



ALLEGION

PIONEERING SAFETY™

Surface Technologies

Copper- & silver ion-based solutions

Healthy environment solutions

1. Regular and effective cleaning is a baseline solution for any environment. Unfortunately, bacteria can reside on hard surfaces for days, weeks or even months, so cleaning is essential.
2. The ideal solution is touchless access but may not be feasible for all applications.
3. Antimicrobial surface technologies offer a means to help mitigate the spread of bacteria in the time between cleanings.

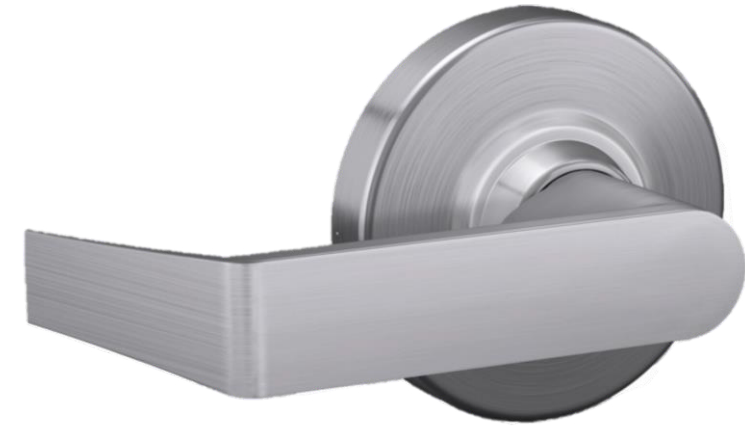


Allegion surface technologies

Now we have two solutions:

1. The 626AM or 630AM antimicrobial finish
 - A silver ion-based solution in the form of a polymer coating
 - Considered a microbistat because it inhibits reproduction or growth of bacteria and fungi it contacts
2. CuVerro Shield™ by Aereus Technologies
 - A new copper-based alloy finish
 - Considered the more effective solution because as a microbicide, it can actually *kill* bacteria¹

1. Laboratory testing shows that, when cleaned regularly, CuVerro surfaces kill greater than 99.9% of the following bacteria within 2 hours of exposure: Methicillin-Resistant Staphylococcus aureus, Staphylococcus aureus, Enterobacter aerogenes, Pseudomonas aeruginosa, E. coli O157:H7 and Vancomycin-Resistant Enterococcus faecalis (VRE). EPA Test Protocol performed by an independent lab for the Copper Development Association, Inc.



Understanding surface technologies

Bacteria is everywhere and though hardware should normally be kept clean and disinfected, in a hospital setting or high-traffic campus setting, recontamination from constant use never ceases.



