into the drainage system. Sandtrapper MD or Sandtrapper I are then used to line the remainder of the bunker.

PRODUCT DIMENIONS

Sandtrapper II is available in 56-inch and 90-inch widths. This option allows facilities and builders to decide which dimension will work for them. Where particular bunker shapes exist, the wider roll widths streamline installation and allow for fewer seams within the bunker.

PRODUCT SPECIFICATIONS - SANDTRAPPER II

Fibers	Polyester	
Binder	Cross-Linked	
Fabric Thickness	15mm	
Weight	16oz. sq. yd.	
Roll Width	56 in.	90 in.
Roll Length	120 ft.	150 ft.
Total Sq. Ft.	560 sq. ft.	1125 sq. ft.
Color	Natural	
Washouts	Yes	
Contamination	Yes	
Bunker Slopes	Extreme	
Bunker Bowls	Excellent	
Full Trailer	85-90 rolls (56-inch)	
Availability	Immediate	



Roll length varies by the width selected, giving you a manageable size and weight for easy handling around the course. At 75 pounds per roll, Sandtrapper can be easily handled by a single individual.

Whether the 56-inch or 90-inch dimension, each roll has enough total coverage where two rolls cover an average sized bunker.

1-888-970-5111



SANDTRAPPER MD



Sandtrapper MD combines high performance and affordability, addressing those needs where budgets are paramount.

A NEW LEVEL OF VALUE

Utilizing Sandtrapper's proven technical assets, MD shares the critical performance characteristics of its top-of-the-line product, Sandtrapper II. In cases where budgets are limited, Sandtrapper MD is the right choice.

UNBEATABLE PERFORMANCE

Sandtrapper MD doesn't replace the premium Sandtrapper II product. MD augments the product line-up by adding an important tier that competes directly with other products in the market. Sandtrapper MD outperforms other alternatives, has greater resistance to compaction, and a matrix that will keep sand on steep bunker slopes. It's designed to work in bunker applications where slopes are moderate to extreme. Its affordability lends itself to lining an entire bunker for top performance.



IMPLEMENTATION

The use of Sandtrapper MD varies by facility and geography. In most cases, lining an entire bunker is the preferred method. Sandtrapper II can be installed on the extreme parts of the bunker slopes with Sandtrapper MD then used to line the remainder, from the edge of Sandtrapper II into the drainage and base of the bunker. Having these product choices puts the flexibility and control into the hands of the professional, tailoring each installation for the application at hand.

PRODUCT DIMENSIONS

Sandtrapper MD is available in 56-inch and 90-inch widths. This option allows facilities and builders to decide which dimension will work for them. Roll length varies by the width selected, giving you a manageable size and weight for easy handling around the course.

PRODUCT SPECIFICATIONS - SANDTRAPPER MD

Fibers	Polyester	
Binder	Cross-Linked	
Fabric Thickness	11 mm	
Weight	11 oz. sq. yd.	
Roll Width	56 in.	90 in.
Roll Length	120 ft.	180 ft.
Total Sq. Ft.	560 sq. ft.	1350 sq. ft.
Color	White	
Washouts	Yes	
Contamination	Yes	
Bunker Slopes	Moderate to Extreme	
Bunker Bowls	Excellent	
Full Trailer	45-50 Rolls (56")	
Availability	Immediate	



At 75 pounds per roll, Sandtrapper can be easily handled by a single individual.

Whether the 56-inch or 90-inch dimension, each roll has enough total coverage where two rolls cover the average sized bunker.

1-888-970-5111



SANDTRAPPER I



For those facilities that have less severe bunker designs, Sandtrapper I delivers solid control and is an extremely affordable choice. As with both styles II and MD, it's great for fighting sand contamination and offers long term protection.

THE STANDARD OF AFFORDABILITY

When Sandtrapper I was first developed, the design parameters were set to create a mid-level range of product characteristics. The lighter synthetic fibers and more flexible binder create a tight matrix. This combination is great for controlling sand contamination and preventing washouts in these less demanding settings. The lighter construction keeps cost to a minimum, making it a good budget choice. Affordable, however, doesn't mean cheap. Sandtrapper I carries the same great manufacturing as the rest of the product line, delivering solid performance over the long haul.



