EPA REGISTERED
PUBLIC HEALTH CLAIMS

U.S. EPA Recognizes the EOS^{CU} Difference.

Shouldn't You?

PREVENTIVE BIOCIDAL™
SURFACES




MADE IN THE USA

EOS^{CU}
cupron enhanced eos surfaces

EOS^{cu} EPA Registered **Public Health Claims**

Testing shows that when cleaned properly, this surface:

- Continuously reduces bacterial* contamination, achieving 99.9% reduction within two hours of exposure.
- Kills greater than 99.9% Gram negative and Gram positive bacteria* **within two hours** of exposure.
- **Kills greater than 99.9% of bacteria*** within two hours of exposure and **continues to kill** 99% of bacteria **even after repeated contamination**
- Inhibits the buildup and growth of bacteria* within two hours of exposure **between cleaning and sanitizing steps**.

*Testing demonstrates effective antibacterial activity against *Staphylococcus aureus*, *Enterobacter aerogenes*, Methicillin-Resistant *Staphylococcus aureus*, *Escherichia coli*, and *Pseudomonas aeruginosa*

The use of EOS^{cu} is a supplement to, and not a substitute for, standard infection control practices; users must continue to follow all current infection control practices, including those practices related to cleaning and disinfection of environmental surfaces. EOS^{cu} has been shown to reduce microbial contamination but it does not necessarily prevent cross contamination. This product must not be waxed, painted, lacquered, varnished, or otherwise coated.

WHAT IS EOS^{CU} PREVENTIVE|BIOCIDAL SURFACE™?

EOS^{CU} (Cupron Enhanced EOS) is the only synthetic, hard surface EPA Registered for Public Health Claims - continuously killing greater than 99.9% of Gram negative and Gram positive bacteria* within two hours of exposure, even after recontamination.

About the current clinical trial:

"We have high confidence that it's going to make a difference; what we don't know is the magnitude of that difference."

- Dr. Gene Burke,
Sentara Healthcare
Executive Medical Director for
Clinical Effectiveness[1]

EOS^{CU} combines EOS Surfaces' innovative surface material with Cupron's proprietary copper technology, offering all the biocidal properties of copper along with the inherent benefits of a surface.[2] EOS^{CU} works around the clock to eliminate bacteria that can make people sick, including multi-drug resistant strains such as MRSA.

EOS^{CU} is manufactured in sheets and is fabricated like a surface. Made in the USA, EOS^{CU} includes countertops and molded products, like patient bed rails, overbed tables, vanities, sinks, and more. All the surfaces actively kill 99.9% of harmful bacteria* without the introduction of new or additional human processes.

The opportunities for application are truly endless and EOS Surfaces will work with any facility or system to identify needs and develop a custom plan to strategically position the material in areas with the greatest potential for contamination.

[1] http://www.healthcaredesignmagazine.com/blogs/anne-dinardo/continuing-fight-against-hais

[2] Cupron is a private company based in Richmond, VA and the inventors of the proprietary cuprous oxide technology which is the biocidal agent infused in EOS^{CU} surfaces.

WHAT IS A

PREVENTIVE|BIOCIDAL SURFACE™?

A Preventive|Biocidal Surface™ is a unique surface that **actively kills bacteria*** within two hours of exposure, even after repeated contamination. It also has a **preventive** quality inherent in its ability to stop and inhibit the growth of harmful bacteria. Unlike other cleaning methods, which are one-time, isolated processes occurring once a day, after a spill, or at patient discharge (terminal cleaning), EOS^{CU} works around the clock, constantly reducing the bioburden of the surface in the patient environment.

Immediately after other processes, recontamination begins and harmful bacteria can accumulate once again on standard surfaces. In contrast, **EOS^{CU} self-sanitizes at least 12 times a day**. While bacteria is living and growing on other surfaces, EOS^{CU} Preventive|Biocidal Surfaces™ are actively killing 99.9% of bacteria* within two hours of exposure, even after recontamination. Imagine what that means from the patients' perspective. The decision to include EOS^{CU} Preventive|Biocidal Surfaces™ among a team's infection control efforts **communicates a commitment to infection prevention as well as patient and employee well-being and health**.

PREVENTIVE BIOCIDAL™
SURFACES

With the rise of hospital acquired infections (HAIs) and antibiotic-resistant microbes, new infection control methods are needed. EOS^{CU} is the first synthetic, hard surface that's EPA registered for public health claims. It kills 99.9% of Gram negative and Gram positive bacteria* within two hours of exposure, even after recontamination. Infused with the biocidal power of copper to kill bacteria, EOS^{CU} is a Preventive|Biocidal Surface™ that protects people by continuously reducing the bioburden.

