



# SYNERGY™ CHITO

BIOSTATIC PROTECTION, NATURALLY

by SYNERGY™ AMERICAS



CONTACT FOR MORE INFORMATION AND PURCHASES  
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## INITIAL REFLECTIONS

Up to now, there are only 3 courses of action for achieving long-term surface protection:

### PERPETUAL DISINFECTION



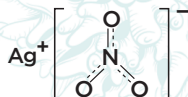
#### DISINFECTANTS KILL BUT CAN'T PROTECT

This would entail hiring enough staff to follow each occupant around the facility and disinfecting each surface after it has been touched.

#### The Disadvantages:

This is both costly and, depending on the choice of disinfectant chemistry, potentially more hazardous than the actual germs being fought.

### SILVER CITRATE DISINFECTANTS

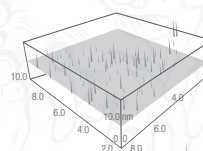


These formulations blend a traditional quaternary ammonium salt with silver nanoparticles and citric acid, and although less perpetual, also need a continuous workforce applying them.

#### The Disadvantages:

Nanosilver must be 'consumed' by bacteria to be destroyed (heavy metal leaching and build-up), it only works for 24 hours and requires expensive daily reapplication.

### SILANE QUATERNARY SALTS



#### FIELD OF SPIKES CAN INHIBIT CLEANING

This material creates a physical barrier in the form of a 'bed of nails' that physically ruptures the membrane of microbes.

#### The Disadvantages:

Developed in the late 70's, this microscopic field is also a barrier to effective soil-removal, since any 3-dimensional surface is harder to clean than a flat, smooth surface.

## PRESENTING THE SYNERGY™ CHITO FAMILY OF PRODUCTS

Synergy™ Americas, Inc. is excited to introduce SYNERGY™ CHITO, the ultimate innovation in all-natural, long-term antimicrobial-biostatic surface protection. These products are based on the active ingredient Chitosan, recognized for its outstanding antimicrobial and biostatic properties and derived from Chitin, a naturally-occurring biopolymer extracted from the exoskeleton of crustaceans like crabs, shrimp and lobster. Chitin:

- Is non-toxic\*, inert, abundant, renewable & biodegradable (\*as defined by OSHA Code 29 CFR 1910.1200).
- Can be applied to food-contact and non-food contact surfaces (as defined by EPA Code 40 CFR 180.940, 960).
- Doesn't harm people, pets, livestock, wildlife or the environment (as defined by EPA Code 40 CFR 180.930).
- Is listed by the EPA as a FIFRA-exempt, non-hazardous component (link to listings available upon request).

Slight variations in concentration and formulation yield different products to protect surfaces, clothing and hands.

## KEY SYNERGY™ CHITO CHARACTERISTICS



Naturally  
Biostatic



EPA & FDA  
Approved



Sustainably  
Sourced



Lab  
Validated



Non-toxic



Food-contact  
Safe





## THE SYNERGY™ CHITO FAMILY OF PRODUCTS



**CHITOSHIELD™** when applied to any precleaned hard or soft surface, will create a microscopic-thin, crystal-clear biostatic protective coating that seals pores, reduces stain and soil penetration, inhibits the growth of mold and mildew, and disrupts and arrests the metabolism of microbes. To ensure proper adhesion, care should be used to not apply over a dirty surface, *and may be applied to food contact surfaces where additional protection is desired, like cutting boards, countertops, vegetable crispers and storage containers.*

### Preparation

**Hard Surfaces:** Preclean surfaces using microfiber cloths an a 200 ppm solution of prepared with **Synergy EnviroTab™ HSC** and microfiber. Clean, wipe dry and allow to air dry thoroughly. For an even deeper clean, add 1 oz per 1 quart of **Synergy Soil Break™** to the solution.

**Soft Surfaces:** Preclean soft surfaces like upholstery, carpeting and curtains by vacuuming plus extraction or low-moisture cleaning techniques. This can again be done with **Synergy™ SB** products like **Soil Break™** and **Capture™**.

### Application

**CHITOSHIELD™** is designed for residential or commercial application as a protective coating. This product may be easily applied with flip top (supplied on quart bottles), a trigger sprayer, or with our **Synergy ProTab™ Compressed Cloths**. Whereas **CHITOSHIELD™** is a penetrating sealer, rather than a topical coating, surfaces with less touch or friction, like wall surfaces, backs of furniture, etc will last up to 40 - 60 days. Depending on the level of general friction and abrasion, critical touch points should last for 20-30 days.

### Care Instructions

In order to maintain contact with any invading microbes, a program dedicated to residue-free cleaning is important. Hence, we recommend employing a regular hard surface cleaning program that includes **Synergy EnviroTab™ HSC** solution at 100 ppm and microfiber. Soft surfaces may be spot-cleaned or extracted with any of our **Synergy™ Solutions** for Cleaning.



Professional applicators and larger facilities require a product that can deliver a thicker film (delivering greater durability) or more economy (higher concentration). These are the advantages of **CHITOSHIELD+™**.

**CHITOSHIELD+™** has three times the active ingredient as found in **CHITOSHIELD™** which means that it will deliver three times the film thickness when applied with a microfiber cloth or **PRO-TAB™** Compressed Cloth, which will, on low-friction surfaces maintain its protective integrity for up to 90 days.

