



With over 35 years of experience the ÆGIS team understands the information needs of medical professionals. There is a wealth of information available for review, please consider this review as a brief overview and introduction to the ÆGIS Microbe Shield® technology.

## Quality. Safety. Durability. Effectiveness.

- Compatible with virtually all substrates, including natural and synthetic fibers.
- Does not create an environment that promotes adaptive microorganisms.
- No arsenic, tin, heavy metals, or polychlorinated phenols.
- Accepted, registered, and readily available worldwide.
- Does not rub off or migrate onto the skin.
- Kills microbes on contact.

## Who is AEGIS?

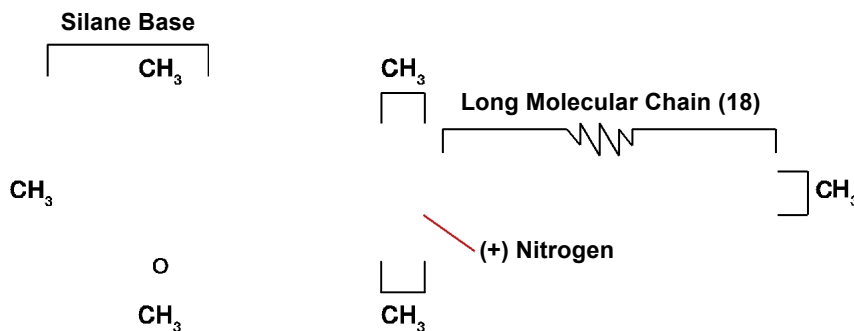
ÆGIS Environments is a business technology spin-off of Dow Corning Corporation.

In the early 1970's, Dow Corning Corporation utilized its unmatched silicone chemical technology to incorporate a standard antimicrobial substance into a silane. The result was the world's first odourless, colourless, non-leaching, durable, broad spectrum antimicrobial. Because it does not dissipate, it retains its full antimicrobial strength for the life of the surface to which it is applied. Dow Corning produces ÆGIS Antimicrobial, the ÆGIS Microbe Shield® in their ISO 9002 certified plant exclusively for ÆGIS Environments.

## ÆGIS Microbe Shield: The Chemical

### Antimicrobial Chemical Name

3-(trimethoxysilyl) propyloctadecyldimethyl ammonium chloride



## International Registrations

- Health Canada: PMRA # 28541
- Canadian Food Inspection Agency
- US EPA # 64881-2
- EU BPD N605 Product Types 2,7,9,10 (EINECS #248-595-8)
- Japan ENCS # 2-2095X
- Australia AICS
- Korea ECL # KE-34384
- China: Listed in approved chemical inventory

## MSDS Available

- Diluted Solution
- Typical Applied Material

## Traditional Antimicrobials vs. the ÆGIS Microbe Shield®

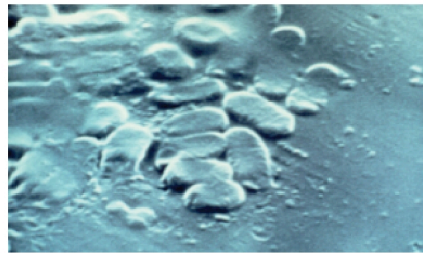
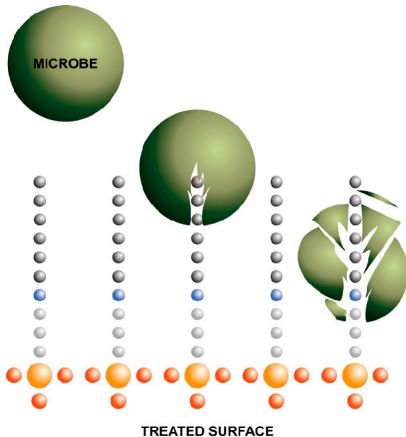
Conventional antimicrobial technologies have been used for decades. They work by leaching or migrating from the treated area to the target organism, much like a bullet. With each use or abuse, some of the chemistry, or ammunition, is used up. This sets up conditions for the negative effects of microbial adaptation. Besides affecting durability and useful life, conventional leaching technologies have the potential to cause a variety of other problems when used.

Traditional Antimicrobial Solutions (examples: Arsenic, Lead, Tin, Mercury, Silver, Animal Byproducts, etc.)	ÆGIS Antimicrobial
Chemical Kill	Physical Kill
Work by poisoning the microbes	Works by piercing the cell membrane
The chemical leaches onto the surface, soaking the surrounding areas with that toxin so that it can be absorbed into the cell	The positively charged Nitrogen attracts the negatively charged cell membrane of microbe. The microbe is pierced by the molecular chain ("sword") and destroys microorganisms on contact. When the negative and positive charges come into contact, it is electrocuted and blown apart.
Dissipates over time	With regular cleaning using mild soap and water, "swords" are cleaned, keeping them ready for action.

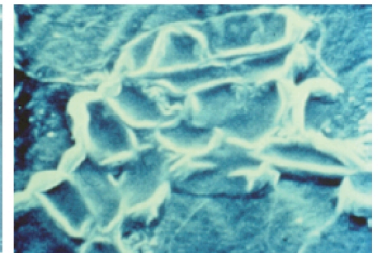


## MODE OF ACTION: How does it work?

Because the AEGIS Microbe Shield<sup>®</sup> technology does not dissipate or leach, it is not absorbed by the organism — or by you. Instead, when a microbe comes into direct contact with the antimicrobial, the cell membrane is ruptured. This combination of stabbing and electrocution allows the technology to be fully effective as long as the surface remains intact.



Normal *E. coli* cells on untreated surface.



*E. coli* cells ruptured after contact with treated surface.

## Durability and Life Span

The AEGIS Microbe Shield<sup>®</sup> permanently bonds to the treated substrate<sup>®</sup>. This means that it will not rub off or migrate and will continue to be effective for the life of the treated substrate.

To maintain the greatest effectiveness and longevity, three basic factors should be remembered:

1. The antimicrobial surface layer can be removed by abrasion
2. It can be deactivated by highly caustic materials (over pH 11)
3. It can be temporarily deactivated if a film or other covering prevents direct contact with microorganisms (ie: dirt)

## Case Studies, Testimonials and Additional Technical Material

We have an entire library of additional materials available for your review. Below are summaries of the main findings of the most commonly requested case studies. Feel free to ask for additional material or complete copies of each of the studies listed below.

### Antimicrobial Efficacy

Refer to Representative Microorganisms Controlled: A Partial Compendium and support document for MRSA

### Efficacy on Textiles

Refer to all documents at the reference section of this kit.

- Testing was done on hospital blankets, carpets, non-woven medical textiles, medical textiles, walls, ceilings, upholstered furnishings, and floors demonstrating that Aegis significantly reduces the likelihood of bacterial survival on treated surfaces.
- The testing also showed that treated surfaces maintained their antimicrobial efficacy even after 300 washings.
- Testing has been done in several hospitals from across North America and Asia.

### Efficacy on Hard Surfaces

Refer to the two part study performed by Micrylium at the Ogden Funeral Home

- Durable.
- Kills on contact.

### Testimonials

Refer to testimonial by the Infection Control and Prevention Department at Northwestern Memorial Hospital.

- Nosocomial infection rate was reduced as a result of AEGIS treatment.

**For more information, please contact us:**

905.602.GERM (4376)  
info@aegiscanada.ca