GREAT FOR MODERATE APPLICATIONS

Many courses lack the severe designs or have bunkers with little or no sand flashing. Even in cases where bunker slopes are gradual, washouts and contamination can occur. These moderate settings, paired with lower precipitation climates, create a need for affordable protection. In these situations, Sandtrapper I is the perfect choice. Effectively controlling washouts and sand contamination, the lighter matrix creates the right balance of protection and cost.

IMPLEMENTATION

Sandtrapper I is used as a great complimentary product to the more robust product styles. The cost advantages make it the sensible option for the base of the bunker, where little slope exists. Where the design is moderate and precipitation levels are less, lining the entire bunker with this style is recommended. In hybrid configurations, Sandtrapper I should be implemented from the toe of the slope through and amongst the drainage lines. Many allow this style to cover the drainage lines for additional protection from contamination.

PRODUCT DIMENSIONS

Sandtrapper I is available in 56-inch and 90-inch widths. This option allows facilities and builders to decide which dimensions will work for them.

Roll length varies by the width selected, giving you a manageable size and weight for easy handling around the course. At 75 pounds per roll, it can be easily handled by a single individual.

Whether the 56-inch or 90-inch dimension, each roll has enough total coverage and a single roll usually covers the average sized bunker.

PRODUCT SPECIFICATIONS - SANDTRAPPER I

Fibers	Polyester	
Binder	Cross-Linked	
Fabric Thickness	7mm	
Weight	6 oz. sq. yd.	
Roll Width	56 in.	90 in.
Roll Length	240 ft.	240 ft.
Total Sq. Ft.	1,120 sq. ft.	1800 sq. ft.
Color	White	
Washouts	Yes	
Contamination	Yes	
Bunker Slopes	Low to Moderate	
Bunker Bowls	Excellent	
Full Trailer	45-50 rolls (56-inch)	
Availability	Immediate	



SANDTRAPPER GEO



Sandtrapper GEO is the contamination only choice. Its thin design allows water and fines to permeate through while keeping larger particles separate from the bunker sand. It's also a great compliment to other Sandtrapper styles.

SUBSURFACE MIGRATION

Washouts may get more attention, but every bunker will contaminate. It's just a matter of time. Nature's forces are certain and predictable. Precipitation, no matter how slight, will force larger particles in a substrate to the surface.

Larger particles can be present in native soils or brought in as gravel forming the drainage system. In either case, a barrier should be present to combat migration.

SEPARATION OF SOIL & SAND

The product characteristics of Sandtrapper GEO are far different than Sandtrapper I, II, or MD. Developed without the three dimensional matrix of these products, GEO should never be used to combat washouts. The design of Sandtrapper GEO allows for filtration of water and creates a precise barrier between the bunker base and bunker sand. Where contamination is the more prevalent maintenance concern, Sandtrapper GEO's extremely low cost make it an important planning consideration.

IMPLEMENTATION

Used primarily in hybrid configurations, Sandtrapper GEO is best used in very flat areas of the bunker. Allowing the more robust Sandtrapper styles to fight washouts, GEO works effectively as an under-layment in transitional areas. In situations where complete coverage is desired, Sandtrapper I is the preferred option. For those preferring easy access to drainage lines, GEO is butted up to, but doesn't cover the drainage system.

PRODUCT DIMENSIONS

Sandtrapper GEO is manufactured differently from other styles, creating slightly different dimensions. Roll widths are 90 inches with a healthy 7,500 square feet of coverage area.



