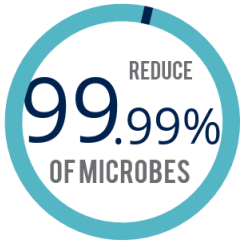
Interpon AM

Antimicrobial Powder Coatings

Europe / Asia

November 2020

What is Interpon AM?



Interpon AM **reduces the presence of microbes** on a protected product by **up to 99.99%**

86% **in 15 minutes** and
99.5% **in just 2 hours.**

Interpon AM is a high-quality powder coating designed to meet decorative and functional demands of your specifications.

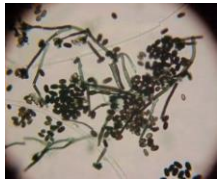
Additionally Interpon AM uses BioCote® antimicrobial technology to reduce the number of microbes such as bacteria and mold.

Test results have proven reduction of bacteria and mold up to 99.9%

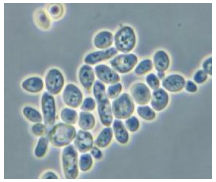
It is designed to be used in areas where there is an obvious need to maintain a low level of microbes eg medical, food and catering. However, it is also effective in areas where there is high human traffic, eg. locker/changing rooms, public transport, airports, schools.

Micro organisms

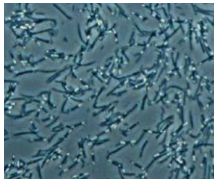
- Living organisms
- Not visible with the naked eye
- Visible under a microscope
- Grow exponentially in favorable media
- Some can be beneficial (i.e. yeasts used in beer, bacteria helping digestion)
- Some can be detrimental to your health
- Food poisoning
- Hospital acquired diseases (i.e. MRSA)



Molds



Yeasts



Bacteria

Interpon AM
The power of silver combating microbes

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.

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Mode of action

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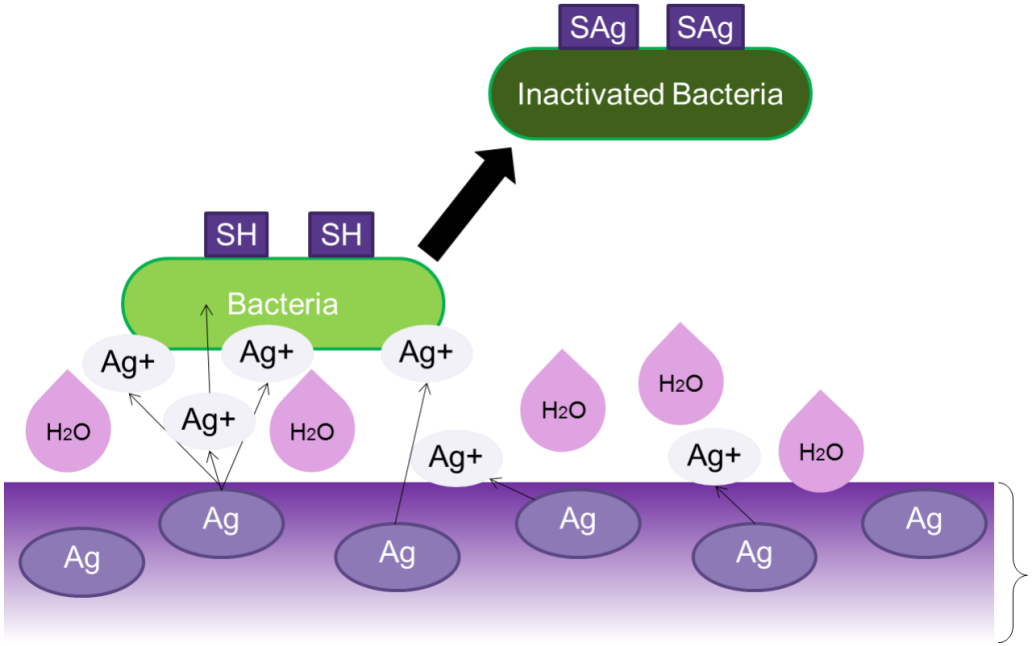


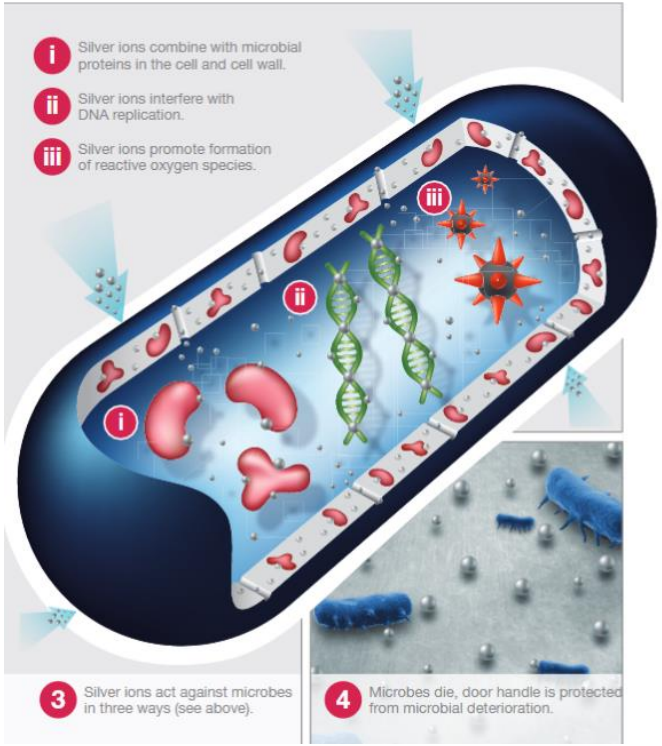
Reacts with nucleophilic groups in proteins

