

Biomaster[®]

Antimicrobial Technology

Durable antimicrobial
protection for your product

Biomaster technology provides effective and durable antimicrobial protection

Bacteria, both good and bad, are a fact of life and they are all around us.

Most bacteria are rendered harmless by the protective effects of our immune systems and some are beneficial.

But several species of bacteria, such as Campylobacter, MRSA, E.coli, Legionella, Listeria and Salmonella can cause serious infectious diseases. Children, elderly people and people with weakened immune systems are especially vulnerable to infection.

Independently tested in thousands of applications, Biomaster is proven to inhibit the growth of these harmful bacteria and many more.

Easily incorporated into any plastic, textile, paper, paint or coating, Biomaster becomes an integral part of the manufacturing process, providing effective and lasting antimicrobial surface protection

for the lifetime of any product to which it is added.

Antimicrobial products are used in many environments such as hospitals, care homes, schools, gyms and offices – in fact anywhere where large numbers of people gather together and share surfaces is a potential application for antimicrobial technology.

Biomaster is also used extensively in meat processing, consumer packaging and in the food service industry to reduce the risk of surface contamination from food-borne microbes.

Our range of unique formulations can be blended to suit just about



any application to reduce microbial contamination from bacteria, moulds or fungi.

If your product could benefit from antimicrobial protection, we'll give you all the technical, regulatory and marketing support you need to ensure its successful launch.

Silver is a natural antimicrobial

Biomaster pioneered the modern day use of silver-ion technology and is recognised as the world's leader in this field.

However the benefits of silver as a natural antimicrobial have been known since the time of the Pharaohs. Silver has been used for thousands of years to prevent the growth of bacteria without the high toxicity associated with other metals.

● The ancient Greek physician Hippocrates wrote that silver had healing and anti-disease properties.



● In the Middle Ages the wealthy fed their children using a silver spoon to give them protection against disease, giving rise to the phrase 'born



with a silver spoon in your mouth'.

● American pioneers travelling west kept their water and milk fresher for longer by putting a silver coin in the storage barrels.

● Early settlers in Australia placed silver forks or spoons into their water tanks in order to keep the water clean.

● Before antibiotics, colloidal silver was used by physicians as a mainstream antibacterial treatment.

● More recently, NASA used an advanced filtration system utilising silver to purify water on the space shuttle.



How does it work?

When bacteria come into contact with a Biomaster protected surface, the silver ions present in the antimicrobial additive prevent them from growing, producing energy or replicating, therefore they die.

Biomaster antimicrobial protection is incredibly durable, long lasting and highly active.

When added, it is dispersed throughout the entire item and becomes an integral part of the product.

Silver is inorganic and non-leaching which means that, unlike organic antimicrobial technologies, it stays within the item to which it is added and doesn't leach out.

The active ingredient provides maximum antimicrobial surface protection for the lifetime of the product.

Round the clock antimicrobial product protection at work, in the home and in education

Home and leisure

Home is where the heart is; it's also where the germs lurk.

It is impossible to keep every surface clean all of the time but Biomaster inhibits the growth of harmful bacteria around the clock.

It can easily be introduced into almost any item found around the home and is used in everything from kitchen units and household appliances to meat thermometers and wall and floor coatings and coverings.

Biomaster also finds application in a wide range of leisure products from gym wear and equestrian equipment to cruiser liner fixtures and fittings.

At the office

Wherever large numbers of people gather together, the chances of exposure to germs and the risk of cross-infection increase.

Some office germ hot-spots carry more harmful bacteria than the average toilet seat. A study has shown that one contaminated door handle can infect an entire office block within 24 hours.

Biomaster is easily added to any frequently handled item in the workplace, giving complete and ongoing product surface protection against the growth of harmful microbes.

In education

Children are more vulnerable than adults to environmental risks because their immune systems are still developing.

Even if a nursery or a classroom starts out clean, germs can build up throughout the day. Harmful bacteria collect on frequently touched surfaces, especially in areas where there is a lot of hand-to-mouth contact, such as the school dinner table.

Biomaster antimicrobial protection can easily be added into commonly shared objects such as calculators, pencils, erasers, rulers and other classroom supplies that could easily become unhygienic.



Round the clock antimicrobial product protection in healthcare and transport

In healthcare

Healthcare associated infections such as MRSA acquired during hospital stays are the most common complications of hospital care and one of the most serious patient safety concerns.

