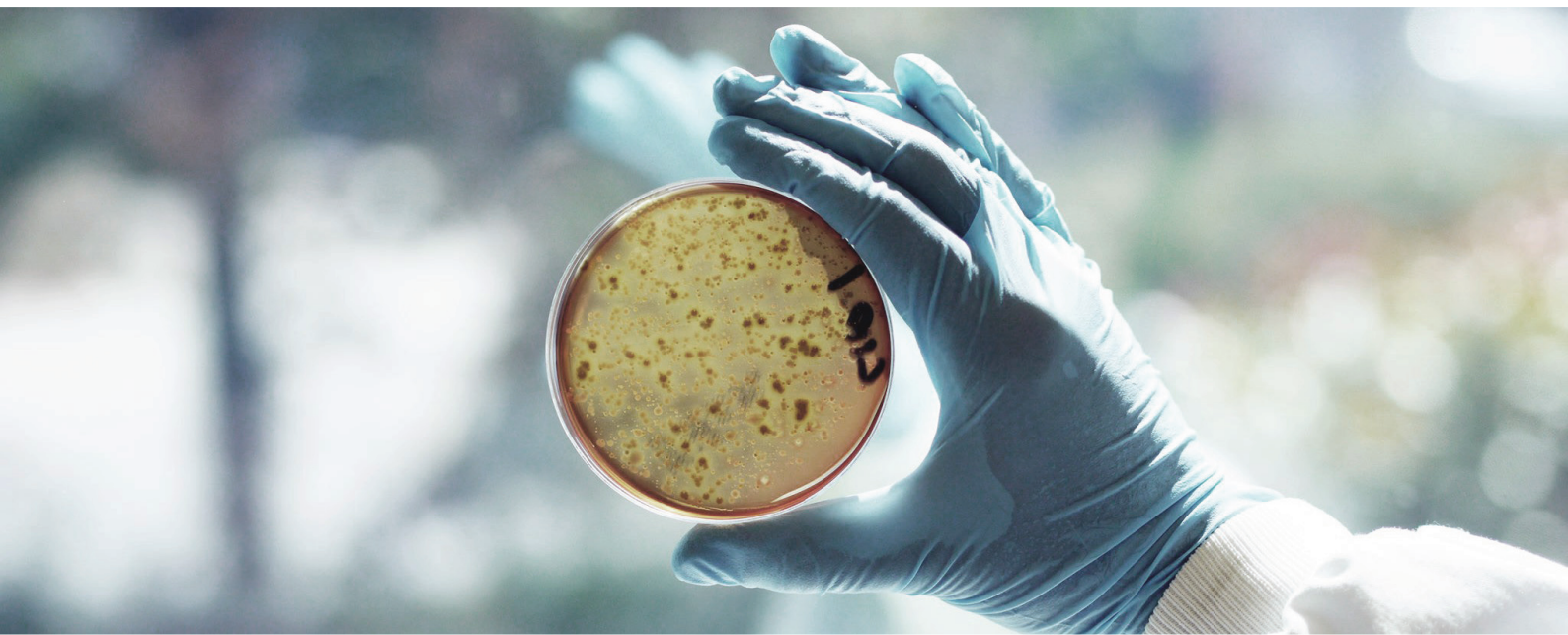


BIO | CLAD

# HYGIENIC SPACES



ANTIMICROBIAL  
EXPLAINED

# What does antimicrobial mean?



Antimicrobial is used to describe substances which demonstrate the ability to reduce the presence of microbes, such as bacteria and mould.

## WHAT'S THE DIFFERENCE BETWEEN ANTIMICROBIAL AND ANTIBACTERIAL?

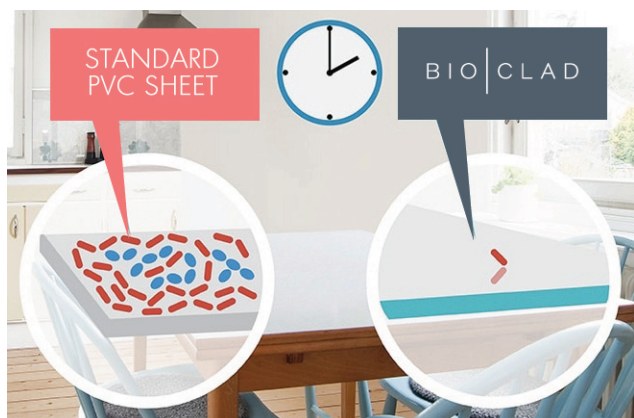
An antimicrobial is effective against a wide spectrum of microbes: this includes bacteria, mould, fungi and even viruses. An antibacterial, on the other hand, is only effective against bacteria.