### Directions for Surface Preparation:

Clean surfaces (consult the Cleaning Tips and Tools below); wipe or allow to air-dry.

### Directions for Treating Microfiber, Cotton and Other Fabrics:

Residential Sized Front or Top-Load Washers - Add 2 - 4 ounces of **CHITOSHIELD+™** to the final rinse cycle and allow to air or tumble dry. This is excellent for cleaning cloths, bath towels, healthcare uniforms and other items that may be common suspects of cross-contamination.

### Directions for Product Preparation & Application:

For the longest life, **CHITOSHIELD+™** may be applied as provided as delivered, but this may be too viscous for use in some battery-powered ULV or Electrostatic Spray Equipment. In this case, **CHITOSHIELD+™** may be diluted with water as follows:

- 1 **CHITOSHIELD+™**
- 2 Parts Clean Water

When diluting and applying with a battery-powered sprayer, make three light passes on all surfaces to deliver the same film thickness as obtainable through a hand application.



Whereas the active ingredient is already FDA approved and the inert ingredients commonly found in prepared foods, cosmetics and other skin treatments, we have 'tweaked' the original formula to increase longevity, tested our formulation in a GLP lab for efficacy and released our powerful hand and skin protection product **CHITOGUARD™**. **CHITOGUARD™**, available in both 8oz RTU bottles and 32oz bottles for refilling wall dispensers requires only one or two light sprays to rub into and over the hands for up to 24 hour protection against contamination.

## CLEANING TIPS AND TOOLS

To keep surfaces clean, use microfiber or viscose **PRO-TAB™** cloths (lint-free) to wipe using the residue-free **CLEANING SOLUTION** produced with **EnviroTab™** tablets or the residue-free **DISINFECTING SOLUTION** using **ProDox™** tablets.





Over the past months, Synergy™ Americas, Inc has been working closely with a fully accredited, EPA-Registered, AOAC-Approved, ISO-Certified and ANSI-Certified laboratory, which is widely respected in the testing of microbiological presence/absence for product research and development. We have asked them to assist us in a comprehensive assessment of our three new products:

**CHITOSHIELD™** - Ready to Apply Surface Coating

**CHITOSHIELD+™** - Dilutable Concentrate

**CHITOGUARD™** - 8-24 Hour Skin Protection

In this document, we present their findings, for each of our products, which employ a natural bio-polymer called **Chitosan**. **Chitosan** is a substance extracted and refined from the exoskeletons of crustaceans in this case, snow crabs.

#### ANTIMICROBIAL

We have already well established the fact that **CHITOSHIELD™** and **CHITOGUARD™** provide long - lasting antimicrobial protection; however, this line is for EVERY industry - clinical as well as cleaners, hospitality as well as healthcare, remediators as well as real estate.

#### ANTI - ODOR

Eliminating odor is only half of the task of the carpet cleaner, housekeeping contractor or property management remediator. Far more difficult is the task of preventing the odor from returning, resurfacing from within porous surfaces. **CHITOSHIELD™** to the rescue!

#### ANTI - ALLERGEN

All **CHITO™** by Synergy products create a positively - charged, biostatic protective sealer on any hard and soft surface. The most common of allergens are negatively-charged particles, and as is commonly known, opposites attract. Allergens generally remain airborne and trigger reactions when they are breathed in through the nose or mouth. When **CHITOSHIELD™** is applied to the hard and soft surfaces in a room, these airborne allergens are attracted to, and held fast to the treated surfaces, where they can be cleaned and removed with high efficiency vacuums and microfiber products.

#### ANTI - STATIC

One of the little known features of **CHITOSHIELD™** is how it reduces the likelihood of static cling and static shock with its biostatic properties. Perfect for treating both the touchable surfaces and the clothing one wears.

#### PET - SAFE

Reduce or eliminate the return of odors from pet bedding by pretreating new or retreating recently laundered pet beds and blankets. Any no need to worry about contact, ingestion or allergies, our products are pet safe!

#### CARPET & UPHOLSTERY SAFE

We have yet to find a fabric or material on which this product cannot be safely applied. Interested in collecting more from each carpet cleaning job? Offer to apply this treatment to any pre-cleaned carpet or furniture fabric.

#### ADD TO FINAL RINSE

Add all of the benefits simply and easily to any launderable garment by adding **CHITOSHIELD™** to the final rinse cycle in your washer.

#### ECONOMICAL

Regardless of application method, remember that **CHITOSHIELD™** is intended to be a surface sealer - NOT a topical surface coating - and should be applied thin and even. If applied as directed, coverage should be 1200-1500 ft2 per gallon for **CHITOSHIELD™** and slightly less for **CHITOSHIELD+™**. On particularly porous hard surfaces, like rough timbers in attics and crawl spaces, pre-coat the surface with **Synergy™ Enviro-Seal**.

#### SUPERB FOR ATHLETIC GEAR

Treat your gym bag and everything in it to reduce the load of odor-causing bacteria from taking up residence in your sports and training gear and equipment.

#### APPLIABLE OVER OR UNDER PAINT

Working on a really bad smoke odor, pet odor, hoarding odor job? Simply add **CHITOSHIELD™** to your quote to seal and protect every semi - porous and paintable surfaces and lock those odors in!

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