
Antimicrobial Copper: A Specifier's Guide

Upgrading, specifying and sourcing approved products

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Antimicrobial
Copper



Patient beds		Door handles		Sinks and basins		Dispensers	
Bed tables		Nurse call buttons		Taps		Toilets	
IV poles		Visitor chairs		Input devices		Trolleys	
Grab rails		Electrical sockets		Waste bins		Light switches	

Introduction

While the antimicrobial properties of copper have been known and appreciated for centuries, it is only recently that the clinical benefits of copper touch surfaces have been evaluated. Although there are more than 200 papers published on laboratory and clinical research, there is a lack of practical information in the public domain to help specifiers understand where and how to deploy copper to improve environmental hygiene in healthcare facilities. This simple guide provides information on which surfaces to prioritise for upgrade, how to recognise efficacious products and where to source these.

What is antimicrobial copper?

Copper is a powerful antimicrobial with proven rapid, broad-spectrum efficacy against pathogens threatening public health, in both hospitals and the wider community, including MRSA and Norovirus. Recent clinical trials around the world have confirmed the benefit of deploying touch surfaces made from antimicrobial copper to reduce microbial contamination (also called 'bioburden') and lower the risk of acquiring infections, improving patient outcomes and saving costs.

More than 450 common copper engineering alloys, such as brass and bronze, benefit from copper's inherent antimicrobial efficacy. Antimicrobial copper is shorthand for these approved alloys and their close equivalents. It is also the brand associated with an industry stewardship scheme which helps suppliers market, and specifiers identify, efficacious alloys and products.

Which touch surfaces to prioritise for upgrade

A number of studies have identified frequent touch surfaces as being contamination hot spots which present a risk to patients, staff and visitors and are therefore targets for upgrade with antimicrobial copper. Based on a review of international research, the United States Center for Disease Control (CDC) has published a checklist of key surfaces based upon the likelihood of touch and contamination. In the many copper clinical trials conducted around the world, multi-disciplinary teams have reviewed the patient, staff and visitor use of different ward environments and prioritised high frequency touch surfaces to upgrade to copper. The factors considered included known hotspots, from microbiological testing, and likely hotspots, from experience and understanding of staff/patient/visitor dynamics.

The list below represents a summary of these surfaces and is the starting point for identifying items to upgrade for any new build or refurbishment project. Input should also be sought from the infection control team and ward staff to ensure that all high risk touch surfaces specific to any particular area are included. The regular environmental swabbing carried out by the infection control team to assess the state of cleanliness will also indicate contamination.

Medical Equipment & Furniture	Fixtures & Fittings	
Bed rails*	Cabinet handles*	Light switches*
Chairs*	Counter tops	Push plates*
Dressings trolleys	Dispensers	Sinks*
Input devices/nurse call buttons*	Door handles*	Switched sockets
IV poles*	Grab rails*	Taps
Over-bed or tray tables*	Hand rails	Toilet seats and flush handles*

* Included in the CDC Environmental Checklist for Monitoring Terminal Cleaning.

Maintaining hand hygiene, cleaning and disinfection

The use of antimicrobial copper alloys does not replace standard infection control procedures and good hygienic practices, rather it is an additional hygiene solution. Antimicrobial copper surfaces must be cleaned and disinfected according to standard practice. Facilities must maintain the product in accordance with infection control guidelines; users must continue to follow all current infection control practices, including those related to cleaning and disinfection of environmental surfaces.

How to specify antimicrobial copper products

Usual product specifications and functional characteristics will apply to copper alloy items but the following should also be noted:

- Antimicrobial copper items are made from solid copper alloy and are not copper plated or painted. This ensures a long life and continued effectiveness.
- Antimicrobial copper items must not be lacquered, plated or painted. Any surface coating, apart from natural oxidation, could make the copper completely ineffective.
- Antimicrobial copper items are available in a range of colours including copper, brass, gold, bronze and silver. Where colour matching across different products is important, this needs to be taken into consideration.
- Antimicrobial copper items will take the usual brushed and polished finishes, depending upon aesthetic requirements or in consideration of the Disability Discrimination Act (DDA). However, chromium plating or paint should never be applied.
- Antimicrobial copper products are marked with Cu⁺ and marketed with the Antimicrobial Copper logo to show that they are supplied by registered companies and made from approved copper alloys with efficacy backed by science.

Where to source approved products

Approved suppliers of antimicrobial copper products and services are listed in the online directory, which can be found at www.antimicrobialcopper.org. Listed companies have been approved under an industry stewardship scheme operated by International Copper Association, Ltd. The Antimicrobial Copper Service Mark (logo) and Certification Mark (Cu⁺) are used by these companies to indicate that their products and services employ approved Antimicrobial Copper alloys. Approved companies adhere to strict usage rules which guide their understanding of the underlying technology and the way they promote, advise and deploy it in line with existing research, regulatory and legislative requirements. Scan the QR code below to access the directory.



Further information

Antimicrobial copper specialists are ready to help prepare a business case, provide assistance to colleagues and source products and services. Visit www.antimicrobialcopper.org to access scientific references, the York Health Economics Consortium business case model, case studies, the Cu⁺ Products and Services directories and to find your local contact. The key publications, shown below, are available to download from the website, free of charge.



- Publication 196: Reducing the Risk of HCAIs - The Role of Copper Touch Surfaces (a summary of the science with key references)
- Publication 201: Antimicrobial Copper FAQs
- Publication 212: Near-patient Antimicrobial Copper Touch Surfaces for Infection Control - The Business Case
- Publication 213: Guidance on Cleaning and Disinfection
- Publication 214: Antimicrobial Copper Alloys: Guidance on Selection (background engineering information)
- Publication 219: Antimicrobial Copper: A Hospital Manager's Guide



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