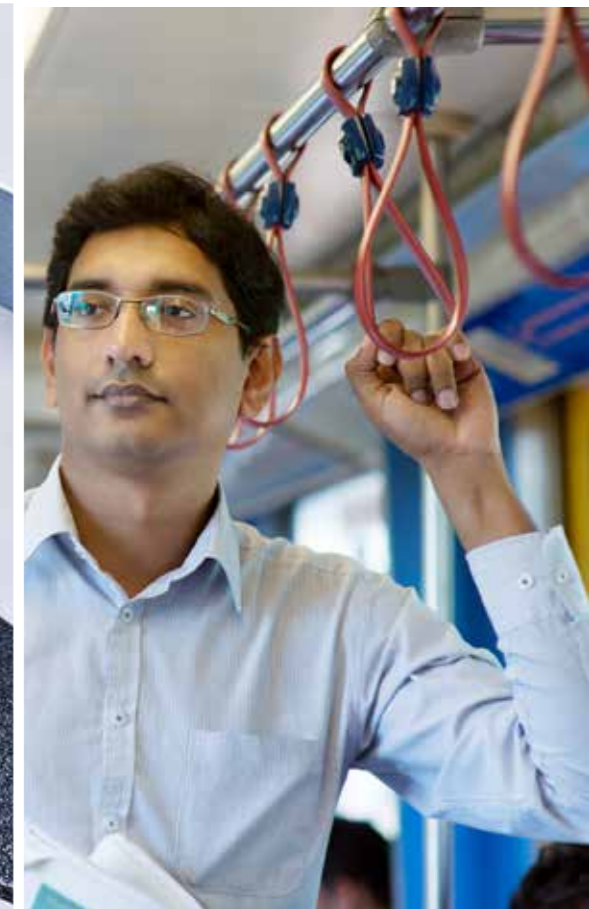
Regular cleaning regimes are all well and good, but any public contact point is only as clean as the last person to touch it. Biomaster provides an inbuilt second line of defence against bacterial cross-contamination.

Biomaster is used extensively in hospitals, dental surgeries, care homes and GP practices around the world in products ranging from beds to cubicle curtains, nurse call systems to wall and ceiling paints, flooring and door handles to showers, pull cords and case note folders.

In public transport

With millions of passengers using trains and buses every day, it is not surprising that people are regularly exposed to potentially harmful bacteria on surfaces.

Biomaster antimicrobial technology complements regular cleaning regimes by offering 24/7 product protection against harmful bacteria and mould and can be added to just about any surface in high-traffic, shared areas to make them cleaner and more hygienic.



Round the clock antimicrobial product protection in food, catering and manufacturing

In food, catering and hospitality

Good hygiene is important in any walk of life, but it is critical in catering and hospitality. Illness caused by food-borne bacteria can be devastating for customers and businesses alike.

Biomaster reduces contamination on surfaces throughout the food chain from preparation and processing to packing and distribution at every stage between farm and fork.

Restaurants use Biomaster antimicrobial technology in kitchen surfaces, appliances, flooring and wall paint and even in the coating on their menus.

In the high street too it is widely used to help reduce the opportunity of bacteria transferring from packaging and from reusable shopping bags.

In manufacturing

Controlling contamination is an essential and fundamental part of any manufacturing process.

Biomaster antimicrobial technology is used in thousands of clean rooms, critical areas and controlled industrial environments, finding application in diverse industries from biomedical, pharmaceutical, electronic and optical to automotive, aerospace and packaging.

Major companies using Biomaster technology to control contamination in their manufacturing processes include Sony, Johnson & Johnson, Motorola, Roche, IBM, Pfizer, Rolls-Royce, Nestle, Intel, Nokia, Honda, BMW and Heinz.



Versatile and long-lasting protection for plastics, textiles, paper and coatings

Awareness of the need to improve hygiene levels is increasing and the demand for antimicrobial products is growing worldwide.

Extending your range with a product offering the benefits of built-in, long-lasting antimicrobial protection can help you open up new markets and increase your market share.

Biomaster Antimicrobial Technology is easily incorporated into any plastic, textile, paper, paint or coating, making it an integral part of the finished product and a compelling benefit that will add real value and differentiate your brand.

Protection for polymers

Biomaster has developed masterbatches and compounds for every type of polymer and every manufacturing process.

It doesn't affect the physical properties of the plastic in any way and can even be used in clear grades.

We can supply masterbatch or compound samples or manufacture plaques of your chosen polymer incorporating Biomaster for testing and validation.

Protection for textiles

Biomaster can be added to any textile or fabric at any stage of production without affecting the characteristics of the material. It provides durable and effective protection against both harmful and odour-causing bacteria.

Treated items can be washed less often and at a lower temperature, thereby saving water and energy, causing less damage to the fabric and increasing durability, whilst

retaining the antimicrobial benefit associated with much hotter wash cycles.

To confirm efficacy prior to production



we conduct exhaustive tests that simulate the actual usage of the article.

