

International Copper Association, Ltd.

Case studies

Mejiro Day Care Center, Hachioji, Japan

Ronald McDonald House, Charleston SC USA

Subway System, Santiago, Chile

Kindergarten Fights Germs with Copper Touch Surfaces

Challenge

The Mejiro Day Care Center in Hachioji, Japan, wanted a safe, germ-free environment in which their children could play and learn. The director and teachers at the Center take infection control very seriously, installing air purification units, as well as running rigorous hand and oral hygiene programs. However, they were still in search of better measures to protect the children.

Solution

The Mejiro Day Care Center installed a range of touch surfaces, from basins, taps, door push plates and handles to meal-serving benches and carts made from brass, a copper alloy. The use of antimicrobial copper protects young children with low immunity systems from pathogens such as flu viruses.

Results

Through the Japan Copper Development Association, Japan's childcare industry has learned about copper's ability to resist bacteria. Parents and children at the Mejiro Day Care Center have a clearer understanding about infection control, and the role that copper and copper alloys can play in the fight against the spread of germs from person-to-person contact.



Children washing hands in copper basin



Antimicrobial copper door handle

Ronald McDonald House of Charleston Protects Families with Antimicrobial Copper



Ronald McDonald Houses are world-renowned for the good they provide our communities, and the care they offer to families and children in need. The Ronald McDonald House of Charleston, South Carolina has chosen to replace many of their high-touch surfaces with Antimicrobial Copper products to create a safer living and working environment for its guests and staff.

Houses like this provide seriously ill children and their families a second home during the time of the child's treatment and recovery. These amenities are provided at no cost to the families in need. The Charleston facility can host up to 25 families a night, and volunteers are on staff 24 hours a day to aid the families however possible.

The Copper Development Association (CDA) and the Ronald McDonald House of Charleston have been working hand in hand to outfit certain touch surfaces at the Charleston home with Antimicrobial Copper products. These surfaces, made from solid, copper-based metals like brass and bronze, continuously kill harmful bacteria that cause deadly infections. The antimicrobial properties are permanent and inherent to the metals, which are 100% recyclable and completely safe to touch. The effectiveness of Antimicrobial Copper products has also been registered with the U.S. Environmental Protection Agency.

Antimicrobial Copper surfaces supplement good hygienic practices by continuously reducing the amount of available bacteria that can be transferred from surfaces to hands. Harmful pathogens like MRSA and E. coli can survive on stainless steel and plastic surfaces for weeks, still posing a threat to all who interact with these contaminated surfaces. Clinical trials at 3 major U.S. hospitals demonstrated that patients treated in Intensive Care Unit rooms (ICU) with select Antimicrobial Copper surfaces like bedrails and I.V. poles had 40% fewer infections.



Antimicrobial
Copper



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Families residing in the Charleston home have children currently being treated in the neighboring hospital. The majority of those children are being treated in the ICU. Studies have shown that 70% of patients who have stayed in an ICU for over a week contracted an infection. Each year, over 2,000,000 infections are contracted in U.S. hospitals, claiming nearly 100,000 lives. It is also estimated that 80% of infectious diseases are transferred by touch. These figures continue to grow at an alarming rate despite best efforts in hand-washing and surface cleaning.

Frightening statistics like these underline the importance of fighting infection in hospitals and other environments where patients and families are vulnerable. Every precaution should be taken when it comes to the health and safety of a child. By replacing frequently touched surfaces (doorknobs, sinks, faucets, grab rails, cabinet pulls, tabletops, stair railings, chair arms, etc.) with Antimicrobial Copper products, the Ronald McDonald House of Charleston will provide a cleaner and safer living environment for its residents and caregivers.

The Ronald McDonald House of Charleston and the CDA would like to extend a special thank you to the following partners who helped make this project possible by providing products and services: Rocky Mountain Hardware, Colonial Bronze, Elkay, Frigo Design, PMX Industries, Wagner Company, Andy on Call, StairCrafters Inc., Nurture by Steelcase, and the South Carolina Research Authority.

To find out how you can help make your facility safer with Antimicrobial Copper, please contact:

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*For a complete listing of EPA-registered public health claims, please visit AntimicrobialCopper.com. Clinical trial results are preliminary and will be submitted to U.S. EPA for review and approval. Product infection claims are not permitted at this time in the U.S. market.



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Infection Minimized in Subway with Copper Handrails

Challenge

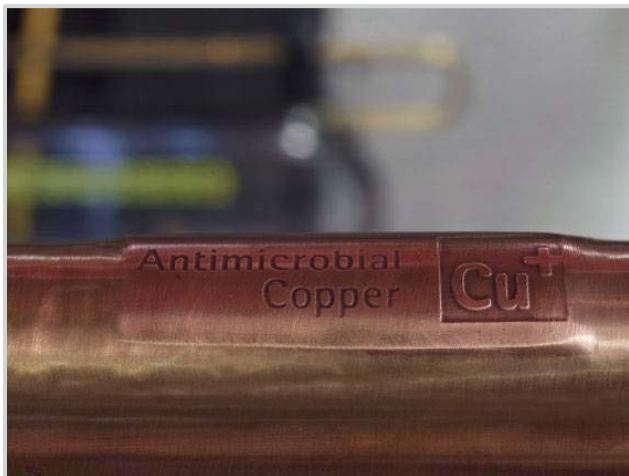
Infectious diseases are spread through person-to-person contact—more frequently through the hands than by any other method. While handwashing is the best line of defense against infection, it can be challenging to manage in public places. When it became apparent that the Santiago transportation system required additional subway stations, the Chilean government searched for designs that were not only aesthetically pleasing but also practical and easy to maneuver for users. Codelco, the Chilean state copper producer, knew that copper presented the best option.

Solution

With construction of the new Santiago Bueras station imminent, Codelco explained the benefits of antimicrobial copper handrails to Metro, the government's subway firm. Antimicrobial copper prevents the growth of bacteria, thereby minimizing the possible spread of infection for the estimated 6,500 daily users of the Santiago Bueras station. Traditionally, nearly 100 percent of all handrails found in public transportation systems are manufactured from stainless steel, which does not prevent the growth of bacteria. Metro decided to change its original plans and go with the copper design from Codelco.



Handrails at Santiago Bueras station



Antimicrobial copper handrail

Results

The new Santiago Bueras station uses 350 m of copper alloy (Cu-Zn) tubes. The expanding Santiago underground transportation service will add 10,000 m of copper-alloy handrails to its new stations, providing an additional level of safety and security to public transportation users. At least 30 stations will be outfitted with copper over the next three years. Additionally, Metro is considering replacing stainless steel in its older trains and stations with copper.