PRODUCT SPECIFICATIONS - SANDTRAPPER GEO

Fibers	Polypropylene
Binder	-
Fabric Thickness	23 mils
Weight	2.7 oz. sq. yd.
Roll Width	102 inches
Roll Length	1,000 feet
Total Sq. Ft.	8,500 sq. ft.
Color	White
Washouts	No
Contamination	Yes
Bunker Slopes	No
Bunker Bowls	Good
Full Trailer	-
Availability	Immediate

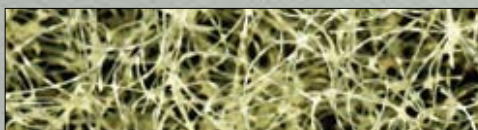


PRODUCT COMPARISONS

In most cases, articulating a product's features and benefits comes down to descriptive statements. Whether or not those statements are based in fact is, in many cases, irrelevant to a sales person trying to make a sale.

When introducing Sandtrapper, IVI-GOLF defined a very simple set of principles – create a durable product that has a framework for stabilizing sand geometries under water flow conditions. Simple yet effective. Over time, Sandtrapper's competition has made incorrect claims concerning performance and presented endless charts listing meaningless statistics.

To clarify important product characteristics and apply meaning to technical terminology, we've created the following tables:



SANDTRAPPER



THE OTHER GUYS

Fiber Thickness	200 denier	25/45 denier
Weight	16 oz. sq. yd.	12 oz. sq. yd.
Thickness	.81 inches	1.0 inches
Tensile Strength	59.4 lbs.	30 lbs.
Compression	43.5 lbs.	25 lbs.
Permittivity	7.22 sec ⁻¹	3.5 sec ⁻¹
Flow Rate	567.27 gpm/sq. ft.	250 gpm/ sq. ft.

IMPORTANT TERMINOLOGY

Fiber Thickness	The thickness of fibers used in a bunker liner material is directly related to its performance. The greater the thickness (denier) of a fiber, the greater its durability, the greater its resistance to tearing, the greater its resistance to compression.
Weight	A product's weight is directly related to the amount of product. In this case, weight is more importantly linked to the amount of binder used in the securing synthetic fibers.
Tensile Strength	The tensile strength of a material is measured in terms of the amount of force needed to tear apart the material. In this case the greater the tensile strength, the greater its durability.
Compression	Measured in terms of the amount of weight necessary to deflect a material to 50%. In this case, compression is linked to a product's ability to maintain its three dimensional matrix. The greater the compression strength, the greater its ability to maintain integrity and consistent water flow over time.
Permittivity	Measured in terms of water flow across the fabric (perpendicular). In this case, permittivity is directly linked a product's ability to move water. The greater the permeability, the better the drainage performance.
Flow Rate	Measured in terms of volume, flow rate is linked to the product's ability to move a quantity of water. In this case, the greater the flow rate, the better the drainage performance.

PRODUCT INSTALLATION



Proper installation insures the maximum performance from your Sandtrapper Bunker Liner. Each of the product styles can be used to line the bunker or be used in combination for a specific bunker area.



Sandtrapper II is used for steep sloped bunker conditions where maximum performance is desired.

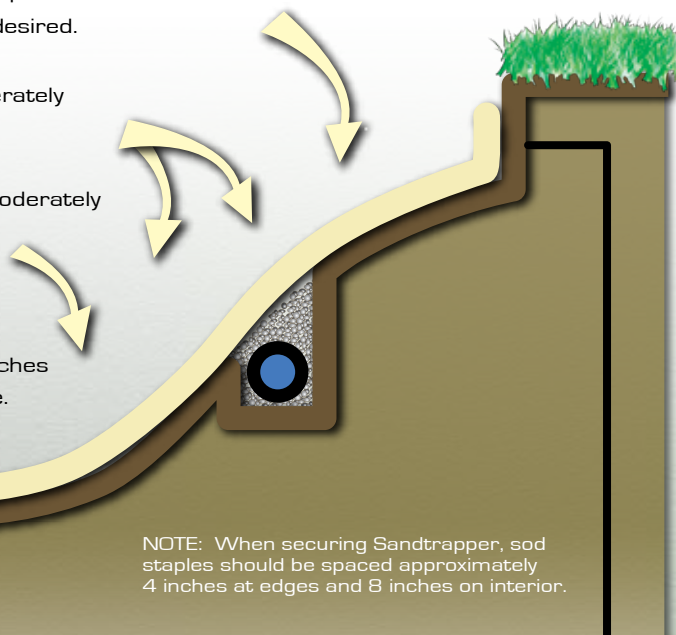


Sandtrapper MD is used for moderately sloped bunker conditions.



