

CREATE
THE
DIFFERENCE



HOW INNOVATIVE COPPER SURFACE COVERINGS CAN HELP RETAILERS IN THEIR CORONAVIRUS CONTROL EFFORTS

Advanced copper surface technology provides additional protection against viruses and bacteria for retail interiors, says Dr. Ziegler, Head of Research & Development at Alanod.

The coronavirus pandemic has forced all manner of retailers to focus on the basics of infection control, even in environments where this was never previously required. To date, social distancing, more regular cleaning practices and improved hygiene measures, have been the backbone of the industry's virus response in the UK.

This greater focus on infection control measures is likely to be a long-term trend. Mass vaccination programmes for COVID-19 are expected to take some months, even in the UK, and outbreaks of other known and novel infectious diseases remain a focussed threat for the future.

In this environment, owners and managers of all types of retail stores are looking for ways to reduce the risk of disease transmission within their premises. Airborne spread of viruses and bacteria can be reduced with effective ventilation, but retail businesses also need consider the risks of contact transmission,

where infectious agents are picked up from contaminated surfaces such as counter tops, POS areas, light switches or door handles.

Regular cleaning using antimicrobial products is part of the answer, but it is not feasible to sanitise high-footfall spaces such as retail stores after every customer visit. One way to reduce the risk of transmission in these circumstances is through the use of surfaces with built-in antimicrobial properties.



Shiny doesn't always mean safe

In the search for safer surfaces, the obvious choices are not always the best. Many viruses and bacteria have evolved to survive for extended periods outside their hosts. In a suitably benign environment, coronaviruses remain viable for several days, for example.

The challenge for retailers, and for the organisations that furnish and fit out their spaces, is that many commonly used materials provide just such a benign environment. Materials such as stainless steel, varnished wood and plastic are robust, long-lasting and easy to clean, but they are also comfortable places for microbes to lurk.

There are materials, however, that can play an active role in the battle against infection. These properties have been recognised for millennia. Long before the development of modern microbiology, people understood that copper, silver or gold vessels helped to preserve foodstuffs and delay spoiling. Indeed, the first written reference to the beneficial properties of copper were found on an Egyptian papyrus believed to be more than 5,000 years old. Ancient civilisations in India and China also used copper to prevent and treat disease.

Today, the anti-microbial effects of certain metals are well-understood. Experiments have shown that charged particles (ions) rupture the fatty membranes that surround virus particles and bacterial cells, quickly destroying them.

Of the widely used metals, copper has been shown to have the strongest and longest-lasting anti-microbial effect. Tests on 100-year-old copper handrails installed at New York's Grand Central Station showed that they were still killing bacteria and viruses as effectively as new material. Moreover, copper is also less expensive than precious-metal alternatives, a real advantage in applications requiring the protection of larger surfaces.



Copper you can cope with

For all its advantages as a hygienic material, pure copper also has some significant pitfalls. It is still a relatively costly metal, for example. And it is heavy and tricky to work with. Those attributes have been a real barrier to the wider adoption of copper surfaces in interiors.

Today, however, our engineered surfaces specialists have developed a new technology that offers all the antimicrobial properties of pure copper in an accessible, versatile and cost-effective format.



The key to our new MIRO® CU material is advanced manufacturing technology that puts the copper where it matters. MIRO® CU uses Physical Vapor Deposition (PVD) to permanently bond a layer of copper only 200 nanometres thick onto a sheet of anodised aluminium.

That layer of copper provides enough ions for a lifetime of antimicrobial performance, while the 95% recycled aluminium substrate produces a material that is lightweight, environmentally friendly, easy to handle and cost-effective. Moreover, the bright copper surface is visually stunning when new, and will develop a luxurious patina with time and use.

Proven in the lab

In tests conducted at the EuroVir institute in Germany, MIRO® CU was shown to eliminate up to 99.97% of the bacteria and viruses applied to its surface.

And comparative testing of a pure copper surface against stainless steel and plastic has shown that copper eliminates coronaviruses in a maximum of four hours. On the stainless and plastic surfaces, virus was still detectable up to three days after application.

