

Interpon.
powder coatings
EVERY COLOR IS GREEN

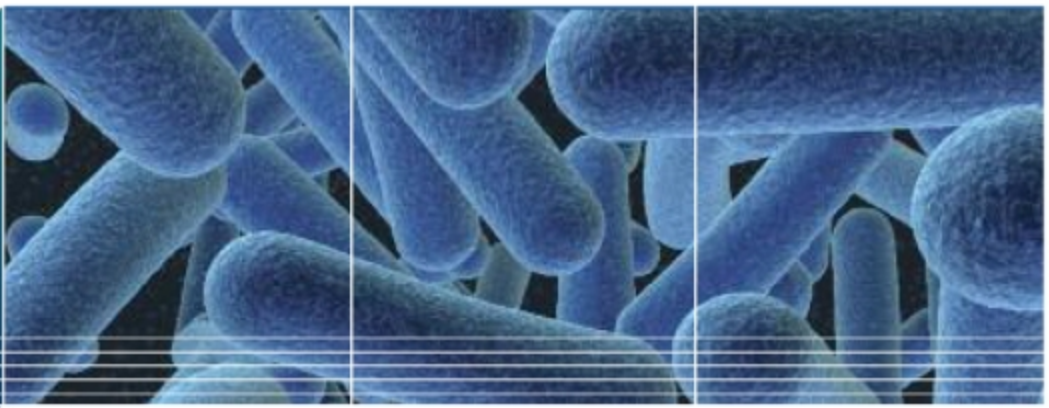


Interpon AM
Antimicrobial Powder Coatings with BioCote® Technology



in association with



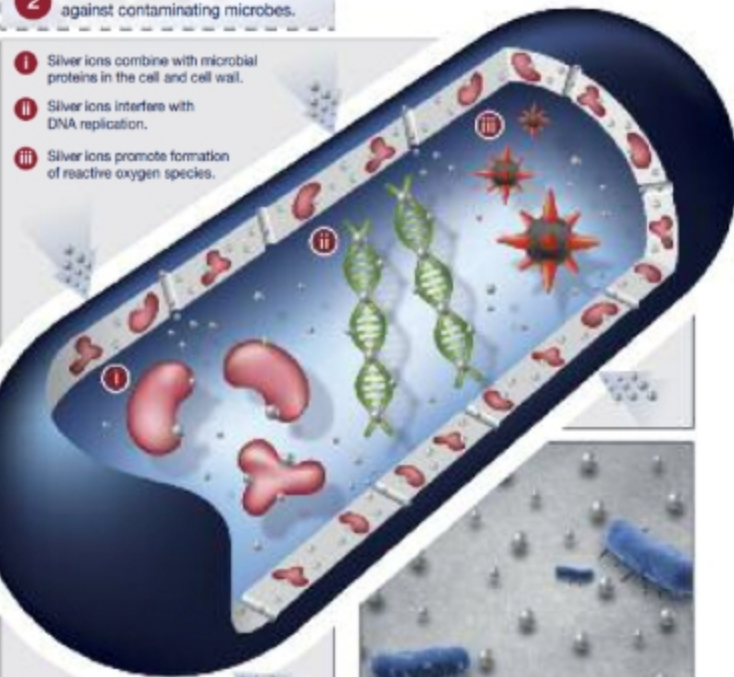


1 Microbes contaminate surface of antimicrobial protected door handle.



2 Silver ions are available to act against contaminating microbes.

- i** Silver ions combine with microbial proteins in the cell and cell wall.
- ii** Silver ions interfere with DNA replication.
- iii** Silver ions promote formation of reactive oxygen species.



3 Silver ions act against microbes in three ways (see above).

4 Microbes die, door handle is protected from microbial deterioration.

The power of silver combats bacteria

For many centuries silver has been used to preserve and protect. In fact, Hippocrates, the "father of medicine", wrote that silver had beneficial healing and anti-disease properties. Its properties were also used by the Phoenicians who used to store water, wine, and vinegar in silver bottles to prevent spoiling. More recently, in the early 1900s, people would put silver dollars in milk bottles to prolong the milk's freshness.

Prior to the introduction of antibiotics, silver was used in hospitals to control bacterial contamination and today silver is widely used in tropical gels and impregnated into bandages because of its broad-spectrum antimicrobial activity.

And here's the science

Silver ions are the active form of elemental silver. Silver ions are known to bind to key proteins in micro-organisms. The effect of silver ions in the proteins is to inhibit the proteins working correctly leading to:

- Loss of correct functioning of protein's essential for the health of bacteria/microbes
- Promotion of the formation of harmful reactive oxygen species
- Inhibition of DNA replication