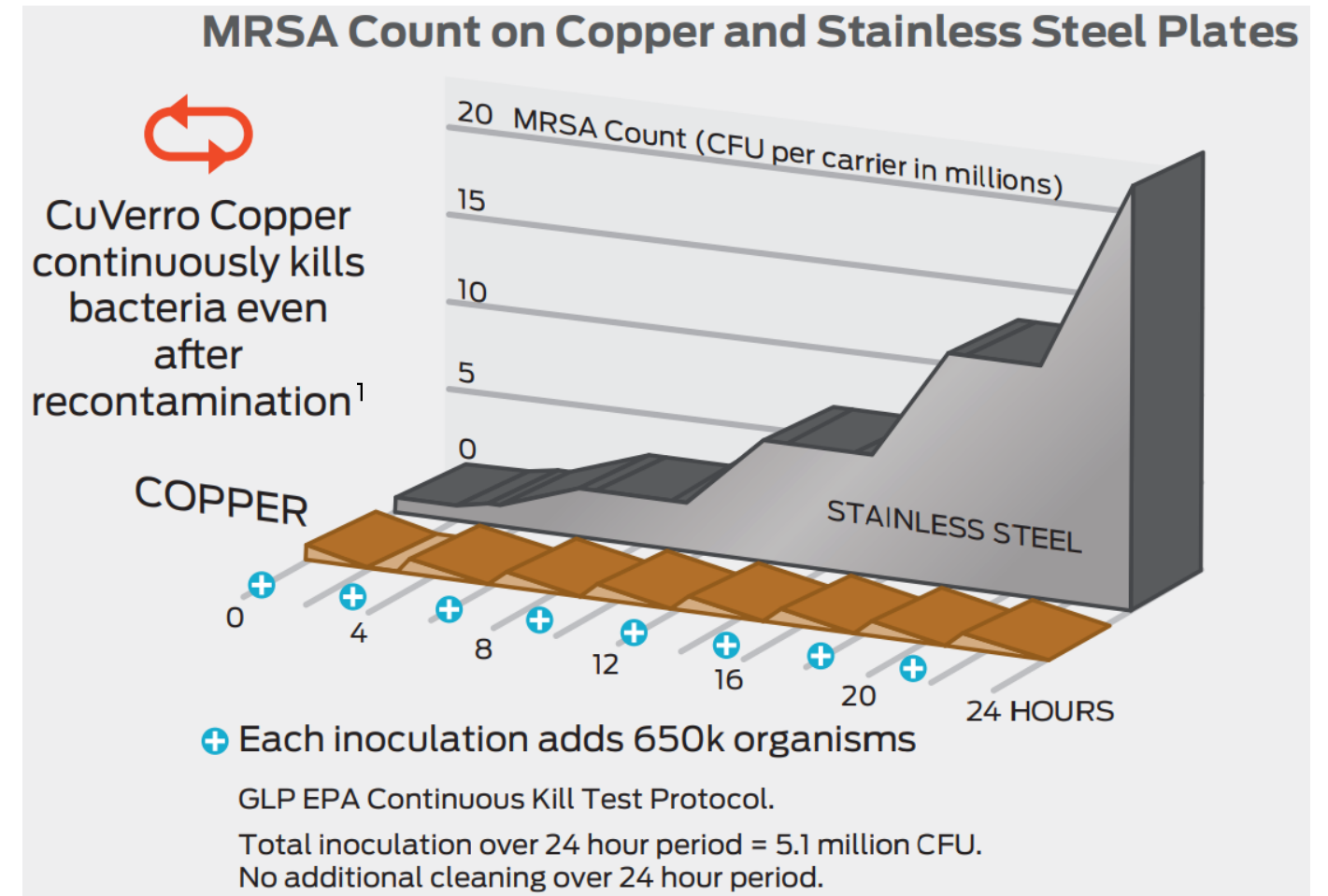
Continuously kills 99.9% of bacteria¹



Does not use harmful chemicals



A solid metal solution



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Understanding surface technologies

There are three things to look for:

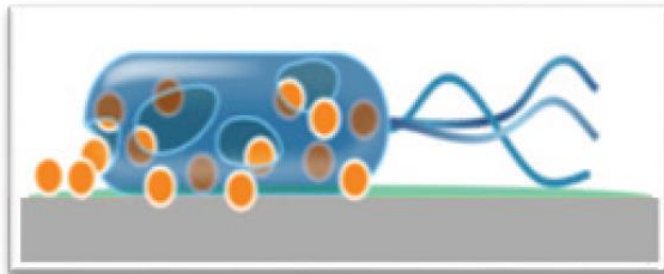
1. Speed and efficacy
2. EPA registered and tested
3. Maintenance ease

	CuVerro Shield 66.5% copper alloy	Allegion silver ion-based coating
Inhibits growth claim for bacteria	Yes	Yes
Kills claim for bacteria	Yes within 2 hrs ¹	No
EPA registered	Yes	No