If You Are Considering An 'Antimicrobial,' **Make Sure You Ask These Two Questions:**

1. Is the product EPA Registered for Public Health Claims?
2. Does the product kill harmful bacteria?

Antimicrobial. Antibacterial. Self-cleaning. Self-sanitizing. Disinfectant. Sterilizer. Sanitizer. Treated Article. Public Health Claim.

There is no doubt that the general marketplace, and especially the medical marketplace, is inundated with promises, claims, and supposed solutions to the problem of infection control. To protect the consumer, claims about public health are carefully regulated. Nonetheless, huge amounts of marketing and advertising dollars are spent to convince the consumer that products "kill," "eradicate," "remove," or "disable" bacteria and other harmful germs, when in fact, they simply cannot make those claims.

Unfortunately, it is up to the consumer to read past the promises and see the data and the proof.

These two questions will help you find the real nature of the product behind the advertising.

EOS^{CU}™
cupron enhanced eos surfaces

EPA Registration No. 84542-7
EPA Establishment No. 89674-VA-001

The Safety Of Copper

Copper is an essential mineral that we have to ingest on a daily basis in order to survive. Humans metabolize copper extremely efficiently and the risk of copper toxicity is exceptionally low, especially due to dermal contact.

EOS^{CU} is a non-leaching technology and Cupron Enhanced EOS Surfaces are non-leaching products. The technology infused in the products is permanent and does not come off or move into its surroundings.

How Copper Works

Since Egyptian times, copper has been known as a microbial killer. While the exact method in use in the biocidal activity at any given time is difficult to distinguish, it is known that copper ions cause a series of damaging effects on bacteria through at least six different "kill mechanisms."

Common methods are that the copper causes leakage of potassium or glutamate through the cells' outer membrane; the copper disturbs the osmotic balance; the copper binds to proteins that do not require copper; and the copper causes oxidative stress by generating hydrogen peroxide. All of these cause the bacteria cells to rupture or erode, killing the bacteria.

Each sheet of Cupron Enhanced EOS^{CU} is infused with Cupron technology on all exposed surfaces. Hence, no matter where the sheet is cut, or what part of the sheet is exposed, the technology is there to continuously sanitize the surface and provide an added layer of protection against infection-causing bacteria. This is not a film or liquid chemical application. The mixture of the Cupron particulate into the EOS surface makes the power and effectiveness of the copper indefinite; it cannot be worn off or become less effective over time.

What Is A Public Health Claim and Why Does It Matter?

An EPA Registered Public Health Claim is the highest standard for making statements regarding a product's impact on harmful bacteria and any implication of beneficial impact on the health of individuals. The ability to make Public Health Claims is difficult to achieve and requires that a product be submitted for rigorous testing to ensure that it is both efficacious and durable.

Central to the testing is the distinction that a manufacturer's end product—not just the antimicrobial used in or on it—is submitted to an EPA approved laboratory. The end product must pass with a zero-fail rate, exhibiting an ability to kill an EPA-assigned range of harmful bacteria within the 2-hour timeframe, while also withstanding a series of comprehensive abrasion techniques without losing any efficacy over time.

After being abraded, an EPA Registered product is repeatedly recontaminated and must continue to exhibit no loss in efficacy in order to be able to make Public Health Claims.

While there are many antimicrobial products in the marketplace, there are only two hard surfaces capable of making these claims. EOS^{CU}'s registration is based on independent laboratory testing using EPA-prescribed protocols that demonstrate the Cupron Enhanced EOS Surfaces' ability to kill specific disease-causing bacteria*, including Methicillin-resistant *Staphylococcus aureus* (MRSA), *Staphylococcus aureus, Enterobacter aerogenes, Pseudomonas aeruginosa* and *Escherichia coli*. EOS Surfaces also performed extensive ASTM testing to support mechanical performance claims.

In order for EOS^{CU} to become EPA Registered for Public Health Claims, thousands of samples underwent extensive third-party testing and retesting in environments determined to simulate the real-world setting. In each and every test, each sample had to achieve a 99.9% reduction in bacteria* in under 2 hours. EOS^{CU} succeeded each time.

WHY EOS^{CU}?

