

REDUCING THE INTERACTION OF COVID-19



The current serious global situation, due to the COVID19 pandemic, is significantly affecting the health, social, and political structures of all countries and governments. That is why it is necessary, from a health point of view, to search for solutions to mitigate or reduce the interaction of this virus, or other types of bacteria and microbes, creating safer and more hygienic facilities, infrastructures and spaces.

Cable management systems, among which are the wire mesh trays, joint accessories and support elements, form an important part of the essential infrastructures or facilities in the supply

of energy to hospitals, health centres, operating rooms, intensive care units (ICU) and other buildings related to health, including public places such as schools, universities, and offices.

The ceiling location of the cable tray systems in these buildings means the installation is of vital importance to avoid the depositing of dirt and pathogens, as well as to promote the reduction of the spread of viruses and bacteria that can accumulate in these spaces and descend to the rooms of a health centre or spread through ventilation or A/C systems.

Hygienic sanitary solution – SAFECu

In order to reduce this interaction, Pemsa has developed a specific SAFECu finish based on copper, which is a powerful antimicrobial against pathogenic bacteria. In this way, it reduces the survival of the current SARS-CoV-2 virus and others, as well as pathogenic bacteria, to less than four hours.

Prestigious entities such as the ASM (American Society for Microbiology) or the New England Medicinal Journal of Medicine have published studies analysing the behaviour and survival of the SARS-CoV-2 virus on different material surfaces (see below).

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Copper is the only metal certified as a bactericidal agent registered by the EPA (United States Environmental Protection Agency) as an antimicrobial agent, highlighting its action against bacteria related to potentially fatal infections, among which are the influenza virus A (H1N1) or the SARS-CoV-1 and SARS-CoV-2 coronavirus.

Copper has a proven bactericidal effect on the following bacteria: Staphylococcus aureus, Enterobacter aerogenes, Escherichia coli O157: H7, Pseudomonas aeruginosa, and Methicillin-resistant Staphylococcus aureus (MRSA).

Other scientific studies (Kiwa Water Research, 2007) show that, in facilities made with copper as a material, this metal kills all bacteria at a temperature of 25°C, while other surfaces such as PVC-C and PEX need up to 60°C to eradicate the bacteria.

In addition, the scientific literature confirms that copper has an inhibitory effect against fungi, since it deactivates and prevents its growth, as well as against yeast, bacteria and viruses (polyvirus and rotavirus type).

Advantages

Pemsa's SAFECu copper finish presents the following additional advantages.

- Electrolytic copper plating treatment, which allows the adhesion of a uniform layer of copper with its hygienic, antibacterial, antiviral and antifungal properties, based on the elimination of these microorganisms when they come into contact with copper for a certain time and contrasted in various scientific investigations with analysis in specialised laboratories.
- Total protection throughout the useful life of the product without problems, due to the aging of the copper, taking into account the minimum maintenance defined in these facilities.
- This coating is recommended for interiors and environments classified with corrosivity category C1 and C2, defined in Table C.1 of Annex C of ISO 9223.


- Another benefit of this finish is that copper improves the electrical continuity of the cable tray system by 50% due to the intrinsic properties of this metal.

The application of the Pemsa SAFECu system as a sanitary hygienic solution is essential for:

- ICU units and operating theatres
- Rooms and waiting areas of health centres and hospitals
- New hospital projects, including temporary facilities
- Residences for the elderly and care centres
- Universities, colleges, teaching centres
- Office buildings, shopping centres, theatres, sports facilities, etc.

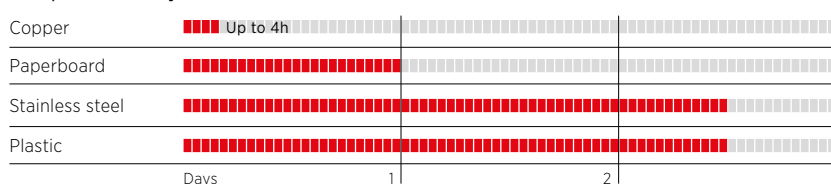
Product features

Pemsa applies its SAFECu finish to a complete product range of cable trays, supports and accessories that additionally have the following characteristics:

- Open structure of rejiband and rejitech mesh trays that favours the ventilation and cleaning of the installation in order to maintain its properties.
- Two metre length – compact size for confined spaces and facility renovations.
- Surface shaped with rounded rods, therefore avoiding edges and reducing contact surface.
- 50% improved electrical continuity, thanks to the copper plate finish.
- Complete product range – wire mesh trays, joints, accessories and supports all with the SAFECu copper finish, guaranteeing the same protection for the entire system. It is important not to mix with other finishes in order to guarantee proper antibacterial and antimicrobial protection.
- SAFECu products are supplied in a closed protective packaging, avoiding any possible contamination.
- All the experience of rejiband and Pemsa in cable management systems. 

Pemsa, pemsa.co.uk

Comparative analysis of the survival of the SARS-CoV-2 virus on different surfaces:



Source: Study of the behaviour and survival of SARS-CoV-2 in different materials, New England Journal of Medicine.