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ANTIBAC FIBREGLASS REINFORCEMENT PANEL
MAXIMUM HYGIENE THANKS TO STERILE SURFACES

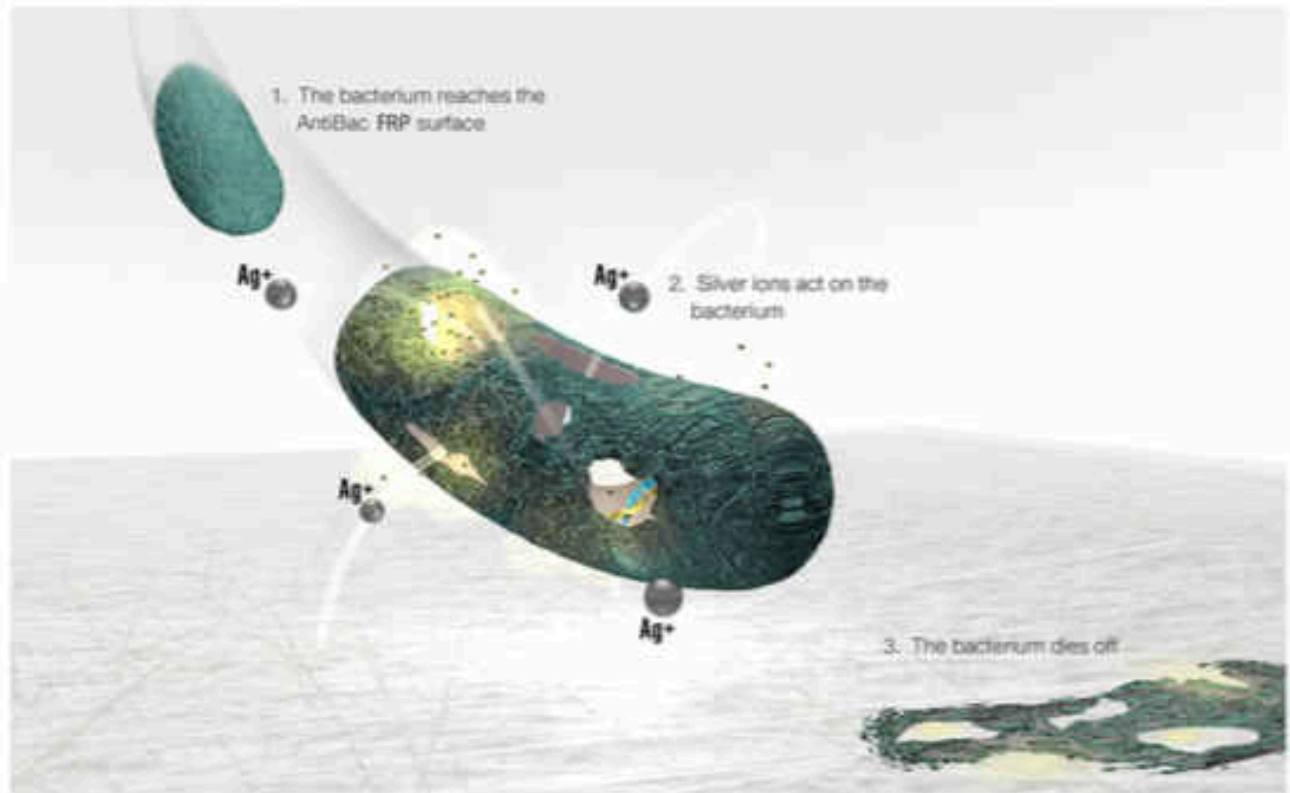


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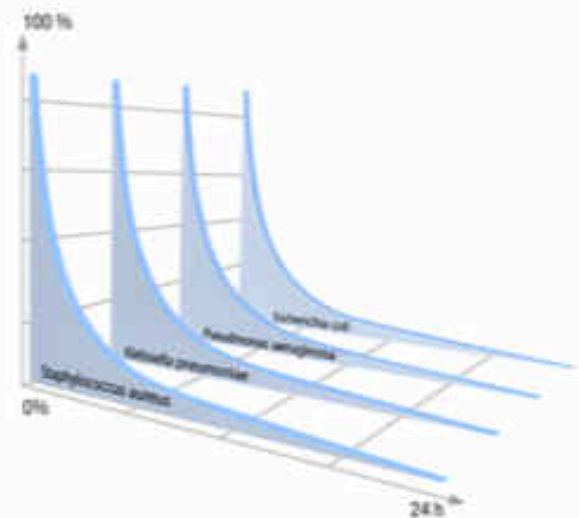
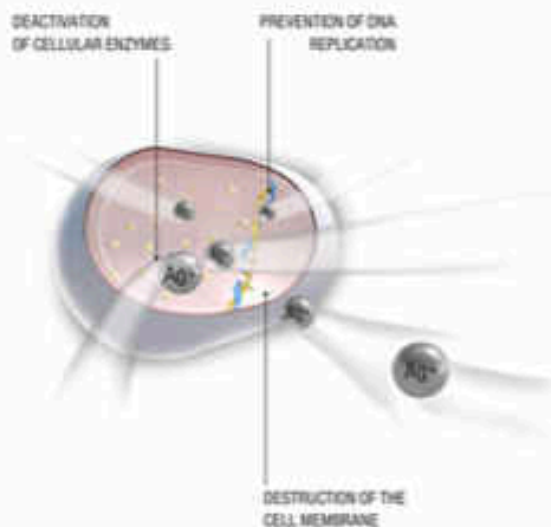
TRIPLE EFFECT AGAINST PATHOGENS

TRIPLE EFFECT ON BACTERIA:

- Destruction of metabolism due to deactivation of cellular enzymes
- Destruction of the cell membrane
- Prevention of DNA replication

EFFECTIVENESS AS PER DIN EN ISO 22196 BASED ON FOUR REPRESENTATIVE BACTERIA

More than 99.9% of all bacteria are killed within 24 hours.



Demonstrable efficiency against various pathogens as per standards JIS Z 2801/ DIN EN ISO 22196, ADTM 2180 and ASTM 2149.

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ADDED SAFETY

With its permanent effect, AntiBac FRP helps to compensate for natural fluctuations in cleaning and disinfection at every point of the wall and ceiling surfaces. This creates a redundant system of maximum hygienic safety.



Starting from the time of disinfection, bacteria re-production again increase exponentially. Often, a critical level is already reached here, before the population growth is stopped by the next cleaning action.

What disinfection means here is reducing germs by a factor of at least 10^5 ; in other words, thanks to AntiBac FRP fewer than 10 of 1,000,000 replicable germs survive.



Immediately suppresses the propagation of bacteria. Uninterrupted disinfection of the surface occurs 24 hours a day, 7 days a week, 365 days a year.

However, time period-based disinfection through AntiBac FRP