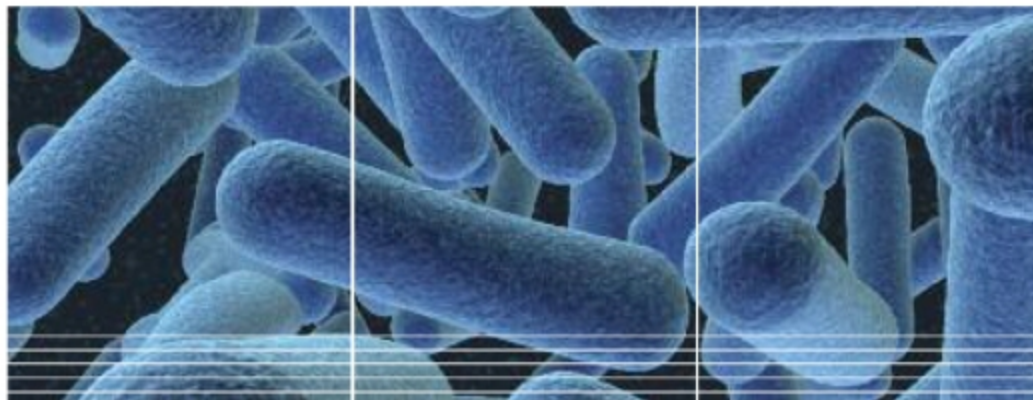
These effects caused by silver ions deprive the microbes of necessary compounds to respire and reproduce.

Microbes in our environment

Modern day living presents ideal environments for a wide variety of microbes to successfully establish colonies and grow on almost every surface we touch eg furniture, equipment, stationery, clothing and work surfaces can all be affected by microbial growth.

The growth of microbes such as bacteria and mould can affect the functioning of a product, leading to degradation, odors, stains and spoilage.

Cleaning will help prevent microbial growth on products, however, between cleaning cycles microbes will multiply on surfaces. Silver ion antimicrobial protection works in between cleans to offer products a further defence against microbial growth.



Safer, cleaner and more hygienic

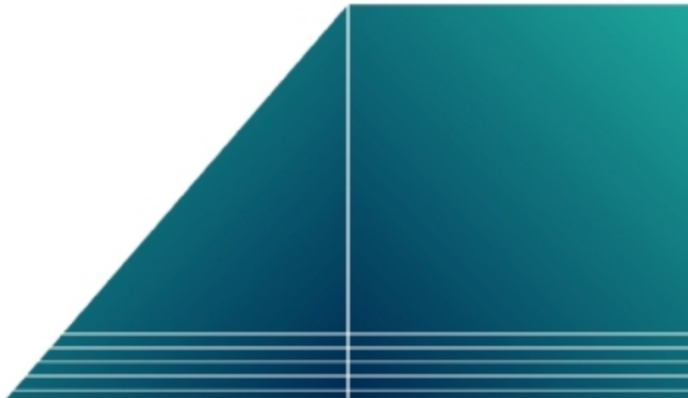
Silver ions show a toxic effect on some bacteria, viruses and mould. However, recent advances in technology allow silver ion technology to be incorporated into everyday products at the manufacturing stage. These products can then inhibit the growth of microbes, such as bacteria and mould on their surface. One such silver ion antimicrobial protection is called **BioCote®** and has been incorporated into AkzoNobel's coating powders to create the **Interpon AM** range.

Interpon AM silver ion antimicrobial protection is effective against a broad spectrum of microbes. It lasts for the useful lifetime of the product and microbial growth is continually reduced on its surface, helping prevent odors, stains and product deterioration 24 hours a day. It supports effective cleaning regimes providing an additional level of protection against microbial growth.

Proven antimicrobial qualities

Interpon AM has been independently tested against a range of microbes and has been found to be effective against them. **Interpon AM** can provide an effective secondary support to existing cleaning regimes in the fight against contamination.





Practical applications

Interpon AM is a product range which can be adapted for use in a wide range of applications. In addition to the antimicrobial properties it will meet the protective and decorative characteristics expected of a high performance powder coating. It is designed to be used in areas where there is an obvious need to maintain a low level of microbes eg medical, food & catering. However, it is also effective in areas where there is high human traffic eg locker/changing rooms, public transport, airports, schools



Typical Applications for **Interpon AM**

Medical/Dental

- Medical and Dental Equipment
- Beds and furniture
- Laboratory areas
- Walls and Ceilings
- Radiators

Food and Catering

- Food preparation areas
- Appliances

Self Service Technologies

- Bank ATMs
- Ticketing Machines

Computing/Telecommunications

- Telephones
- Computers

Leisure

- Sports Centres
- Factory Changing areas
- Hand driers
- Taps and Shower fittings
- Door Handles

Public Transport

- Train seats
- Handrails
- Internal Panels



Quality controlled BioCote® technology

BioCote® protected products are being used by millions of people every day incorporated into plastics, paper and textiles or applied to product surfaces in paints, powder coatings or lacquers. When you see **BioCote®** you can rest assured that the protected product will:

- Achieve a minimum of 95% reduction in microbes.
- Support cleaning regimes and provide an additional level of protection against microbial growth on their surface.
- Help prevent odors, stains, and deterioration.
- Be regularly validated and independently quality control tested to ISO 22196:2007.
- Continue to provide protection for the life of the product and the silver ion technology won't wear off, wash out or leach from product.
- Provide a safe, natural alternative to synthetic, organic antimicrobials.