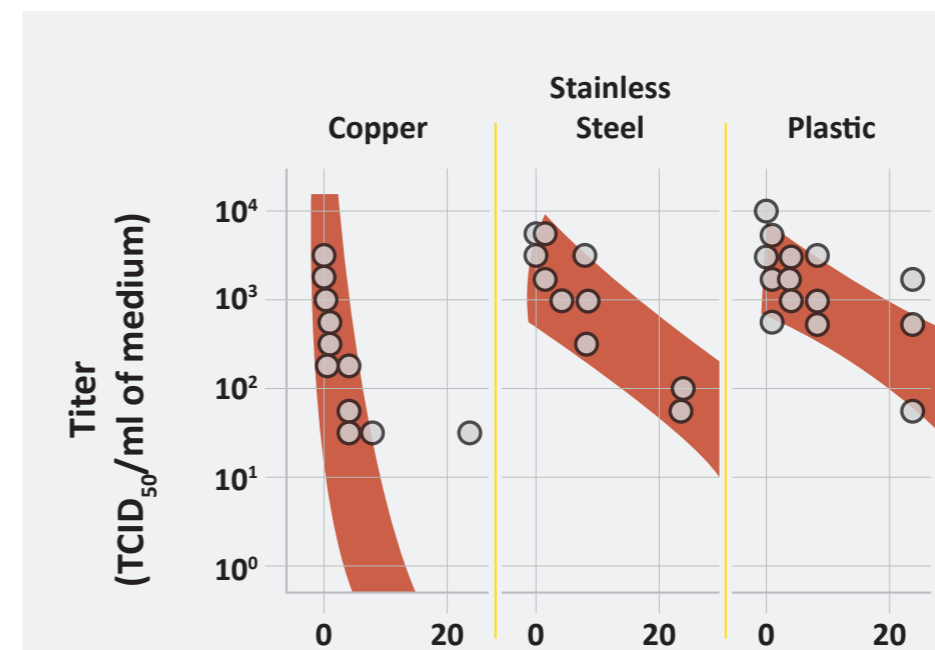
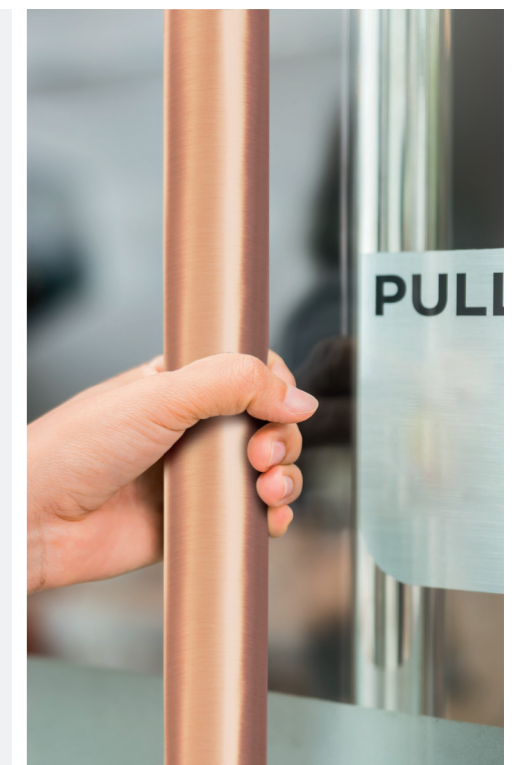


Fig.1 - New England Journal of Medicine study on surface stability of SARS-CoV-2 compared with SARS-CoV-1



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Ready for the workplace

MIRO® CU is available in two versatile formats. A 0.1mm foil with a self-adhesive backing is easy to cut and bend, making it ideal for application to light-switches, door handles and other high touch areas. Alternatively, 0.5mm sheets are suited for the protection of countertops, tables and worksurfaces.

In the quest for safer, more hygienic retail interiors, copper has a track record that remains unrivalled to this day. With MIRO® CU, Alanod has applied advanced technology to create the ideal copper surface for 21st Century applications.

For more information about MIRO® CU solutions or for technical advice, please visit www.alanod.com

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