



HOW DOES THE BIOTREXX™ 247 TECHNOLOGY WORK?

The active ingredient in the *BIOTREXX™* 247 antimicrobial forms a colorless, odorless, positively charged polymer, which chemically bonds to the treated surface, think of it as a layer of electrically charged swords. When a microorganism comes in contact with the treated surface, a "sword" punctures the cell membrane and the electrical charge shocks the cell. Since nothing is transferred to the now dead cell, the antimicrobial doesn't lose strength and the sword is ready for the next cell to contact it. Normal cleaning of treated surfaces is necessary to prevent buildup of dirt, dead microbes, etc. which could cover the "swords", prohibiting it from killing microorganisms.

WHAT IS THE PURPOSE OF THE SILANE PORTION OF THE MOLECULE?

Silanes are extremely efficient bonding agents which can be coupled to other molecules and then used to permanently bond those molecules to a target surface. This process modifies surface properties of building materials and transforms them to a material that will not support microbial growth. In other words, it is the "glue" that holds the "sword" to the surface.

IS THE BIOTREXX™ 247 TECHNOLOGY A QUATERNARY COMPOUND?

BIOTREXX™ 247 is an organosilane, but part of the molecule is a quaternary amine. Unlike traditional quaternary disinfectants, which have a very short effectiveness and a limited kill spectrum, *BIOTREXX™* 247 provides extended protection, and controls a very broad spectrum of microorganisms (including Gram (+) and Gram (-) odor causing bacteria). As an added benefit, it is easier to use.

WHAT IS THE DIFFERENCE BETWEEN BIOTREXX™ 247 AND OTHER ANTIMICROBIALS?

Conventional products are absorbed into living cells and kill by way of poisoning the organism. They are designed to act quickly and dissipate quickly to avoid adverse effects to humans and animals due to their toxic ingredients. Most commercial antimicrobials used for treating building surfaces do a great job of getting a quick kill on bacteria and fungi, although most have a limited spectrum of effectiveness. The *BIOTREXX™* 247 technology takes a totally unique approach. It provides an effective antimicrobial barrier, providing extended control of growth on treated surfaces between standard cleaning and disinfecting protocol. The surface itself is modified to make it actively antimicrobial, with no need to reapply the product for 30 - 90 days.

The microorganism is attracted to the treated surface and punctured by the long molecular "sword." This is a physical rupture of the cell membrane; *BIOTREXX™* 247 is not consumed by the organism and stands ready to defend the surface from the risks of cross contamination.



IS BIOTREXX™ 247 PERMEABLE TO MOISTURE?

Yes, moisture that is in or on the treated material or surface passes through the treatment. After curing, the treatment is somewhat hydrophobic (water repellent) but it should not be considered a replacement for commercial water repellents.

DOES BIOTREXX™ 247 GIVE OFF GASES DURING OR AFTER APPLICATION?

No, *BIOTREXX™ 247* does not volatilize, dissipate, or leach onto other surfaces or into the environment. *BIOTREXX™ 247*'s chemistry polymerizes where it is applied and forms an antimicrobial barrier on the surface.

HOW LONG DOES THE TREATMENT LAST?

The cured antimicrobial is non-volatile, insoluble, and non-leaching. A treated surface's life span depends on a number of factors, not the least of which is surface preparation. Treating a dirty or unstable surface decreases the effectiveness of the antimicrobial. Abrasive or caustic (pH 12.0) cleaners can shorten the effective life of a treated surface, therefore the product should be reapplied every 30-90days, depending on these factors.

WHAT KIND OF PREPARATION IS NEEDED FOR TREATMENT?

Clearstream recommends disinfecting surfaces with an EPA registered quaternary disinfectant prior to application of *BIOTREXX™ 247*. However, *BIOTREXX™ 247* can be applied to any clean surface.

HOW DO YOU HANDLE CONTAMINATED SURFACES?

Microbes can be extremely hazardous. Severe contamination with hazardous organisms may require extreme cleaning protocols similar to those for asbestos removal. For normal decontamination: solid surfaces should be thoroughly cleaned before applying *BIOTREXX™ 247* to the surface.

HOW IS BIOTREXX™ 247 APPLIED?

For everyday applications Clearstream's *BIOTREXX™ 247* antimicrobial can be applied with our easy to use 32 oz. surface spray. We are happy to provide application tips for the treatment of large facilities & / or surface areas.

Whichever application process is used, the treated surface is protected by *BIOTREXX™ 247*

BIOTREXX™ 247 is available in 32 oz., 1 Gallon, 5 Gallon, 55 Gallon, and 275 Gallon Totes



*Experience the freedom of knowing your environment is
CLEAN, PROTECTED & PRESERVED*



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