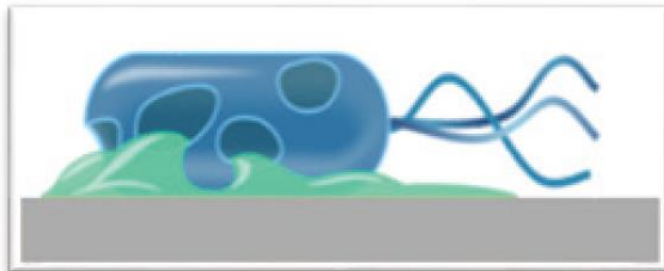
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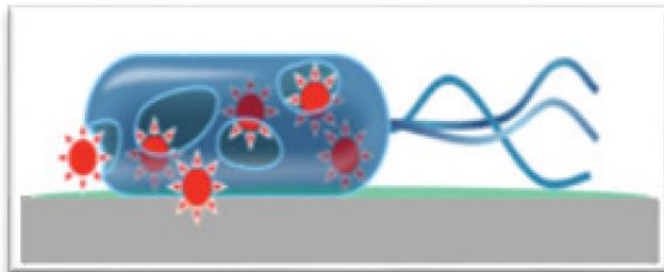
How they work



Copper ions enter bacteria



Membrane integrity is lost



Cell function ceases

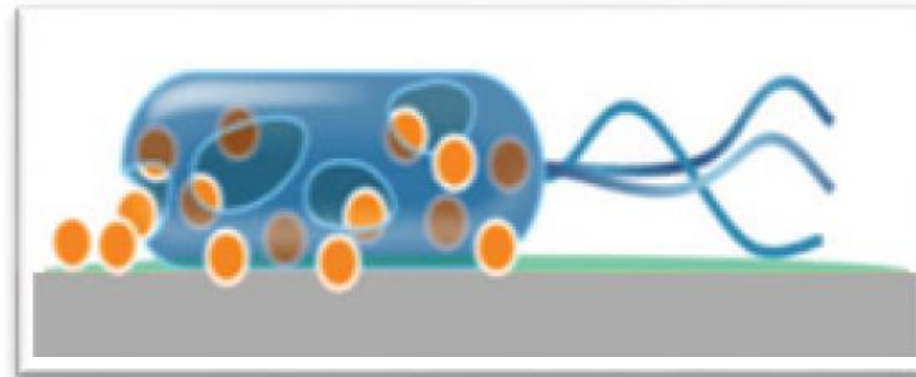
Here's what happens to bacteria on the CuVerro Shield™ by Aereus Technologies surface:

This process is called ionic bonding and is similar to what happens on silver ion-based coating surfaces.

1. Bacterium recognize copper ions in the alloy as an essential nutrient and allow the ions to pass through their membrane.
2. Upon entering, the ions provide a lethal dose that interferes with cell function and membrane integrity.
3. Cell respiration/metabolism is impeded and DNA damage may occur. The bacteria can no longer consume food or reproduce and dies.

Why cleaning still matters

- All surface technologies require direct contact with the microorganisms they are meant to combat
- Dirt and oils can create a surface barrier where bacteria can still live but through which copper or silver ions cannot be effective
- Allegion antimicrobial surfaces are durable and easy-to-clean



Clean



Soiled



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Applications

Where to use surface technologies

	Type of entry	Copper alloy	Silver ion	Ideal
HEALTHCARE	Hospital patient door	■	■	Copper alloy
	Healthcare exam rooms	■		
	Healthcare passage doors		■	Touchless
EDUCATION	Staff rooms with student visitation	■		
	Main entry openings (high traffic)	■	■	Touchless
	Lecture hall doors	■	■	Copper alloy
MULTI-FAMILY	Shared use space doors	■	■	Copper alloy
GOVERNMENT	Public access doors	■ (high traffic)	■ (low traffic)	Touchless
COMMERCIAL REAL ESTATE	Public Restrooms	■		
	Main entry openings	■ (high traffic)	■ (low traffic)	Touchless



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About Allegion™

Allegion (NYSE: ALLE) is a global pioneer in seamless access, with leading brands like CISA®, Interflex®, LCN®, Schlage®, SimonsVoss® and Von Duprin®. Focusing on security around the door and adjacent areas, Allegion secures people and assets with a range of solutions for homes, businesses, schools and institutions. Allegion had 2.9 billion in revenue in 2019 and sells products in almost 130 countries.

For more, visit www.allegion.com.