



# MICROBECARE *R<sub>x</sub>tU*

Antimicrobial & Antibacterial Protection

A unique molecularly bonded  
antimicrobial technology  
with hospital grade disinfectant

>99.999%

Germicidal • Viricidal • Bactericidal • Fungicidal • Tuberculocidal

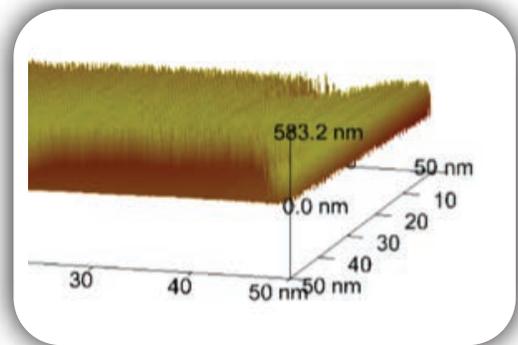
MicrobeCare™ is a unique antimicrobial bonding technology that is odorless, colorless, non-leaching, long-lasting and is effective against bacteria, viruses, fungi, algae and yeast. MicrobeCare™ uses a molecular bond to hold the antimicrobial to its applied surfaces, thus retaining its full antimicrobial strength where it is applied.



- A** A covalent bond permanently affixes MicrobeCare to the surface
- B** Cross linking between adjacent molecules forms a matrix of swords
- C** 18 link carbon chain pierces microbes as they are pulled towards the nitrogen atom
- D** The positively charged nitrogen atom attracts microbes to the surface and ultimately electrocutes the microorganisms through a positive-negative ion exchange

## Barrier of Protection

The cross link swords create an impenetrable barrier that is permanently bonded to any surface.



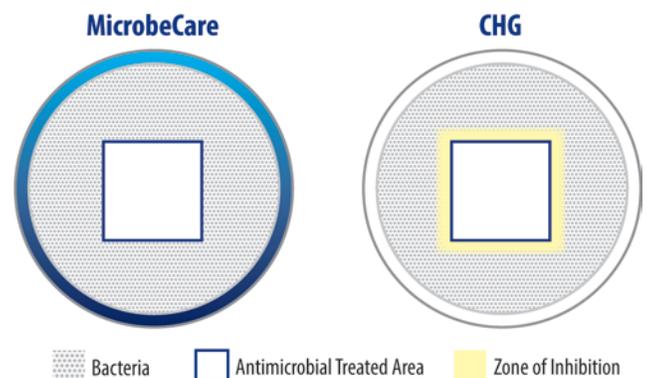
ACTUAL AFM IMAGE

## Time To Kill

MicrobeCare has a mechanical mode of action, killing microorganisms as they land on a treated surface. Other antimicrobials work by poisoning the cell which often takes up to 24 hours.

## Non-Leaching

Most antimicrobials are leaching technologies which offer an “zone of inhibition” often marketed as a positive. However, leaching allows the antimicrobial to migrate into the environment where it was not applied. As the antimicrobial leaches further from the application site, it exists in a weakened state which will eventually allow for the cohabitation of microorganisms and the antimicrobial.



## Effectiveness

MicrobeCare is effective against gram-positive and gram-negative bacteria, viruses, fungi, algae, and yeast. This includes microorganisms such as MRSA, HIV, E. coli, and many others. Contact us for a complete list of microorganisms MicrobeCare has been tested against.

## MicrobeCare Advantages

	<b>MicrobeCare™</b>	<b>Silver</b>	<b>Triclosan</b>
Chemical nature	Bonded Polymer	Releases ionic free radicals that react with cell DNA to disrupt critical life processes.	Releases toxic bis-chlorinated phenol (PCB) for consumption or cellular absorption, causing lethal mutations.
Mode of antimicrobial action	Cell "Wall" Destruction	DNA, Enzymes - POISON	Cell absorbed toxic bis-chlorinated phenol
Durability	Covalently Bonded and durable for the engineered life of the substrate	Leaches / Releases and can weaken as a result & affected by bleaching to treated fabric.	Leaches / migrates and can weaken as a result.
Effectiveness & speed to action	Quick Kill- Broad Spectrum < 20 min	Spectrum and Time to Kill – limited and slow to impact reduction takes 24 hrs.	Mostly antibacterial, but some limited antifungal capability-slower kill
Safety	No Risks	Risks to Humans and Environment	Risks to Humans and Environment
Cost	Cost / Effective	Expensive	Medium Cost
Verification	Easy Test (Mill & Store)	Complicated Test – in lab	In lab- ZOI test, proves leaching
Regulatory compliance	Globally Compliant	Varies by global region and limited	Varies by global region and limited
Range of antimicrobial activity and effective on:	Bacteria, Gram +, Gram – , Fungi yeast) and Algae	Limited- Bacteria, not fungi (not yeast)	Limited – Bacteria & fungal.

## FAQ's

### How does MicrobeCare™ work?

The patented protection of MicrobeCare™ provides immediate and reactive protection against microbes. When microbes contact a product protected with built-in MicrobeCare™ technology, our product destroys the cell wall of the microbes, disrupting the growth process and making it unable to reproduce, effectively destroying the organism.

### Do MicrobeCare™ treated products need to be cleaned?

MicrobeCare™ is not a replacement for routine cleaning; it will, however, make cleanings far more efficient, and hundreds if not thousands of times more effective.

### How safe are MicrobeCare™ treated products?

Consumer safety is our top concern. All our products are guaranteed non-toxic, and have obtained United States EPA and FDA approval. Risk assessments by independent scientific bodies constantly reconfirm the safety of our antimicrobial additives.

### How long does MicrobeCare™ protection last?

MicrobeCare™ forms a covalent bond with the surface to which it is applied. This permanent bond will not wear or wash off. MicrobeCare™ protection is guaranteed to function throughout the average lifetime of your product, and often will extend said lifetime by eliminating bacteria known to corrode or degrade polymer surface material.

### Can disinfectants be used on MicrobeCare™ treated surfaces?

Yes, most disinfectants have been approved for use on surfaces treated with MicrobeCare™. Contact us for a complete list of tested disinfectants.

### Will regular cleaning of a MicrobeCare™ treated surface reduce its effectiveness?

MicrobeCare™ can preserve its >4 log reduction even after 1200 cleaning cycles with hospital-grade disinfectant. For further details or a copy of this study, please contact us.

## About Us

Parasol Medical is a premier developer of specialty medical devices designed to serve the needs of the growing and ever changing healthcare industry.

Our direct relationships with clinical end users allows us to develop and quickly implement suggestions and changes to product designs that make the lives of healthcare workers easier and improve patient outcomes.

At the forefront of new and emerging technologies Parasol Medical is rapidly expanding its footprint throughout the Healthcare market to include patient safety, advanced wound care products, compression therapy and infection control technologies. Parasol Medical complies to Good Manufacturing Practices cGMP and maintains an ISO 13485 quality system.



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FDA Listed Products  
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