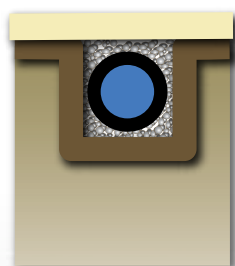
Sandtrapper I is used for low to moderately sloped bunker conditions.

NOTE: Sand depths should be maintained to 4 inches on bunker faces and 6 inches on the bunker base.



NOTE: When securing Sandtrapper, sod staples should be spaced approximately 4 inches at edges and 8 inches on interior.

DRAINAGE

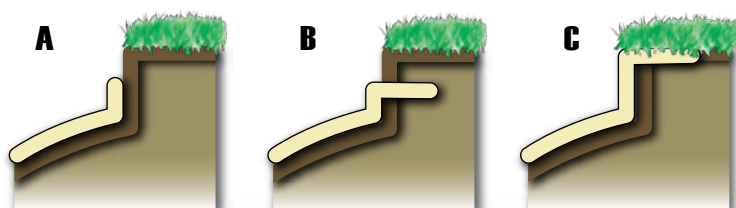


Sandtrapper II, MD and I are all able to be placed over drainage lines.

By doing so, maximum performance against drainage gravel contamination is achieved.

Should access be required to the drainage system, Sandtrapper can be tucked down and into the drainage trench.

EDGE DETAIL



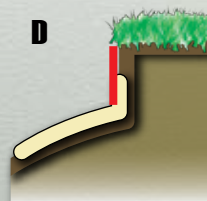
A variety of methods exist to install Sandtrapper at the bunker edges. Each has it's own advantage, given soil types and grass varieties.

OPTION A - Sandtrapper is brought to and up the bunker edge, being secured into the edge with sod staples.

OPTION B - Sandtrapper is brought to and up the bunker edge, then tucked into the soil below the root zone of the grass above.

OPTION C - Sandtrapper is brought up and over the bunker edge. Grass is placed on top with root structure growing into the liner.

OPTION D - Shown in red, Mighty Edge is an innovative way to secure the bunker edge. Mighty Edge is applied over the liner and secured into the edge with steel anchors for long-term bunker protection.



888-970-5111
www.sandtrapper.com

CUSTOMER SERVICE

Acquiring products is also about service. With an incredible support system behind each Sandtrapper product order, professionals can plan confidently, knowing that they can get what they need, when they need it.

LARGE ON-HAND INVENTORY

IVI-GOLF supports the Sandtrapper product line by having it "on-the-floor". With considerable quantities available, the timeframe from order to delivery is the fastest in the industry. Even for large orders, the inventory is ready to go.

NATIONWIDE DISTRIBUTION

With a network of delivery hubs and warehouses nationwide, logistics are simplified. In specific geographic regions, Sandtrapper is distributed through exclusive relationships. In many cases, these relationships are with local businesses you know and trust.

RELIABLE SUPPORT

Keeping track of the details is what IVI-GOLF is about. Delivery times, quantities, ancillary products -- these factors can foul up a project if not managed correctly. As professionals have grown to expect things right, we don't disappoint.

COMPLETE PRODUCT LINE-UP

IVI-GOLF has more than just Sandtrapper and many rely on us to provide other important materials. For bunker related products, IVI-GOLF manufactures Mighty Edge® bunker borders and V-Staple® fasteners.

For tees and greens protection, IVI-GOLF manufactures Turf Shield®, custom-sized and fabricated turf covers.

For golf course construction, IVI-GOLF carries a complete line of erosion control products — including silt fence, excelsior blankets, straw mats, jute, burlap, and Futerra.

These products can be found online at www.ivi-golf.com or through the main Sandtrapper site — www.sandtrapper.com.

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