Penetrates through the cell membrane

Release of silver ions with moisture

Coatings film

Interpon AM
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 mold 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. Biocote® antimicrobial protection works in between cleans to offer products a further defense against microbial growth.

Interpon AM
Suits a wide range of applications

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Medical / Dental
- Laboratory areas
- Walls and ceilings
- Radiators
- Hospital beds
- Medical equipment (X-ray machines)

Food and Catering
- Food preparation areas
- Appliances

Self Service Technologies
- Bank ATMs
- Ticketing machines

Telecommunications
- Computing
- Telephones
- Computers

Locker Rooms / Toilets
- Sports Centers
- Factory changing areas
- Hand driers
- Taps and shower fittings
- Door handles

Public Transport
- Hand Rails
- Doors handles
- Seating

Construction parts
- Ceiling tiles
- Windows frames and facade
- Metal office partitions
- Railings
- Metal doors and elevators doors

AkzoNobel and BioCote® working together

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BioCote®

Proven Antimicrobial Protection

- In order to provide our customers with the best possible coating, we have teamed up with BioCote® to ensure that our Interpon AM product performs to the very highest antimicrobial standards and complies with biocidal legislation around the world*.
- When you buy Interpon AM powder coatings you can also benefit from a personal antimicrobial support service by contacting our partner BioCote®.

*Legislation related to the use of products treated with biocidal agents is very complex and allowable marketing claims about product performance vary greatly from country to country - fines for not adhering to local rules and regulations can be very severe.

BioCote® support to AkzoNobel and potentially its customers

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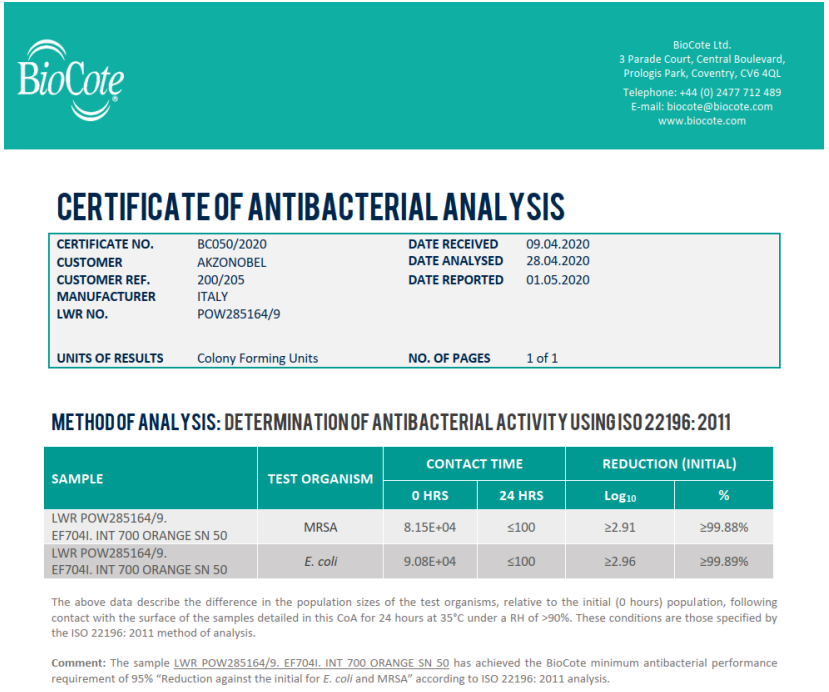
BioCote® support service includes

- Validation and ongoing antimicrobial performance quality
- International product registration support
- Use of the BioCote® brand - a sign of antimicrobial quality
- Control testing
- Global regulatory support
- Preparation of marketing literature and product launch sales support
- Access to BioCote's team of microbiologists

Interpon AM – Efficacy testing



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CERTIFICATE OF ANTIBACTERIAL ANALYSIS

CERTIFICATE NO.	BC050/2020	**DATE RECEIVED**	09.04.2020
CUSTOMER	AKZONOBEL	**DATE ANALYSED**	28.04.2020
CUSTOMER REF.	200/205	**DATE REPORTED**	01.05.2020
MANUFACTURER	ITALY		
LWR NO.	POW285164/9		
UNITS OF RESULTS	Colony Forming Units	**NO. OF PAGES**	1 of 1

METHOD OF ANALYSIS: DETERMINATION OF ANTIBACTERIAL ACTIVITY USING ISO 22196: 2011

SAMPLE	TEST ORGANISM	CONTACT TIME		REDUCTION (INITIAL)	
		0 HRS	24 HRS	Log_{10}	%
LWR POW285164/9. EF704I. INT 700 ORANGE SN 50	MRSA	8.15E+04	≤100	≥2.91	≥99.88%
LWR POW285164/9. EF704I. INT 700 ORANGE SN 50	*E. coli*	9.08E+04	≤100	≥2.96	≥99.89%

The above data describe the difference in the population sizes of the test organisms, relative to the initial (0 hours) population, following contact with the surface of the samples detailed in this CoA for 24 hours at 35°C under a RH of >90%. These conditions are those specified by the ISO 22196: 2011 method of analysis.

