

## Antimicrobial surfaces with VESTOSINT® *Protect*

VESTOSINT® *Protect* is a thermoplastic polyamide (PA) 12 coating powder that can be used to create highly durable, antimicrobial surfaces. This coating features a vast spectrum of properties that act against a variety of microorganisms (e.g., bacteria and fungi). VESTOSINT® *Protect* inhibits or checks the growth of these microorganisms and kills germs, including the much-feared multiresistant strains of *Staphylococcus aureus* (MRSA), for example.

### Antimicrobial surfaces

Antimicrobial surfaces are an excellent way to reduce the general risk of infection by germs that other surfaces pose. Antimicrobial surfaces can better protect high-risk groups, especially children and older people, from infection.

The general risk of infection from germ-laden surfaces, however, is just part of the story. In recent years, scientists have been discovering more and more strains of bacteria that are resistant to multiple antibiotics simultaneously (multiresistant bacteria). It is becoming increasingly difficult to combat these bacteria with ordinary antibiotics, and they now present a serious medical problem. This is why measures are concentrating more on effectively preventing infection by improving hygienic conditions.

Antimicrobial surfaces are an important part of this approach because they effectively reduce the risk of infection by germs that other surfaces pose. They are currently being used in many living and occupational environments:



- hospitals and doctor's offices
- swimming pools and sports facilities
- restaurants, kitchens, bakeries
- sanitary equipment and furnishings

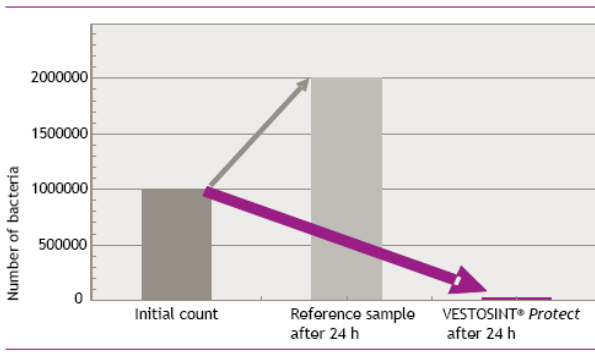
In addition, common household articles are increasingly being made with antimicrobial surfaces.

### Properties of VESTOSINT® *Protect*

With VESTOSINT® *Protect*, antimicrobial surfaces can be produced on which a microbial reduction of 99.99% (see chart) can be achieved. This effectively combats bacterial growth and the formation of biofilms.

VESTOSINT® *Protect* reduces bacteria by  
99,99 %

### Test for *Staphylococcus aureus* (DSM 799) at 35 °C



Antimicrobial activity was measured in accordance with the Japanese standard method JIS Z 2801: A nutrient medium with one million bacteria was applied to the sample. After 24 hours at 35°C, the number of dead bacteria and thus the reduction compared to the reference sample is determined. For a potent bactericidal effect, 99.9 percent of all bacteria need to be killed.

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In addition to antimicrobial properties, VESTOSINT® *Protect* coatings offer

- excellent resistance to wear
- high impact strength
- high mechanical stability, elasticity, and surface hardness
- low water absorption
- high chemical resistance, also resistant in warm water and water containing detergents
- low heat conductivity
- good electrical isolation and dielectric strength

VESTOSINT® *Protect* is

- safe in accordance with food safety regulations
- easy to clean

VESTOSINT® *Protect* retains these properties even at extreme freezing temperatures. It offers excellent protection—including anti-corrosion protection—for the surfaces of many applications.

### Processing with the fluidized bed sinter coating process

Metal objects are most cost-effectively coated with VESTOSINT® *Protect* using fluidized bed coating technology. The heated objects are submerged in the fluidized powder and VESTOSINT® *Protect* sinters to form a homogeneous, resistant, antimicrobial coating.



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