GOLDSHIELD
TECHNOLOGIES

Healthcare

Fannin Exclusive Distributor to the NHS Supply Chain

Protect Your Healthcare Facility Against The Rise of "Superbugs"

Unique molecular bonding technology to protect against bacteria, viruses and infection outbreaks.

Goldshield® Technology

Introduction - for a safer patient environment

Goldshield®'s unique antimicrobial barrier technology provides unrivalled cleaning and disinfection armoury in the fight against infection and potential outbreaks.

Goldshield®
Healthcare sector

In a world where we are fighting a losing battle against more resistant bacteria and viruses, the need for new technology to clean and disinfect our hospital environments has never been greater.

In recent years hospitals have recognised the importance and the role of the immediate clinical environment in the potential transmission of nosocomial pathogens. Whilst the aesthetic appearance in cleanliness of the hospital is important to both patients and visitors it also needs to be microbiologically clean. Issues with the increase in antibiotic resistant bacteria and organisms such as PVL MRSA that can also impair our own immune defense. Viruses such as Norovirus are also a constant problem in many trusts.

Routine cleaning in a hospital usually occurs once a day and can be carried out using microfiber or disposable cloths with either a neutral detergent or oxidising agents such as hypochlorite, which can damage surfaces and be associated with health and safety concerns. After a patient has had an infection the room is subjected to high level disinfection with hypochlorite or HPV (Hydrogen Peroxide Vapour) technology.

In a hospital there are many and varied areas such as wards, theatre's, augmented facilities where patients are immuno-suppressed, A&E departments and many more where cross-contamination/infection can occur with harmful and resistant pathogens. Therefore the hospital's infection prevention policy puts cleaning and disinfection in a high risk category in the part the process plays as an intervention in HCAI. Goldshield products can be used to clean and protect clinical areas.

“Cleaning alone does not kill potentially harmful microorganisms such as Norovirus the “winter vomiting” virus, which can strike at any time”

Most normal cleaning products do not contain any form of biocide relying on physical removal of soils and microorganisms as cleanliness is the main objective. Even if they do contain some form of biocide, none can compete with the long-lasting effect of using Goldshield© known as our long-lasting “residual protection”.

Goldshield® Technology

Introduction - for a safer patient environment

When surfaces are cleaned or even disinfected they become re-contaminated from the environment via people and the air. This can be in as short a time frame as 2 hours depending on the clinical area and the activity. High risk areas such as operating theatre's and isolation rooms have filtered air change ventilation systems to overcome this.

Goldshield®'s advanced technology contains a range of liquid, non-toxic products that not only clean and disinfect but also leaves an invisible antimicrobial layer that carries in killing harmful pathogens for potentially days after application, overcoming the problem with re-contamination.

Using Goldshield® will provide your patients, visitors and staff with “peace of mind” that your healthcare facility is not just visibly clean but microbiologically clean as well thereby providing a safer environment for your patients, visitors and staff.

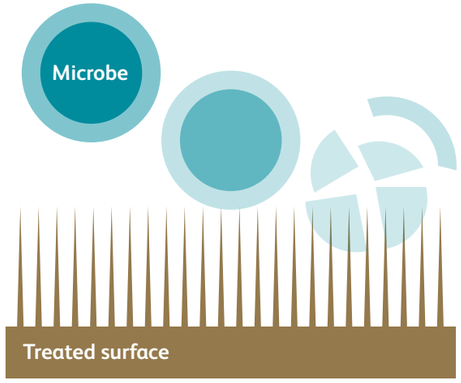
Protecting your patients, visitors and staff against the threat caused by common surface areas is vital in the control of Norovirus and other pathogens. To combat this, Goldshield® provide a hand - washing sanitiser that will protect hands for up to 24 hours with a single application.

The Goldshield® range comes in ready to use spray bottles, wipes, hand sanitisers, or in a format (concentrate) that you can make up yourself. Goldshield® is easy to use, non-toxic and does not require any changes to how you clean. Goldshield® will also provide training and after sales service if any extra help or advice is required.

