

### What is it?

The high-touch portion of the GERMGUARD Treatment Program™ uses a patented antimicrobial solution called the ÆGIS Microbe Shield®.

This antimicrobial was originally developed in the early 1970s by the Dow Corning Corporation, and received its first EPA registration in 1976.

Initially designed for medical textiles, it became readily available for commercial after-care applications over the last 15 years. It received Health Canada registration in 1997.

### How does it work?

The ÆGIS Microbe Shield® antimicrobial treatment forms a colorless, odorless, positively charged polymer that molecularly bonds to the treated surface, creating a permanent bond.

You could think of the ÆGIS Microbe Shield® as a layer of electrically charged swords. When a microorganism comes into contact with the treated surface, the molecular sword punctures the cell membrane and an electrical charge shocks the cell.

The treatment does not break down and the antimicrobial doesn't lose its strength, leaving the sword ready for the next cell to contact it.

### How do we know it works?

The ÆGIS Microbe Shield® has world-wide approvals, including US EPA # 64881-2 and Health Canada PMRA – PCP #15133. With over 30 years in the marketplace, there is also substantial third party data, including published articles, laboratory tests and peer reviewed documents that show the efficacy of the treatment. Please contact us if you require copies of these documents.

### How does it compare to traditional antimicrobial treatments?

Traditional Antimicrobial Solutions (examples: Arsenic, Lead, Tin, Mercury, Silver, Animal by-products, 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.



## **What are microorganisms?**

Microorganisms are microscopic organisms and are very diverse. They include bacteria, fungi, yeast and algae. Some microbiologists also include viruses, but others consider these as non-living.



## **Where can this treatment be applied?**

The antimicrobial treatment can be applied to almost any surface, both hard and soft. It has been applied to textiles, building materials, high-touch surfaces and more.



## **How often should it be applied? How long does it last?**

The antimicrobial treatment is permanently bonding, which means that it becomes part of the surface to which it is applied. In high-touch areas, it is best to apply annually due to the fact that the surface is worn down with regular contact, and with the deterioration of the surface comes the deterioration of the antimicrobial.



## **Will its use result in 'super bacteria'?**

No. Adaptation studies show that microbes do not adapt to the ÆGIS Microbe Shield and no 'Zone of Inhibition' develops.



## **What removes it? Does bleach remove it? How about other chemicals?**

The antimicrobial treatment is removed over time as the surface wears down. It can also be removed with abrasives (i.e.: scouring pads, abrasive cleaners, etc.) and harsh chemicals with a pH level of 11 or higher, as these chemicals wear down the surface, thereby removing the treatment. Bleach cannot be used as it has a pH level of 12.6. It is important to follow the recommended cleaning protocol provided to ensure the treatment is not damaged.

See post-application cleaning protocol.



## **Will this technology adversely affect the skin or environment?**

No. The antimicrobial is permanently bound to the surfaces it protects – it does not leach from the surface onto the skin or into the environment. Extensive toxicological testing shows the antimicrobial does not cross the skin barrier.



## **Who is using this treatment?**

The treatment was created over 30 years ago, originally for medical textile applications. In recent times, it has been used in a variety of applications internationally, including hospitals, schools and universities and sporting facilities like New York's Yankee Stadium. Bombardier is currently working on a worldwide Transit treatment program.



## **Can we treat the areas ourselves?**

To uphold our stringent quality control standards, only properly trained applicators should apply this treatment. This ensures the application is done accurately and helps ensure the efficacy of the treatment.



## **How much does it cost?**

Due to the number of variables building by building, it is best to speak with our team about your specific needs so that we can provide you with a proper and accurate quote.