



HEALTH & SAFETY UPDATE:

# Antimicrobial Properties of Brass

**Creating Safer Public Spaces Using Brass Railing Systems**

# Did You Know?

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Brass is an antimicrobial copper alloy.

This means that bacteria and viruses interact with the metal, causing them to become inactive at an accelerated rate.





# Brass Properties

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The bactericidal properties of brass have been observed for centuries, particularly in marine environments where it prevents biofouling, the fouling of pipes and underwater surfaces by organisms such as barnacles and algae.

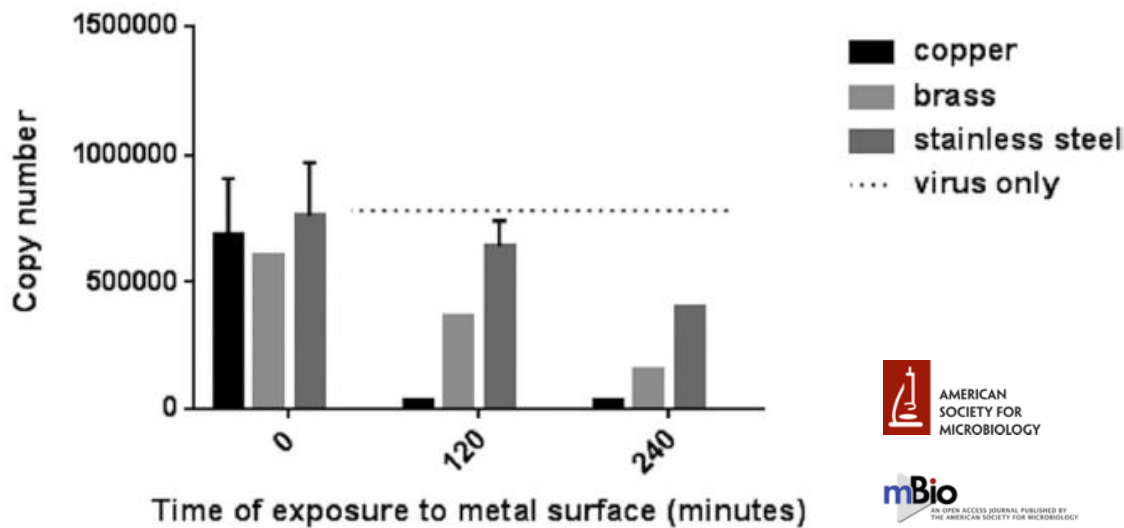
Depending upon the type and concentration of pathogens and the medium they are in, brass kills microorganisms within a few minutes to hours of contact. Certain brass alloys qualify as antimicrobial as confirmed by the Copper Development Association and the U.S. Environmental Protection Agency or EPA.

Brass handrails can help protect crowds in public buildings such as government facilities and hospitals



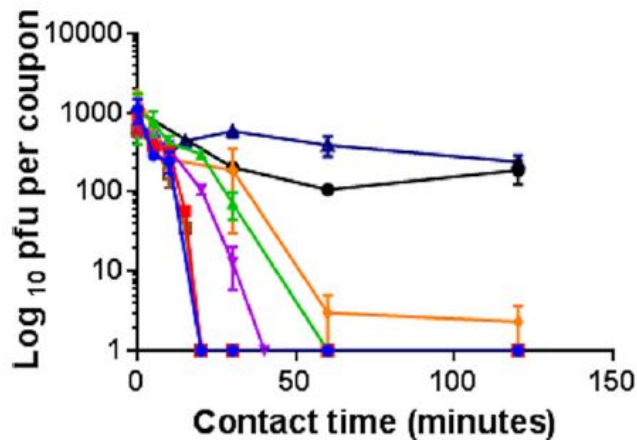
# Brass Railing & Coronavirus

Research studies show that brass can rapidly inactivate Human Coronavirus.



# Brass Railing & Coronavirus

Bacteria and viruses can remain active up to 24 hours on other metal surfaces, but become inactive on copper alloys such as brass in less than an hour.



