

Active Defense Against Microbes

The Problem

H1H1... MRSA... E. coli... Salmonella... Mold... Allergens... The world we live in is a dangerous place. The media tells an ominous story that threatens us all - the story of drug-resistant microbes and global pandemics.

You take every precaution: you wash your hands and are careful about what you touch. Still, you can't help feeling vulnerable.

Chemists have responded with a dizzying array of products to destroy germs. Most of these antimicrobials use metals or poisons that leach into the surrounding environment to kill offending organisms. These agents create a halo of diminishing efficacy around the area of application. Microbes near the center of this halo are usually eliminated, but those on the outer edge, where the strength of the poison is greatly reduced, survive and mutate into resistant strains, known as "Super Bugs".

Scientists and medical professionals see the real danger: **most antimicrobials actually make the problem worse** by promoting adaptive strains of microorganisms.



The answer? **The BactiBarrier Cleaning System**. The BactiBarrier® cleaning system approaches cleaning in a more logical way. We have achieved groundbreaking success using our two-step cleaning system.

- 1. First we remove and neutralize unwanted microbes by cleaning away pollutants using our premium EPA registered Disinfectant/ Cleaner antimicrobial.
- 2. Second we apply an odorless, bound, EPA-registered, antimicrobial barrier of protection on surfaces that may be exposed to future harmful microbial growth.

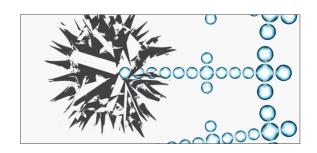
This two-part cleaning and protection system is a unique combination of both innovative procedures and chemistry. Efficient and effective cleaning procedures require careful attention to details. Proper application, coverage and dwell time of our Step 1 BactiBarrier Disinfectant/Cleaner antimicrobial will eliminate 99.9 % of the unwanted microbial growth that builds up on a hard surface.

BactiBarrier Protector or Step 2, applied properly, provides a bonded, long-term, antimicrobial protective barrier. This chemistry works slightly different than the first step. Its unique charged mechanical action actually works to eliminate microbial growth for months or even years on/in specific undisturbed hard and soft surfaces.



How the BactiBarrier Cleaning System Works

At the heart of our process is a molecule made of a long chain of atoms, forming a microscopic "spear". The silane base of this spear forms a covalent bond with virtually any surface and locks it, in turn, to each adjoining molecule. Built into the spear's shaft is a **positively charged nitrogen atom**. This positive charge irresistibly draws negatively charged, airborne microbes from the atmosphere, impaling them on the point of the spear. As the attraction pulls the microbe farther down the spike, they



contact the positively charged nitrogen atom and are destroyed by its minute electrical discharge.

Since microbes are obliterated instead of being altered, they can not learn to adapt to this electro-mechanical process. **In over thirty** years of field application, no adaptive strains have ever been documented. Best of all, because nothing of essence is transmitted during the process, the efficacy of our barrier does not diminish - it keeps on working, month after month.

Now, imagine an entire field of these electrically charged spears - billions upon billions of them - bonded to a surface and interlocked one to another, points at the ready. This is the inhospitable bio-barrier that confronts any bacteria, virus, or fungi that ventures near the surface - our **active defense against microbes**.

Benefits of the BactiBarrier Cleaning System

- Proven BactiBarrier active bio-barrier
- Ongoing protection that lasts month after month
- Covalently bonds to almost any surface
- EPA registered products
- Effective against a broad spectrum of gram (+) & gram (-) bacteria, viruses, & protozoa, including mold, mildew, & algae
- Extensively field-tested for years in hundreds of products & locations
- Environmentally friendly, non-toxic, non-leaching products
- · No noxious poisons, heavy metals, or harsh fumes

- Electro-mechanical action does not permit adaptive strains
- Uniform coating does not alter the texture of surfaces
- Reduces airborne contaminants while inhibiting surface growth
- Not affected by normal housekeeping procedures, including steam cleaning
- Presence & efficacy can be verified with a simple field test
- Minimizes institutional liability by demonstrating a proactive approach
- Long-term efficacy saves money over temporary treatments

Some examples of potential applications:

Healthcare, building and remodeling, athletic facilities, transportation, education, day-care, hotels and restaurants, correctional facilities, cruise lines, residential, business, marine, medical devices, industry and government, etc. This is just a small sampling of where BactiBarrier can be applied.

The comprehensive BactiBarrier Cleaning System can dramatically reduce the bio-load on touch surfaces, while lowering airborne contaminants in the process. BactiBarrier creates a biological safety net over your entire environment, protecting you from pathogenic organisms and fungi, month after month.