etherium™ By E-Stone

Microban® Treated Surfaces vs. Untreated Surfaces.

Microban® Treated Surfaces	Untreated Surfaces
Built-in technology helps prevent the growth of bacteria on surface	After regular cleaning, surface is re-contaminated with bacteria that grows and multiplies
Built-in technology reduces the growth of microbes and helps prevent their reproduction	Surface does not inhibit microbial growth, microbes grow and multiply
Constantly protected surface, always active, 24/7	Surface can be cleaned regularly but does not maintain this characteristic over time
Continuously high level of antimicrobial performance	Surface does not feature antimicrobial performance
Built-in antimicrobial performance is unalterable by wear and tear	Surface does not have high antimicrobial performance, wear and tear and climatic conditions can reduce durability
Thanks to the technology that is permanently built-in to the product, technology efficacy lasts for the lifetime of the product	No lasting efficacy, no antimicrobial performance

Biofilms On Surfaces

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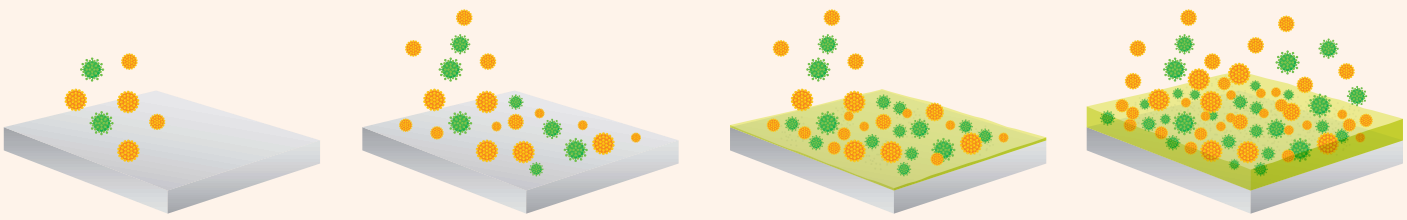
DEFINITION: **Biofilm** a community of microorganisms that are embedded in a gel-like substance and anchored to surfaces.

FIGURE 1. STAGES OF BIOFILM FORMATION



Microbial cells floating above surface

Microbial cells attach to surface

Recruitment of other cells and production of gel-like substance to support attachment

Mature biofilm

As with untreated surfaces, Microban® treated surfaces are exposed and can be contaminated with microbes from the environment that can come from damp sources like water, blood, chicken juice, etc. However, when antimicrobials are incorporated into treated surfaces, they create unsuitable conditions for microbes to survive and multiply. As the contaminating microbes attempt to attach and absorb nutrients from a surface, they are also absorbing the antimicrobial from the treated surface. The built-in antimicrobial technology will interrupt the microorganism's metabolism and prevent attachment, survival, and/or growth.

Biofilms On Surfaces

Microban® antimicrobial technology does not prevent biofilm formation. However, it will work to protect a treated surface from microbially-induced product deterioration by delaying microbial attachment, survival, and growth. This means that if soil and dirt are wiped away from the treated article, the surface underneath will still be cleaner than an untreated surface.

While built-in antimicrobial treatments are not substitutes for normal cleaning practices, they will continue to work in between cleaning to reduce the growth of bacteria on surfaces. Ultimately, surfaces with built-in antimicrobial technology can delay and reduce the formation of biofilms.