EOS^{CU} joins EOS's durable and trusted surface material with Cupron Inc.'s proprietary copper-oxide technology to harness the superior (and natural) biocidal properties of copper within a polymer structure. Each EOS^{CU} sheet or EOS^{CU} molded product is infused with the technology directly at the time of manufacturing so the technology is dispersed throughout the entire material. This means that anywhere the piece is cut or exposed, the technology is present and the biocidal properties remain, making the power of the copper indefinite.

EOS^{CU} is not a film or topical application and cannot be worn off over time or when exposed to cleaning agents. You may hear about other hard surfaces or products with an "infused" antimicrobial product. What makes EOS^{CU} different – and superior – is that the surface itself, not just the antimicrobial agent, has been rigorously tested to meet strict EPA requirements. The surface itself has been proven to kill 99.9% of harmful bacteria*, even after recontamination. If it is unclear whether or not an end product has been tested against the EPA protocols, remember to ask the two questions. Is the product EPA Registered for Public Health Claims and does the product kill bacteria?

While other cleaning methods, such as bleach and healthcare-grade cleaning solutions are effective at the time of application, they are applied only once a day and during isolated incidents. Once that cleaning process is complete, the surface begins to recontaminate immediately, serving as a host for any bacteria that land on it. Self-sanitizing EOS^{CU}, however, is constantly reducing the bioburden — continuously, 24 hours a day.

Research has shown that up to 40% of HAIs are attributed to cross-contamination from healthcare workers' hands and the environment. Bacteria, such as MRSA, have been shown to survive on inanimate surfaces for as much as 7 months and acinetobacter can survive up to 5 months. E. Coli can survive on surfaces for up to 16 months. With EOS^{CU}, these same bacteria strains live less than 2 hours. **Can we afford not to deploy the added layer of protection provided by EOS^{CU} Preventive|Biocidal Surfaces™?**

Healthcare Associated Infections (HAIs):

- Patients admitted to the hospital have a 5% chance of contracting an HAI
- 1.7 million people per year get an infection during a hospital stay
- Length of stay in the hospital increases by 17.6 days if you get an HAI
- 9.4% of total inpatient costs are HAI-related
- HAIs cost the system $35 billion per year
- HAIs cost the patient $1,100 per year
- 69% of HAI affected people are on Medicare or Medicaid
- 90,000 people in the US die annually from HAIs

SOURCE: Klevens RM, Edwards JR, Richards CL Jr, Horan TC, Gaynes RP, et al. (2007) Estimating health care associated infections and deaths in U.S. hospitals, 2002. Public Health Rep 122: 160-166.

WHY EOS^{CU}?

EOS^{CU} joins EOS's durable and trusted surface material with Cupron Inc.'s proprietary copper-oxide technology to harness the superior (and natural) biocidal properties of copper within a polymer structure. Each EOS^{CU} sheet or EOS^{CU} molded product is infused with the technology directly at the time of manufacturing so the technology is dispersed throughout the entire material. This means that anywhere the piece is cut or exposed, the technology is present and the biocidal properties remain, making the power of the copper indefinite.

EOS^{CU} is not a film or topical application and cannot be worn off over time or when exposed to cleaning agents. You may hear about other hard surfaces or products with an "infused" antimicrobial product. What makes EOS^{CU} different – and superior – is that the surface itself, not just the antimicrobial agent, has been rigorously tested to meet strict EPA requirements. The surface itself has been proven to kill 99.9% of harmful bacteria*, even after recontamination. If it is unclear whether or not an end product has been tested against the EPA protocols, remember to ask the two questions. Is the product EPA Registered for Public Health Claims and does the product kill bacteria?

