PRESS RELEASE
09.2021

SAN LINE products against bacteria and fungi

Elesa+Ganter **SAN LINE** components are destined for medical and hospital equipment, rehab and disability aids, machines in pharmaceutical sector, urban and public fittings.

It offers two different solutions:

- standard components in technopolymer with silver ion additives and stainless steel inserts, against bacteria and fungi;
- metal standard parts with a powder coating based on zinc molybdate against bacteria.

According to WHO (World Health Organisation), antimicrobial resistance represents, today, one of the greatest threats to public health, due to the epidemiological and economic impact of the phenomenon. It occurs when microorganisms resist to antimicrobial drug activities, thus exposing humans to the risk of contracting infections that are difficult to control and eradicate.

Despite the scrupulous carrying-out of traditional sanitization procedures, especially in public places, hospitals and long-term care facilities, where it is easier to contract infections, 5-30% of microbial contamination can persist on surfaces or objects.

It is therefore important to provide prevention to reduce the risk of contracting these infections in such environments. SAN LINE represents an effective solution.

HOW SILVER IONS Ag+ WORK

1. THEY BREAK THROUGH THE MICROBE CELL WALL
2. THEY INTERRUPT INTRACELLULAR ENZYMES
3. THEY ATTACK THE DNA OF THE MICROBE TO STOP CELL REPLICATION

SAN-Antimicrobial technopolymer components

The special technopolymer with silver ion additives on an inorganic base (without active pharmaceutical ingredients, antibiotics or pesticides) prevents the proliferation of unhealthy organisms such as bacteria and fungi by penetrating the surface of the cells, attacking their DNA.

The controlled release mechanism of the silver ions allows the inalterability of the antimicrobial characteristics prolonged over time, even after numerous washing cycles, to guarantee the antimicrobial characteristic of SAN-Antimicrobial Line.

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Strains used

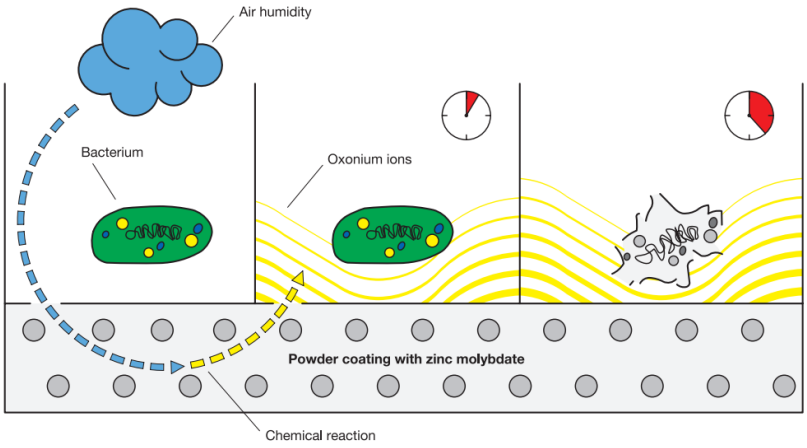
- Staphylococcus Aureus ATCC® 25923™ (antimicrobial activity 99,9%)
- Escherichia Coli ATCC® 25922™ (antimicrobial activity 99,9%)
- Klebsiella Pneumoniae ATCC® 13883™ (antimicrobial activity 99,8%)
- Pseudomonas Aeruginosa ATCC® 27853™ (antimicrobial activity 99,9%)
- Candida Albicans ATCC® 10231™ (antimicrobial activity 98,9%)

Laboratory tests have been conducted on technopolymer components and have shown that 98,9% of bacteria load is eliminated over the course of 24 hours (ISO 22196: 2011).

All components of the technopolymer SAN-Antimicrobial Line are provided with the Statement of Compliance “Antimicrobial Properties of Materials”.

SAN-Antibacterial metal components

Powder coatings with an additive based on zinc molybdate have a powerful antibacterial effect. The coating mimics the natural acidic protective sheath of human skin. Glands in the skin produce acids that lower the pH and form an acidic protective sheath for the body, rendering pathogens on the skin harmless.



With zinc molybdate, this principle can be recreated by technical means: On the surface of the coating, oxide particles chemically react with moisture in the air to form an acid group, lowering the pH.

The resulting oxonium ions (H3O+) destroy the cell walls of the bacteria via protolysis.

This process ensures a constant reduction in microorganisms, preventing their growth and disrupting their ability to establish themselves on the surfaces.

SAN-Antibacterial standard parts have been tested successfully according to ISO 22196:2011-08 “Measurement of antibacterial activity on plastics and other non-porous surfaces.”

The principle of action demonstrably reduces the growth of bacteria within 24 hours so that contaminated surfaces ultimately have less 0.2% of the original number of microbes.

Product technical data sheets, along with drawings and tables with codes and dimensions are available on our website **elesa-ganter.com**.

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