How Goldshield® works

Goldshield®'s persistent residual antimicrobial barrier protection technology

- The microbe lands on the treated surface
- The microbe is then pulled onto the molecule by strong electrostatic forces
- The microbe is then pierced and killed
- The analogy is "a bed of molecular nails"



Goldshield®'s technology forms a covalent bond which allows it to remain affixed to any hard or soft surface including textiles. The surface is positively charged generated by a nitrogen molecule, which pulls in negatively charged microbes. Through a long carbon chain, this unique assembly penetrates the cytoplasmic membrane physically stabbing the cell releasing ions, denaturing proteins and causing cytoplasm to leak so the cell is then destroyed. This renders the microbe dead and incapable of any adaption.

Goldshield© uses a technology that not only cleans and disinfects any surface but also protects it from microbes that land on the treated surface once it is dry.

Extensive clinical trials have shown the product will remain active for at least 24 hours and for up to 7 days with a single application, depending on the product chosen and the type of surface treated.

For many years cleaning and disinfection has relied upon old technologies that have failed to evolve and keep pace with microorganisms that are becoming ever more difficult to treat.

The need for new products that are safe to use, sustainable and are as environmentally friendly as possible has never been greater, Goldshield® fits this need.

Goldshield® is an innovative solution to reduce the risk of cross-infection, providing a more effective solution that can be easily implemented without causing any business interruption whatsoever.

Why use Goldshield®?

Goldshield® is a silicone based polymer that for many years was used in the treatment of textiles to provide both hydrophobic and antimicrobial properties. Our R&D team were able to adapt this technology to provide a water based solution and a molecule capable of forming a covalent bond with hard and soft surfaces. This meant that we now had a biocidal product capable of being used on hard and soft surfaces that provides a durable antimicrobial mono-molecular layer protecting the surface for extended periods.

Goldshield® is a product that:

- Provides an anti-microbial surface once dry
- Is a broad spectrum biocide
- Is Water based
- Covalently bonds to any surface making it difficult to remove
- Microbiologically protects surfaces over long periods of time
- Is safe and simple to use
- The analogy is “a bed of molecular nails”

Why is this of benefit?

Disinfectants of which there are many, are important to control pathogenic or harmful microorganisms as if there are any on a surface potentially capable of causing infection, removing them by cleaning and killing them by disinfection minimises that risk. Many products contain both detergent and disinfectant and are termed sanitisers. Products containing powerful agents such as chlorine or more recently chlorine dioxide, have excellent microbicidal properties but can be damaging to surfaces and can have health & safety issues depending on their concentration.

When these products are applied they remove the pathogen but only at that point in time and if the source of the pathogen remains the surface will re-contaminate after approximately 2 hours and with other potentially harmful (and non-harmful) microorganisms. Goldshield® is not only microbicidal at point of use but also carries on protecting the surface to a level that minimises the risk of cross-contamination. Other disinfectants cannot provide this extended antimicrobial activity.

Goldshield® and routine cleaning processes

Goldshield® does not replace cleaning as this remains an important part of the process and as an acknowledgement of this we have a sanitiser in our range that both cleans and disinfects. A surface has to be thoroughly clean before the application of Goldshield®. The reason cleaning is important is that during the course of the day surfaces become “dirty” and need to be cleaned to remove this soil and for aesthetic reasons. Moreover, if surfaces were not cleaned regularly even with microfiber and normal detergent soils such as body fat (the “smudge” we see on glass) will build up and both protect and provide nutrients for microorganisms held within.

Goldshield®’s covalent bonding means that it remains active even if the treated surface is cleaned by physical and even chemical action.

