



## What you should know about Synthetic Turf Maintenance

### Why do I need to clean and disinfect my synthetic turf field?

Like any other athletic competition surface, synthetic turf is continually being recontaminated with bodily fluids (Blood, sweat, vomit) animal & bird droppings and other environmental contaminants. All of these are potential sources of bacterial contamination – like MRSA. The CDC estimates that 1 out of 3 individuals are carriers of Staph so the odds are that many of your athletes have the potential to spread this highly contagious bacterium. The preferred route of entry for Staph bacteria is through broken skin, such as "Turf Burns". A single Turf Burn could constitute millions of potential routes of entry for Staph so the bacterial count does not need to be high.

So is synthetic turf bad? **NO**! The growth of bacteria on any man-made surface does not mean that there is an inherent problem with the surface, in this case synthetic turf. It simply means that when synthetic surfaces get contaminated, they need to be **cleaned & disinfected**. Just as this is true for wrestling mats, exercise equipment, therapy equipment, protective gear and uniforms, the same is true for synthetic turf.

## I have an outdoor field. Won't the rain "wash away" all of the dirt and bacteria? What about sunlight?

A quick look at your windows or your car will show you that rain does not really "wash away" dirt – and thus bacteria. The substrate of the playing field will act as a filter, trapping and concentrating all of the dirt and bacteria and letting "clean" water filter through. Direct sunlight will certainly play a role in eliminating bacteria. Over time, on sunny days, the UV light will break down the bacteria that is exposed and not trapped in the substrate. In general, however this is not occurring at night and depending upon your geographic location, is dramatically limited on overcast days and in the prime athletic seasons of March, April, May, September, October and November. Additionally, with many fields having almost non-stop activity, the only time that this benefit would be occurring is when no one is using the field – and then who are you protecting?

# How can I pick the best antimicrobial protection for my synthetic turf field?

First, think about what you are dealing with and then, what you are trying to overcome.

You are dealing with a continual build up of bacterial contamination intermingled with routine soil from activity, rain, dust, smog,... This is normally a relatively warm environment that is very conducive to bacterial growth. At night you add darkness and moisture. Placing these bacteria in a warm, dark, moist setting on an synthetic surface contaminated with organic matter and you have created the perfect environment for bacteria to thrive.







Therefore, you are trying to overcome the cumulative effects of 1) soil deposition and 2) addition of infectious bacteria derived from bodily fluids.

Some products purport to be "long-term" or even "permanent". Most (if not all) of these products are not really EPA registered disinfectants, rather they are listed as "*exempt*" because they are considered to only "*treat the articles*". Under U.S. EPA guidelines, these products only protect *"the surface*", <u>NOT the athletes</u> who come in contact with the surfaces. As soon as even the smallest amount of soil covers the treated surface, the treatment can no longer have any effect on the bacteria that would come in contact with humans – there is a "soil barrier".

TURFSTAT *PRO*<sup>™</sup> is an <u>EPA Registered</u>, <u>broad spectrum</u>, <u>hospital-grade</u> <u>disinfectant</u> and <u>sanitizer</u>. It is blended with surfactants (*detergents*) that aid in soil removal while leaving in place a residual Quaternary Ammonium Compound (*active antimicrobial*). This cationic (*positively charged*) disinfectant magnetically bonds to the surface and remains on the surface where athletes come in contact with the field – not under a layer of soil. (*See attached Efficacy Summary*)

### Know the "Jargon"?

- 1. Is the product that you plan to use an EPA Registered disinfectant?
- 2. Does it contain any surfactants (components to help "clean" the field)?
- 3. Is it also Virucidal and Fungicidal?
- 4. Where you given the <u>efficacy reports</u> (the tests that confirm which organisms the product will kill)?