## SILVER-ION ANTIMICROBIAL TECHNOLOGY

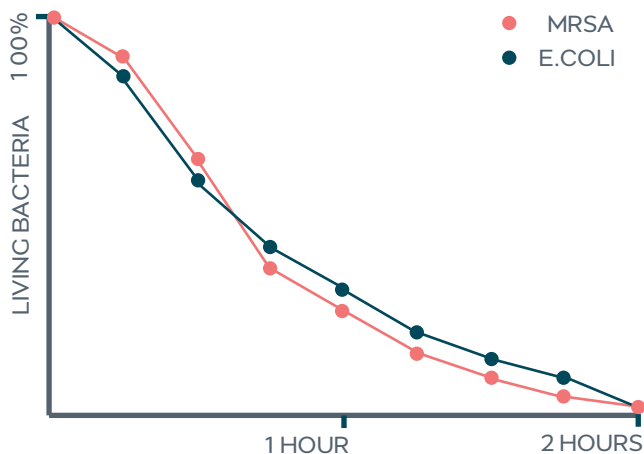
There are four main types of antimicrobial additive, based on Silver-Ion, Copper, Zinc and Organic technologies. Our range of antimicrobial products use Silver-Ion antimicrobial additives which are suitable for deployment in a broad range of materials and applications, including paints, coatings, textiles, polymers and other material types.

## CONTINUOUS PROTECTION

BioCote® technology works 24-hours a day, for the expected lifetime of the product, to provide integral protection against microbes. Laboratory tests and real life studies show that microbe levels on BioCote® protected products are significantly reduced. In fact **80% of microbes** are eradicated within **15 minutes** and up to **99.99%** are gone within **2 hours**.



# Benefits of silver-ion surfaces



REDUCES  
MICROBES  
BY 99.9%

## 1. REDUCTION OF BACTERIA BY UP TO 99.99%

Even antibiotic-resistant strains of bacteria such as MRSA, VRE and CRE cannot survive on protected products.

## 2. NO MOULD

Products upon which unsightly and unpleasant mould such as *Aspergillus niger* cannot survive.

## 3. DEFENCE AGAINST VIRUSES

Antimicrobial technology is proven to deactivate the H1N1 influenza virus.

## 4. REDUCES CROSS-CONTAMINATION

A cleaner product means less microbes to transfer, ultimately reducing cross contamination.

## 5. REDUCES ODOUR

Less microbes means reduced potential for staining and unpleasant odours, so your product stays fresher for longer, increasing its functional life cycle.

## 6. INCREASES PRODUCT LIFESPAN

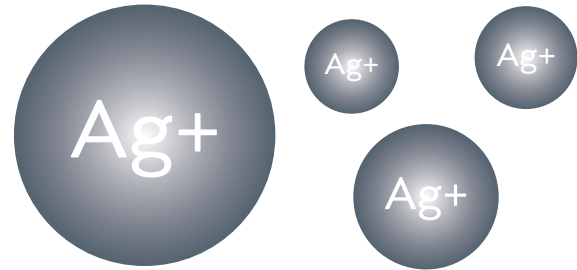
Lasting surface protection against microbial colonisation also minimises material degradation, ultimately extending the lifetime of the product.

## 7. EASIER TO KEEP HYGIENICALLY CLEAN

Thanks to your product will have around-the-clock protection against unseen microbes, permanently.

# How silver-ion tech works!

Silver-ion technology creates surfaces upon which 99.9% of microbes cannot survive. Laboratory and real-life testing has proved that the technology reduces microbes by 80% in just 15 minutes and 99.9% in just two hours. Working 24 hours, BioCote® technology effectively fights a wide variety of microbes. BioCote® has been proven effective against MRSA, E.Coli and even at deactivating the Influenza (H1N1) virus.



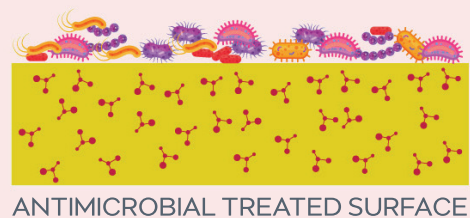
## STEP ONE

Bacteria contaminates surface.



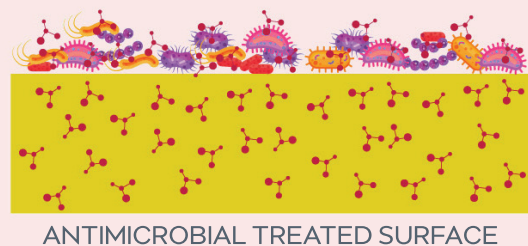
## STEP TWO

Silver ions are available to act against contaminating bacteria.



## STEP THREE

Silver ions act against bacteria. They combine with bacterial proteins in the cell and cell wall, interfere with DNA replication, and promote the formation of reactive oxygen species (see over).



## A FOUR-PRONGED APPROACH

Products protected by antimicrobial technology will negatively affect bacteria that contaminate the surface through:



**Protein damage:** Proteins are essential for the biological systems of life. Any damage to these components causes the failure of essential functions such as energy production.