Goldshield® has a product that:

- Is not removed by routine cleaning
- Enhances cleaning
- Provides a surface that is microbiologically clean in excess of 24 hours

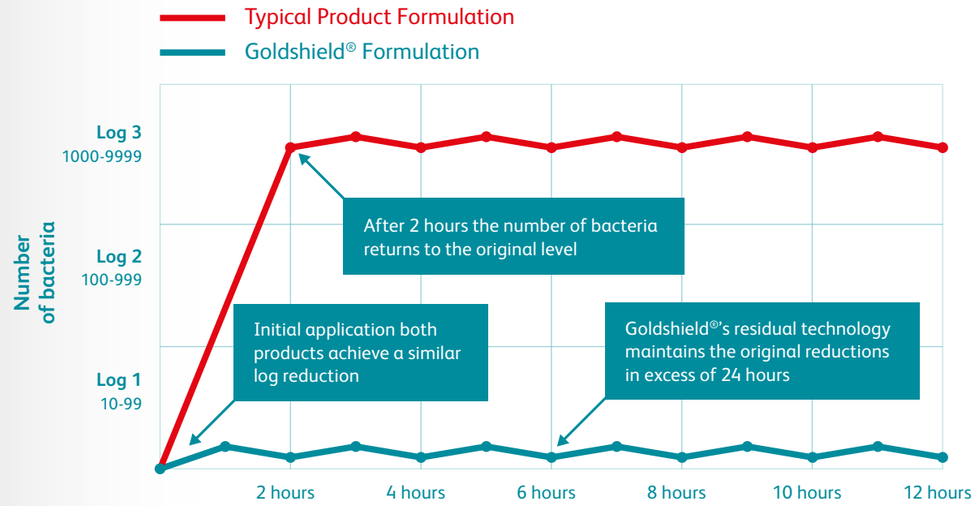
Industry Sectors

Protecting health, welfare and environments and redefining new standards for infection control

- Healthcare
- Hotel, Catering & Leisure
- Veterinary
- Laundry & Textiles
- Transport & Logistics
- Agriculture & Horticulture
- Workplace & Education
- Care Homes
- Domestic Household

Formulation

Goldshield® compared to non-residual sanitisers



Goldshield®'s unique technology differs to other similar technologies in that it not only kills microorganisms but also leaves a residual layer on any surface once dry. Most other formulations contain quaternary ammonium compounds only (QAC) as the main biocidal active, which is not capable of leaving an antimicrobial barrier once dry.

In the environment, residual activity is important because even though after disinfection, the levels of environmental bacteria are reduced, they soon recover as the surface is re-seeded from the air, people and animals shedding microorganisms and touching surfaces and other sources.

Goldshield® provides a protective layer that has been shown in a number of tests to remain for periods in excess of 24 hours. Also because Goldshield® has a unique covalent bond, it is able to remain on the surface even if it is subsequently cleaned with normal detergents after application as cleaning is important to remove soils such as dirt and body fat. This is represented on the graph above, which is a visual representation to show the principle. The numbers of bacteria and levels of kill will vary depending on the environment.

Goldshield®'s ability to create this protective layer after cleaning and disinfection, reduces the potential for cross-contamination/infection of potentially harmful pathogens in all areas of application in our industry sectors. This will create a safer environment in a world where we are seeing more and more antibiotic resistant strains of bacteria and viral pandemics. Goldshield®'s technology therefore provides a safer environment by providing a protective shield, wherever it is applied giving confidence that surfaces remain hygienic for hours or even days after application.