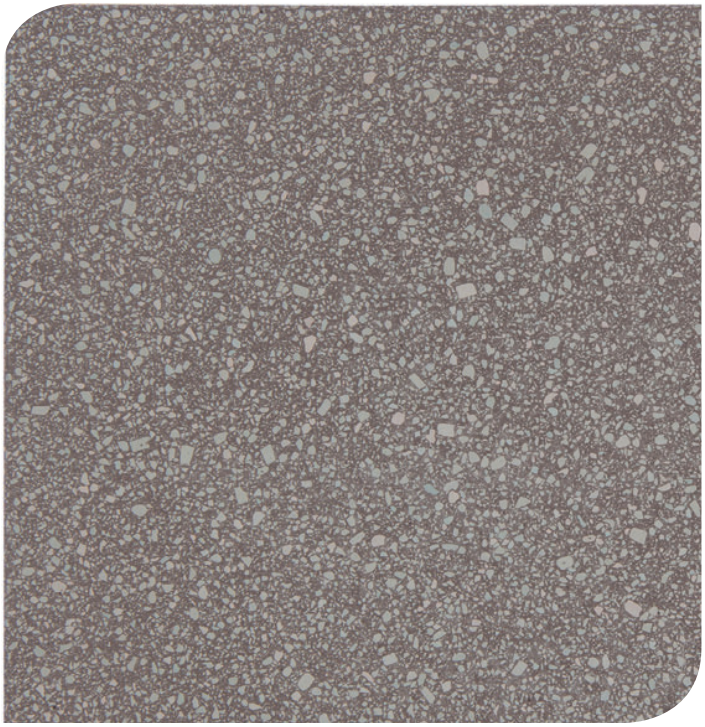
While other cleaning methods, such as bleach and healthcare-grade cleaning solutions are effective at the time of application, they are applied only once a day and during isolated incidents. Once that cleaning process is complete, the surface begins to recontaminate immediately, serving as a host for any bacteria that land on it. Self-sanitizing EOS^{CU}, however, is constantly reducing the bioburden — continuously, 24 hours a day.

Research has shown that up to 40% of HAIs are attributed to cross-contamination from healthcare workers' hands and the environment. Bacteria, such as MRSA, have been shown to survive on inanimate surfaces for as much as 7 months and acinetobacter can survive up to 5 months. E. Coli can survive on surfaces for up to 16 months. With EOS^{CU}, these same bacteria strains live less than 2 hours. **Can we afford not to deploy the added layer of protection provided by EOS^{CU} Preventive|Biocidal Surfaces™?**

Healthcare Associated Infections (HAIs):

- Patients admitted to the hospital have a 5% chance of contracting an HAI
- 1.7 million people per year get an infection during a hospital stay
- Length of stay in the hospital increases by 17.6 days if you get an HAI
- 9.4% of total inpatient costs are HAI-related
- HAIs cost the system $35 billion per year
- HAIs cost the patient $1,100 per year
- 69% of HAI affected people are on Medicare or Medicaid
- 90,000 people in the US die annually from HAIs

SOURCE: Klevens RM, Edwards JR, Richards CL Jr, Horan TC, Gaynes RP, et al. (2007) Estimating health care associated infections and deaths in U.S. hospitals, 2002. Public Health Rep 122: 160-166.



EOS^{CU} **Grey**

EOS^{CU} **Beige**

Actual color shades may vary slightly from above samples and from color lot to color lot.

HOW IS EOS^{CU} SPECIFIED?

EOS Surfaces recognizes the need for proven surfaces that actively and continuously kill infection-causing bacteria* in healthcare facilities and other public buildings where bacteria are present and form and function matter. Architects and designers are challenged to make the environments they design safe, functional, and visually appealing. EOS^{CU} is a surface that marries style and function. It's a unique material that has the advantages of a solid surface—durability, virtually seamless fabrication, and a beautiful aesthetic—with the ability to actively kill harmful bacteria* within two hours.

EOS^{CU} may be specified as:

12 36 61.16 Solid Surfacing Countertops, Cupron Enhanced EOS Surfaces (EOS^{CU}) with 16% Cuprous Oxide with biocidal protection.

(Section number based on the broadly accepted CSI MasterFormat®).

EOS CU
cupron enhanced eos surfaces

EPA Registration No. 84542-7
EPA Establishment No. 89674-VA-001

ABOUT EOS SURFACES

On the forefront of surface technology, EOS Surfaces LLC has developed three innovative products since its inception as a surface manufacturer in 2005. EOS Surfaces created the first non-cement-based recycled glass surface, GEOS, an environmentally friendly surface option comprised of recycled glass and carried by The Home Depot and other national distributors. The company's latest product, EOS^{CU}, is a preventive biocidal surface. The only synthetic hard surface EPA Registered for Public Health Claims, EOS^{CU} actively and continuously kills greater than 99.9% of Gram negative and Gram positive bacteria* within two hours of exposure even after recontamination. The company revolutionized the solid surface industry with EOS, the first 3cm solid surface that received the International Solid Surface Fabricators Association's (ISSFA) 2007 Envision Award honoring the year's most innovative product. For more information, visit www.eos-surfaces.com.

#EOScu #PreventiveBiocidalSurfaces

EOS SURFACES LLC | Toll Free 1.800.719.3671 | www.eoscu.com