**Cell membrane damage:** By disrupting the microbes membrane, its structural integrity is compromised, which can cause essential nutrients to leak out and catastrophic structural failure.



**Oxidative damage:** Antimicrobials can cause increased levels of reactive oxygen species, which result in damage to the internal systems of the microbe.

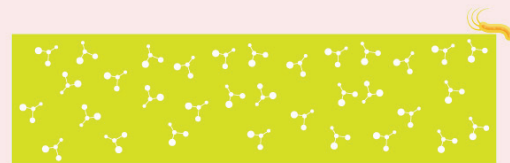


**DNA interference:** The genetic material of the bacteria is disrupted, ultimately stopping the bacteria from being able to replicate by blocking the copying of their genetic material.



### STEP FOUR

Bacteria die; surface is cleaner and more hygienic to use.



ANTIMICROBIAL TREATED SURFACE



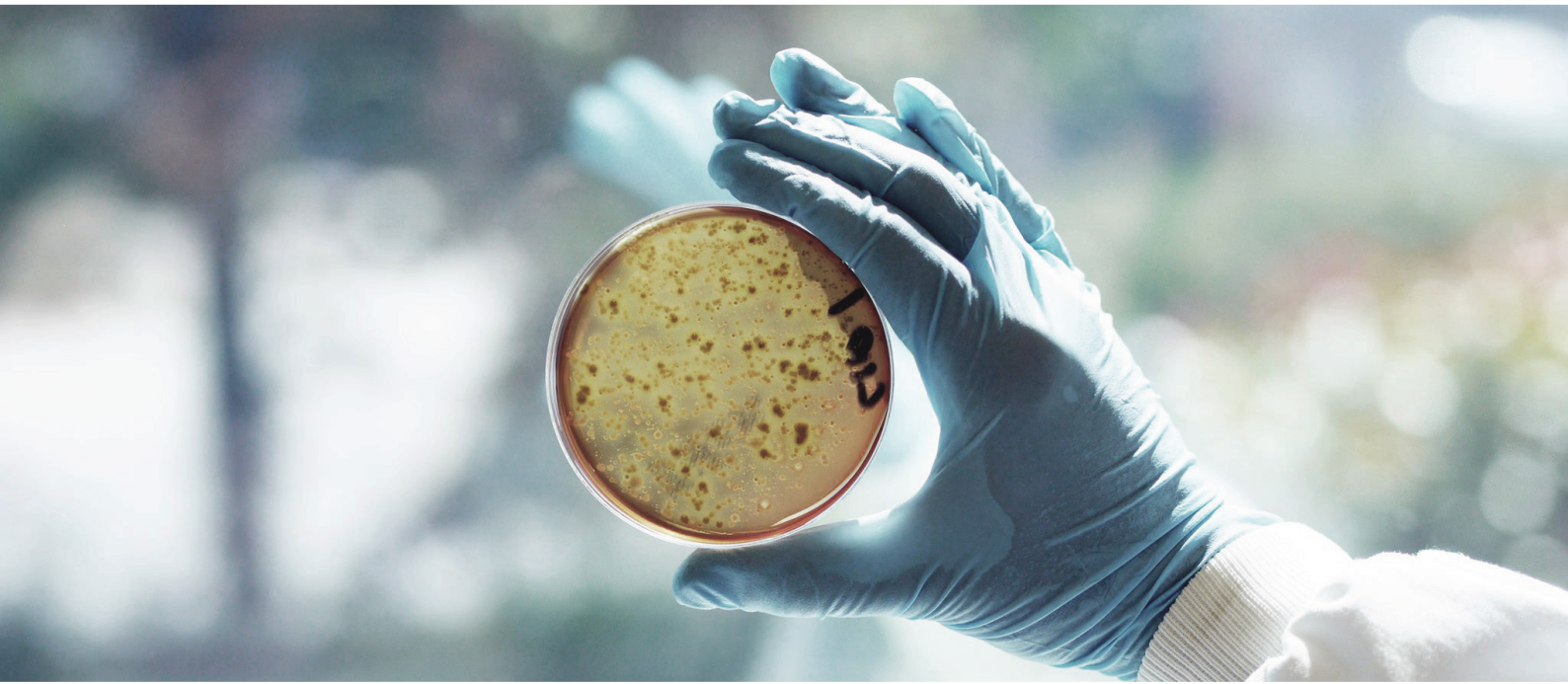
UNTREATED SURFACE



ANTIMICROBIAL  
TREATED SURFACE



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ANTIMICROBIAL WALL  
CLADDING WITH SILVER-ION  
TECHNOLOGY

BIO|ARMIS

ANTIMICROBIAL WALL & DOOR  
PROTECTION WITH SILVER-ION  
TECHNOLOGY

BIO|FLOOR

ANTIMICROBIAL SAFETY  
FLOORING WITH SILVER-ION  
TECHNOLOGY

BIO|POD

ANTIMICROBIAL IPS  
UNITS WITH SILVER-ION  
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