Goldshield® Products

Goldshield® offers a range of products in various forms

Disinfectant with Residual Anti-Microbial Barrier

- Unique molecular bonding technology
- Long lasting continual protection
- Minimizes cross-contamination
- Alcohol-Free & Non-Corrosive
- Kills 99.999 % microbes

Key Areas Of Use

To be used after basic cleaning to disinfect all hard surfaces such as those frequently touched and other surfaces routinely cleaned to include floors. Medical equipment can also be disinfected and protected. Other common areas, reception desks, offices and even fabrics can be treated

Just one application offers continual protection

Unlike most disinfectant cleaners which commonly use chlorine as their active ingredient, Goldshield uses a water-stabilised organosilane formula. Typical disinfectants or inhibitors used in hospitals generally provide no more than ten minutes to two hours of residual protection

Food Grade Surface Cleaner and Disinfectant

- Unique non-leach molecular bonding technology
- Long lasting continual protection (up to 24 hours)
- Minimises cross-contamination
- Kills 99.999 % of microbes
- Alcohol free & non-corrosive

Key Areas Of Use

For cleaning and disinfecting food preparation /storage surfaces

Just one application will provide up to 24 hours of protection

This product is specifically designed for use within the food processing /handling facilities. It is non-leaching, has no fragrance and has no migration risk

Cleaner and Disinfectant with Residual Anti-Microbial Barrier

- Unique non-leach molecular bonding technology
- Long lasting 24 hour continual protection
- Minimises cross-contamination
- Kills 99.999 % of microbes
- Alcohol free & non-corrosive

Key Areas Of Use

To be used after basic cleaning to disinfect all hard surfaces such as those frequently touched and other surfaces routinely cleaned to include floors. Medical equipment can also be disinfected and protected. Other common areas, reception desks, offices and even fabrics can be treated

Just one application offers continual protection

This product is highly effective as a cleaner and disinfectant against bacteria, mycobacteria fungi, viruses and spores and has excellent cleaning properties. It is designed to be used a deep cleaner prior to the application of GS75

Anti-Bacterial Laundry Additive

- Unique molecular bonding technology
- Long lasting protection
- Eliminates odour
- Prevents mould & mildew
- Prevents cross-contamination
- Kills 99.999 % microbes

Key Areas Of Use

All types of bedding & laundry

Just one application will prevent bacterial growth betweem washes

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This alcohol-free laundry additive offers a water-based product with long-lasting protection against a number of commonly occurring bacteria, yeast and viruses that are known to be highly transmittable and can result in infections and illnesses

Alcohol-free Hand Sanitiser & Skin protector

- Long lasting protection
- Effective for up to 24 hours
- Moisturises skin
- Unique water based technology
- Kills 99.999 % of microbes

Key Areas Of Use

Varying sizes and formats for use on hands but does not replace hand washing, which is recommended for infections such as C. difficile

In Vitro tests show that just one application offers up to 24 hours protection

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This product has been tested and is effective against virtually all commonly occurring bacteria, yeast and viruses that are know to be highly transmittable and can result in infection and illnesses. It is perfect for use where the highest standards of hand hygiene are required and is suitable for use in healthcare and food processing environments

Goldshield®'s advanced product range is incredibly versatile and provides long-term "residual" protection that cannot be achieved using typical cleaning and disinfection products.

GOLDSHIELD TECHNOLOGIES

Organisms Tested Against Goldshield®

Bacteria	Fungi	Viruses
Acinetobacter spp	**Yeast**	Avian Flu
Bacillus cereus	Candida albicans	HIV B
Burkholderia cepacia,	Saccharomyces cerevisiae	Influenza A
Clostridium difficile		Norovirus
Enterobacter spp		SARS
Enterococcus spp		
Escherichia coli		
Klebsiella pneumoniae		
Listeria monocytogenes		
Mycobacterium tuberculosis		
Pseudomonas aeruginosa		
Salmonella typhosa		
Stapylococcus epidermidis1		
Strepticoccus faecalis		

GOLDSHIELD
TECHNOLOGIES

Sales & Enquiries

Goldshield® Technologies LTD
Top Floor
Waterloo Chambers
Fir Vale Road
Bournemouth
BH1 2JL
+44 (0) 800 98 78 050

Goldshieldtech.co.uk

Distribution & Delivery Enquiries

Goldshield® Technologies LTD
Unit C
Lincoln Lodge Farm
MK19 7HJ
+44 (0) 1908 745 539

NHS Supply Chain

Fannin