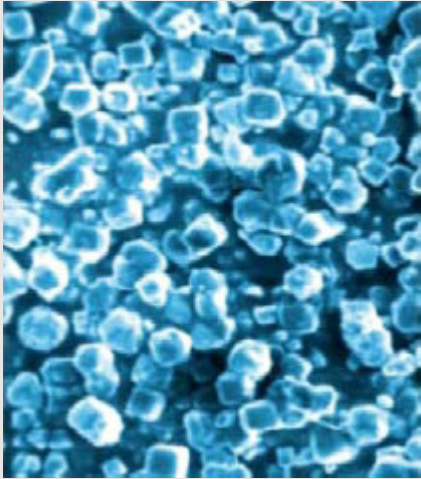
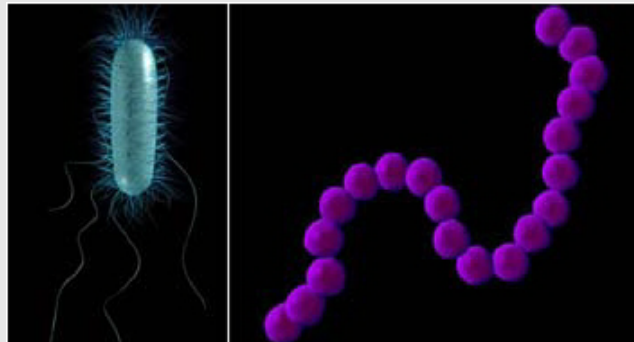


Antibacterial coating for particle filter boxes



Active substance combination



Microscopic photograph of:
Escherichia coli (left) & Staphylococcus aureus (right)

Particle Filter Box Models FK-FD / FK-FF / FKU / FKU-W

Antibacterial coating - For permanent protection against infestation with bacteria

The antibacterial coating of particle filter boxes and air diffusers is an additional possibility of killing bacteria without any additional treatment of the surface. These bacteria-free surfaces are required in particular in hospitals and chemical laboratories.

A special active substance combination (see Figure 1) containing nano-scale silver prevents bacteria from settling on the surface and kills them.

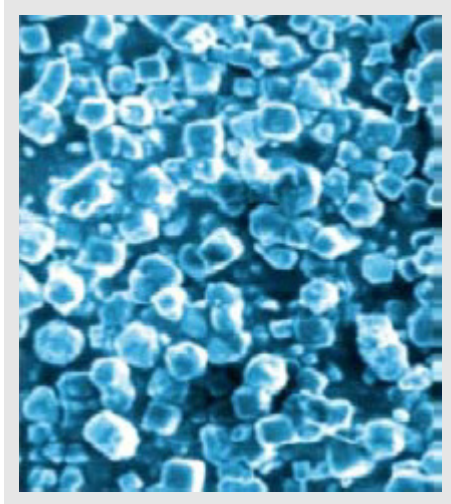


Figure 1: Active substance combination

The antimicrobial action of silver has been known for many centuries. A logical consequence is to make use of these special characteristics also for powdered surfaces and achieve long-term antimicrobial protection.

This is based on three mechanisms of action which

- block cellular metabolism
- stop cellular respiration
- prevent cell division

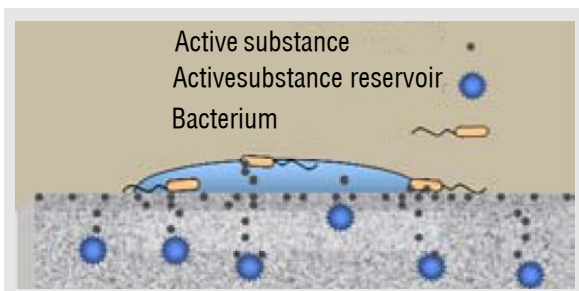


Figure 2: Diffusion and the effect of the nano-scale antimicrobial combination

These mechanisms prevent the growth of undesired microorganisms on surfaces and kill them off. The active substance combination containing nano-scale silver in connection with (air) moisture migrates to the surface of the coating until a defined surface coating has been formed (equilibrium concentration). As a result of this triple effect, the existing bacteria undergo a continuous degradation process, leaving behind a "clean" antimicrobial surface. The nano-scale active substance combination has been incorporated homogeneously in the entire powder coating and is available in excess. As the concentration decreases on the surface, the active substance is continuously replenished. This leads to the high long-term effect.

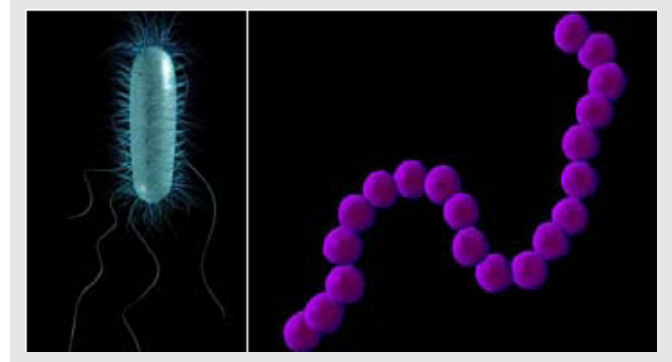


Figure 3: Microscopic photograph of Escherichia coli NBRC 3972 (left) and Staphylococcus aureus NBRC 12732 (right)

These germs are opportunistic pathogens, which may cause infections in human beings.

Chemical resistance:

The antibacterial coating shows good resistance to many dilute acids and bases. Organic solvents have only a limited effect and act only over a short period of time.

Resistance to chemicals should be examined on a case by case basis.

Notes:

Although our surface coating is done to the best of our knowledge, it can only be regarded as non-binding information that does not exempt you from carrying out your own tests. The range of application of the coated parts is beyond our control and therefore exclusively your own responsibility.

Particle Filter Box Models FK-FD / FK-FF / FKU / FKU-W

Advantages of the product

- permanently effective against many bacteria, algae and viruses
- long-term protection through continuously replenished active substance combination
- no toxic effect
- environmentally friendly
- no indication of resistances, no side effects
- easy processing, uniform distribution
- no change in mechanical properties
- chemically resistant
- optically neutral

Safety:

The high efficiency of the antibacterial coating has been impressively confirmed in external studies. Many germs have been proven to become reduced by up to 100% within 24h. Despite its high effectiveness, it is completely safe for humans and animals. This has been thoroughly examined in elaborate tests.