- C21000 (95% Cu)
- C22000 (90% Cu)
- ▲— C23000 (85% Cu)
- ▼— C26000 (70% Cu)
- ◆— C28000 (60% Cu)
- Z13000 zinc
- C11000 (100% Cu)
- ▲— S30400 stainless steel



Brass handrails and bar railing can help keep patrons safe in public areas such as bars and restaurants.





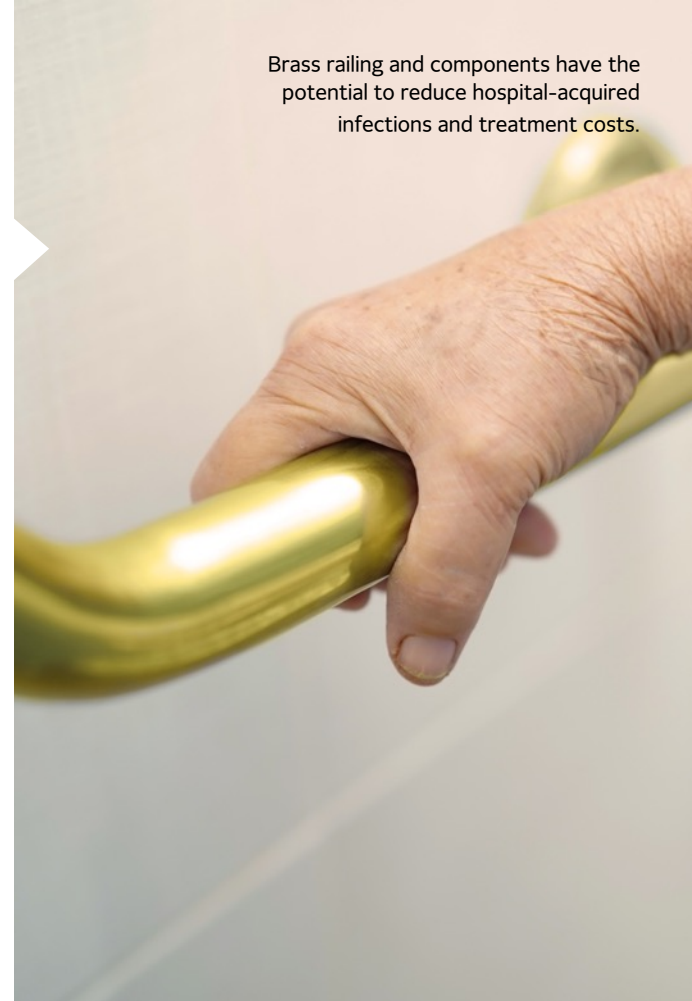
# Brass Railing and the Healthcare Industry



Brass railing and components have the potential to reduce hospital-acquired infections and treatment costs.

In a clinical trial conducted by The Center for Health Design, an **83% reduction** in bacteria was seen on copper alloy components, and infection rates among patients were **reduced by 58%** in patient rooms with components made of copper alloy components, when compared to patient rooms with components made from standard materials.

The placement of copper alloy components in the built environment may have the potential to reduce not only hospital acquired infections but also patient treatment costs.



# Use Cases

- Buffet Tray Slides
- Bar Railing
- Glass Holders
- Door Pulls/Handles

## Industry Applications:

- Healthcare
- Hospitality/Food Service
- Retail
- Commercial/Office
- Residential



# Use Cases

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- Stair Railing
- Freestanding Handrail
- Shortrail

## Industry Applications:

- Healthcare
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# About Us

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Lavi Industries is the leading provider of solid brass architectural fittings, tubing, and railing systems in the Americas. Our vast selection of in-stock, precision-crafted, brass tubing and fittings will help make your projects shine, now and long into the future.

## **Affiliations:**

AIA, NOMMA, NAHB





▶ THANK YOU!

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**NOTE:** Information in this presentation was assembled from documents obtained from The Copper Development Association, the American Society for Microbiology, and the the U.S. Environmental Protection Agency (EPA), and has not been independently verified by Lavi Industries.