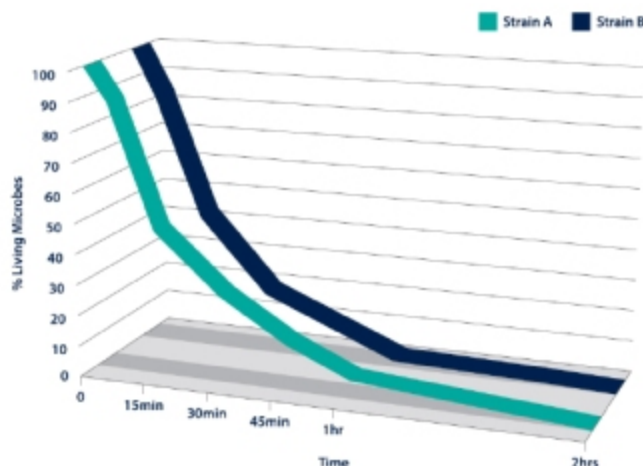
You can also be confident in the fact that **BioCote®** protected products have been shown in real life situations to have similar efficacy levels as they have in a lab environment.

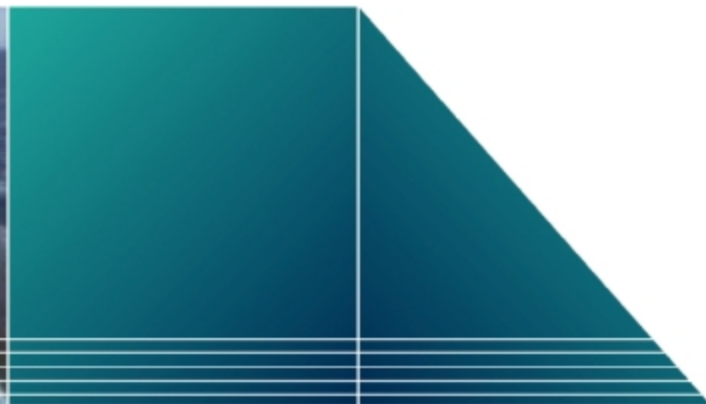
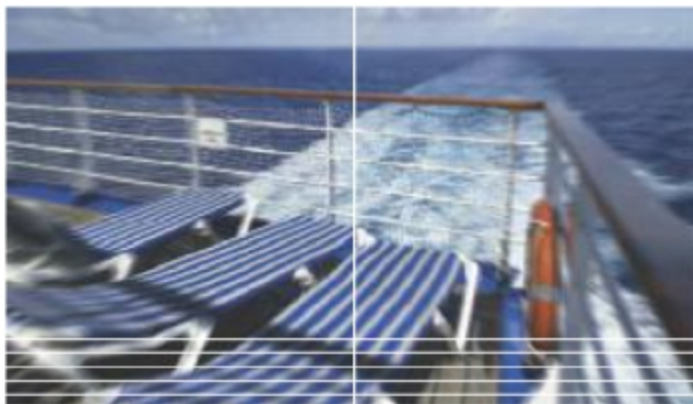
The **BioCote®** brand is therefore a standardized mark for quality, giving you the reassurance of continuing antimicrobial efficacy for a proven leading technology.



Real environmental studies

BioCote® is the only antimicrobial company to carry out a number of environmental studies which prove **BioCote®** is as effective in situ as in laboratory testing. Trials in, a hospital, care home and a food production plant showed **BioCote®** protected products harbored 95% fewer microbes than standard products in real life environments.





AkzoNobel and BioCote® working together

The global legislation related to the use of products treated with AntiMicrobial agents is very complex and allowable marketing claims about product performance in this area vary greatly from country to country. Fines for not adhering to local rules and regulations can be very severe. In order to provide our customers with the best possible support in this area AkzoNobel have teamed up with **BioCote®** to provide a full support package.



When you buy an **Interpon AM** powder coating you also get the benefits of a personal antimicrobial support service provided for you by **BioCote®**.

BioCote® support service includes

- Validation and Quality control testing
- Certification of antimicrobial performance
- Regulatory support
- Preparation of marketing literature
- Access to BioCote's team of Microbiologists
- International product registration

Interpon AM in association with BioCote®

AkzoNobel Develop Interpon AM product to customers' specification

BioCote® confirm efficacy for Interpon AM Product

- Validation testing
- Certification >95%

BioCote® complete support agreement with customer for the supply of Akzo Nobel's Interpon AM

Marketing Support

- BioCote® Branding
- Product launch

Regulatory

- Claims guidelines
- Product registration support

Technical support

- Access to our silver antimicrobial specialists and material support



AkzoNobel Powder Coatings

As part of the world's largest coatings company, we have over 25 manufacturing plants worldwide and sales operations in more than 50 countries. Drawing on over 30 years' experience, and as world leader in powder coatings, we are committed to the highest possible standards of quality in all aspects of our business and are uniquely placed to meet the needs of our customers locally and globally. What is more the environmental benefits of powder coatings are far reaching. With Interpon Powder Coatings – Every Color is Green.

Visit us online at:

www.interpon.com

www.akonobel.com/powder

for more information on silver ion technology visit:

www.biocote.com

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Proven Antimicrobial Protection