Without AntiBac FRP



Cleaning and disinfection are not always equally effective at all locations.

With AntiBac FRP



AntiBac FRP offers continuous disinfection at any point of the surface, even in hard to reach areas.



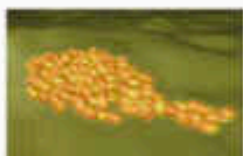
AVOIDING INFECTIONS SAVES LIVES

Multidrug-resistant bacteria and nosocomial infections account for 400,000 to 600,000 infections and 15,000 deaths per year in Germany alone: a hazard in healthcare that means additional treatment cost amounting to an average of 20,000 euros per patient.

Innovative AntiBac FRP surfaces help to prevent this and save lives. In addition to many useful germs, like those on our skin or in our intestinal flora, there are a number of germs that causes illness and can have devastating consequences for a patient if they infect

the wrong place, for example, a wound. Among other things, antibiotics are used to eliminate these germs, but the limits are being reached because of resistant pathogens.

Hospitals are therefore facing the permanent challenge of mitigating or even preventing the occurrence of hazardous hospital germs through targeted preventive and acute measures. Especially on the largest surfaces of a hospital complex, the walls and ceilings, AntiBac FRP can ensure more effective and permanent protection against pathogens and interrupt the propagation chain.



STAPHYLOCOCCUS AUREUS

An inflammatory pathogen that can trigger abscesses and wound infections, among other problems, and which can additionally aggravate the symptoms in the case of hybrid infections with other pathogens. Anti-biotics resistant strains (MRSA) are well known.