Comment: The sample LWR POW285164/9. EF704I. INT 700 ORANGE SN 50 has achieved the BioCote minimum antibacterial performance requirement of 95% "Reduction against the initial for *E. coli* and MRSA" according to ISO 22196: 2011 analysis.

- Our Interpon AM in conjunction with BioCote Ltd ® are subject to antimicrobial efficacy test in accordance with ISO 22196: 2011 and exhibited a minimum of 95% and up to 99.99% reduction in the population of Escherichia coli and Methicillin Resistant Staphylococcus aureus (MRSA).

- Testing is carried out by an independent laboratory and is classified as 'microbiological results satisfactory'. BioCote® silver ion technology has been proven effective against the following bacteria in laboratory conditions:

Interpon AM available product series

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Industrial use

Product series	Description
Interpon 100 AM	Epoxy
Interpon 200 AM	Polyurethane
Interpon 600 AM / 610 AM	Industrial Polyester
Interpon 300 AM / 310 AM	Industrial Polyester
Interpon 700 AM	Epoxy-Polyester
Interpon 800 AM / 810 AM	Advanced durable Polyester

Architectural use

Product series	Description
Interpon D1036 Gloss/Satin/Matt/Texture AM	Architecture Polyester Qualicoat Class 1
Interpon D2525 Gloss/Satin/Matt/Texture AM	Architecture Polyester Qualicoat Class 2
Interpon D1010 AM	Architecture Polyester Qualicoat Class 1 Asia only
Interpon D2015 AM	Architecture Polyester Qualicoat Class 2 Asia only

Proven to be effective against multiple bacteria

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BioCote® silver ion technology has been proven effective against the following bacteria in laboratory conditions:

Bacteria

- *Acinetobacter baumanii*
- *Bacillus subtilis*
- *Campylobacter* spp.
- *Clostridium difficile* (excluding spore form)
- *Escherichia coli* O157
- *Enterobacter aerogenes*
- *Enterococcus faecalis*
- *Legionella* spp.
- *Listeria monocytogenes*
- *Pseudomonas aeruginosa*
- *Salmonella Enteritidis*
- *Salmonella Typhimurium*
- *Shigella* spp.
- *Staphylococcus aureus*
- *Staphylococcus epidermidis*

Multi Drug Resistant Bacteria

- ESBL *Escherichia coli*
- CRE *Klebsiella pneumoniae*
- MRSA Methicillin Resistant *Staphylococcus aureus*
- VRE *Vancomycin Resistant Enterococcus*

Quality controlled antimicrobial technology

When you use Interpon AM you can rest assured that the coating will:

- Provide the required decorative effect together with the chemical, physical and performance characteristics expected from the high-quality Interpon powder coatings.
- Provide an additional level of protection against microbial growth on the coatings surface.
- Be easier to keep hygienically clean
- Help prevent odors, stains, and material deterioration
- Be regularly validated and independently quality control tested to ISO 22196:2011
- Continue to provide protection for the expected life of the product (the BioCote® technology will not wear off, wash out or leach from the coating)
- Provide 24 hour protection, 7 days a week

Buying process Interpon AM

Today:

1. We introduced to you our Interpon AM offer

If you want to progress with Interpon AM

2. You need to sign our Interpon AM Addendum to the Terms and Conditions
3. Once signed a product development request will be passed to our lab
4. The product sample will be submitted to BioCote for efficacy testing
5. **Optional: you can receive the sample + test results for approval or we directly**
6. Produce and supply Interpon AM powder
7. We will pass your details to BioCote who will give you basic antimicrobial advice. www.biocote.com/InterponAM

Addendum to the Terms and Conditions

Because of any potential legal issues we ask all Interpon AM customers to sign *Interpon AM Addendum to the Terms and Conditions* before we can supply Interpon AM powder coatings.

Key points in the agreement:

- We warrant that the additive and coating are registered in their region
- We warrant that Interpon AM has been tested to ISO 22196-2011 and demonstrates a minimum antimicrobial efficacy of 95%.
- We warrant that we will incorporate the BioCote additive
- We do not warrant that every batch of Interpon AM will be tested before supply.
- We advise you that you are responsible for regulatory compliance of your Interpon AM coated" end-product.
- We advise you to seek support about registration and marketing claims language.
- We will pass on your details to BioCote.
- You indemnify AkzoNobel against any claims resulting from your breach of regulations

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Thank you!