### What do they protect?

- 1. Is it approved by the EPA to prevent cross contamination in humans?
- 2. OR does it only protect the treated item (ie. "now, only your <u>field</u> will not get a Staph infection")

### Is it on the label?

The U.S. EPA only approves disinfectants after rigorous testing for efficacy and safety. As part of this process, they also approve all efficacy and marketing claims on the label. The label is a legal document and any claims that the seller may make that go beyond what is on the label are illegal and you must assume to be false and never proven. **IF IT IS NOT ON THE LABEL, THE PRODUCT DOES NOT DO IT.** 

### What do they guarantee?

When they say it "works" for an extended time period (ie. 2 years) what do they mean by "works"? If you have your field swabbed and tested after 1 year and bacterial contamination is found, will they refund all of your original investment? Is it your responsibility to continue checking?

### Is it in writing?

Have they put all of their promises, claims, efficacy, and warranties in writing?







### **IMPORTANT TERMS**

### **Disinfectant**

"Used on hard inanimate surfaces and objects to destroy or irreversibly inactivate infectious fungi and bacteria but not necessarily their spores. Disinfectant products are divided into two major types: General Use and Hospital-grade." (U.S. EPA)

### "General Use" Disinfectant (Broad Spectrum Efficacy)

Label claims of effectiveness as a "general disinfectant" or representations that the product is effective against a broad spectrum of microorganisms are acceptable if the product is effective against both Gram-negative bacteria (**Salmonella choleraesuis** ATCC 10708) and Gram-positive bacteria (**Staphylococcus aureus** ATCC 6538).

### "Hospital-grade" Disinfectant

Label claims for use of disinfectants in Hospital or medical environments are acceptable only for those products that are effective for general or broad-spectrum disinfection <u>and</u> additionally against the nosocomial bacterial pathogen **Pseudomonas aeruginosa**.

### **Sanitizer**

Used to reduce, but not necessarily eliminate, microorganisms from the inanimate environment to *levels considered safe* as determined by public health codes or regulations. The applicant must submit data to show that the product, when used as directed, will substantially reduce the numbers of test bacteria on a treated surface over those on an untreated control surface. The results must show a bacterial reduction of at least 99.9%.

### Self-sanitizing residual

A product that imparts to the article the ability to reduce the count of "newly acquired" bacteria by at least 99.9%. This is an "active" antimicrobial finish.

### **Efficacy**

This is the compilation of laboratory testing, conducted under "Good Laboratory Practices" (GLP) to support claims of effectiveness against specific organisms. In the case of EPA Registered products, this is the "Data Set" submitted to the U.S. EPA to support all efficacy claims made on the label.

### **EPA Registration**

The United States Environmental Protection Agency (EPA) oversees the registration of all antimicrobial pesticides. To obtain an EPA Registration, the manufacturer must submit to the EPA numerous laboratory studies regarding the product's chemistry, efficacy, safety (oral & dermal toxicity), and long-term exposure effects. These tests must be conducted by EPA approved laboratories and under GLP (Good Laboratory Practice) conditions. Upon acceptance of these studies, the U.S. EPA will register a label that contains language approved and validated by the EPA. All efficacy claims on the label have been submitted to and accepted by the EPA.







### **EPA "Treated Article" Exemption**

"A treated article typically refers to articles or products that are treated with an antimicrobial pesticide to <u>protect the articles or products themselves</u>. The pesticides are usually added to the products during manufacture; however, they may be added after manufacture but before use of the article.

EPA grants the treated articles exemption for a <u>non-public-health</u> use of a pesticide that is intended to <u>protect only the treated article</u> or substance itself.

Any pesticide-treated product that is not registered by EPA must not make public health claims, such as "fights germs, provides antibacterial protection, or controls fungus." EPA's policy is predicated on the fact that *no scientific evidence exists that these products prevent the spread of germs and harmful microorganisms in humans*.

FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act) does not allow companies to make public health pesticidal claims for any product distributed or sold unless the product has been approved and registered by EPA or is covered by an exemption from registration. <u>"EPA is concerned about these claims because, in addition to being unlawful, they are also potentially harmful to the public (e.g., if people believe that a product has a self-sanitizing quality, they may become lax in their hygiene practices)." (U.S. EPA)</u>

For further detail on the Treated Article Exemption please see the U.S. EPA web site at: http://www.epa.gov/pesticides/factsheets/treatart.htm