KLEBSIELLA PNEUMONIAE

Ubiquitous occurrence, also in the human intestinal flora. 10% of nosocomial infections are attributed to this germ. Natural resistance to benzyl penicillin and aminopenicillin.



PSEUDOMONAS AERUGINOSA

Widespread soil and water germ characterised by pronounced frugality in terms of its habitat. Pronounced resistance to antibiotics, particularly to most penicillins and cephalosporins.



ESCHERICHIA COLI

Normally helps to ensure healthy intestinal flora. However, it may lead to infectious diseases outside the intestinal tract. The dangerous EHEC bacterium belongs to this group.



FOOD PROCESSING AND STORAGE

In livestock farming, and especially in meat processing downstream, it is important to comply with what are often strict national or international standards. In many cases, these strict hygienic requirements also need to be ensured under tough conditions.

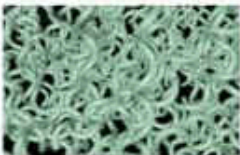
Here too, AntiBac FRP continuously contributes towards eliminating all germs that come into contact with the surface - 24 hours a day, and 365 days a year.

Assured food safety and non-toxicity of the materials used, is also essential for storage rooms, refrigerated shelves and deep-freeze

counters.

Many AntiBac FRP material qualities are thus tested for indirect contact with food, and the newly developed nano silver is considered absolutely safe for humans and the environment.

In livestock farming, too, cleanliness and freedom from germs are ensured by periodic cleaning as the most important means in the fight against bacteria. AntiBac FRP impresses here with easy residue-free cleaning thanks to the pore-free surface, which does not lose its antibacterial properties even under the toughest conditions.



CAMPYLOBACTER JEJUNI

One of the most common causes of diarrhoea in humans beside salmonella. They are transmitted through unpasteurised milk, raw poultry meat and drinking water. Symptoms include severe abdominal pain, diarrhoea, fever and, in rare cases, neurological damage such as the Guillain-Barré syndrome with paralysis.



ESCHERICHIA COLI (SPECIAL FORM OF EHEC)

EHECs are disease-causing strains of E. coli that produce certain toxins and destroy the cells of the intestinal wall and blood vessels. EHEC can be transmitted through raw meat. The disease can lead to serious consequences, such as the development of the life-threatening HUS (haemolytic uremic syndrome).



PSEUDOMONAS AERUGINOSA

Anaerobic, gram positive bacteria, which can often be found in vacuum-packed, raw meat and lead to the food spoiling. The metabolism of the bacteria causes various foul-smelling gases and acids, which become visible as bloating of the packaging ("blown pack spoilage").



FOOD TRANSPORT

In addition to its low thermal conductivity, and high strength despite a light weight, AntiBac FRP above all impresses with the constant disinfectant effect of its surface in temperature-controlled transportation of foods that require refrigeration throughout the delivery chain.

Refrigerated containers and semitrailers are exposed to severe mechanical stress, temperature changes and harsh cleaning cycles -- often with aggressive media - during loading and along the transport route. AntiBac FRP is demonstrably resilient to these stresses and reliably disinfects for at least 55 years - even under the toughest conditions.



SALMONELLAE

Salmonellae are common in raw eggs, poultry meat, unpasteurised milk and chocolate and can infect both humans and animals. Infections with salmonellae can trigger illnesses such as diarrhoea or typhoid fever. Depending on the course of the sickness and the treatment, these diseases can be fatal.



YERSINIA ENTEROCOLITICA

Yersinia enterocolitica is a widespread bacterium that mainly occurs in pigs. Due to its optimum temperature of 4°C, the bacterium can even survive in the refrigerator. Infections are manifested in diarrhoea, swollen joints and inflammation of the abdominal fat.



LISTERIA MONOCYTOGENES

Listeriosis pathogens can cause meningitis and are very dangerous for pregnant women, new born children and persons with immune deficiencies. The pathogens are transmitted through contaminated food, such as fruits and vegetables. Because the bacterium is psychrophilic, it can also propagate well in refrigerated conditions.