Protection for coatings

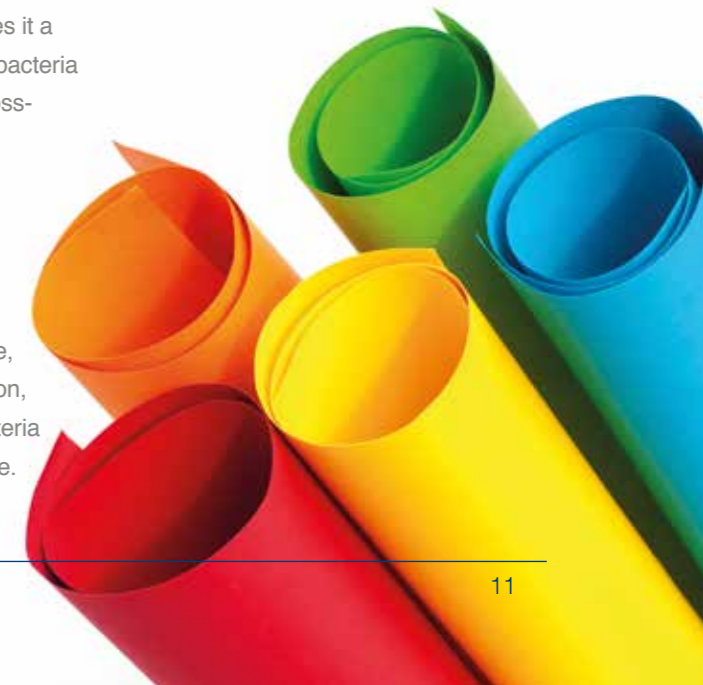
Biomaster is easily added to any water, solvent, oil or powder-based paint, coating, ink or lacquer to inhibit the growth of micro-organisms such as bacteria, yeast and mould.

It makes surfaces cleaner and is ideal for use in hygiene-critical, high traffic environments.

Protection for paper and board

By its very nature, paper is inherently difficult to clean, which makes it a perfect breeding ground for bacteria and a potential source of cross-contamination.

The Biomaster paper grade additive is unique and can be applied either during manufacture or in post-treatment to provide effective, lasting antimicrobial protection, reducing the build-up of bacteria on the surface during storage.



Tested and compliant

We know that Biomaster is highly effective at reducing bacteria levels, but it is essential you are confident that your finished product is effective too.

That's why our antimicrobial testing to the latest ISO standards is completely independent and conducted only at leading microbiology laboratories.

The Biomaster regulatory service will ensure your product complies with all of the relevant legislation for biocidal products including:

- Biocidal Products Regulation (BPR)
- Environmental Protection Agency (EPA)
- Food and Drug Administration (FDA)

We work closely with our customers to ensure they comply with the required regulations regarding the manufacture, importing and marketing of products incorporating Biomaster.



Discover the power of antimicrobial branding with our free marketing and regulatory support service

Adding Biomaster can increase the value of your product by at least 20% and grow your product range for relatively little extra cost.

As your strategic partner, we'll help you take your product to market, quickly and effectively.

And if you co-brand with us, you will get all the benefits of our unrivalled customer service package including

- FREE marketing support
- FREE technical support
- FREE regulatory support
- And NO licence fees.

We'll give you all the help needed to ensure the launch and on-going promotion of your antimicrobial product is both easy and successful.

We have extensive experience of introducing antimicrobial products around the world. We understand what is important to your customers

and how to communicate the benefits of antimicrobial protection.

Customers using the Biomaster Protected symbol in their marketing materials can rest assured that all of their claims are valid and regulatory requirements are fulfilled.

Whether you are looking for a product line extension, increased pricing leverage or market share growth, co-branding with the trusted Biomaster Protected symbol in your marketing strategy will give your product the clear competitive advantage that only the recognised leader in antimicrobial technology can offer.

We have invested heavily to raise the awareness and benefits of the Biomaster brand and demand for antimicrobial protected products is growing. To find out more about how we can help grow your business, call us today.



Our expertise in antimicrobial technology

Biomaster pioneered the development of durable antimicrobial protection into new substrates such as plastics, coatings, textiles and paint and continues to create innovative technologies that provide long-term product protection against harmful bacteria.

We have developed a range of unique formulations blended specifically for each end application to provide maximum performance and durability.

Rather than giving you an off-the-shelf solution, our antimicrobial additives are bespoke.

We'll discuss the requirements of your product, taking into account such factors as performance criteria, how and where it will be manufactured and sold, before formulating a solution.

Excellence is achieved by the enforcement of strict standards and meticulous quality control, supported by the specialist skills of our experts in the fields of microbiology, chemistry and polymer science.

Our knowledge of antimicrobial additives and of the regulatory support required is unrivalled within the industry.

We can develop an antimicrobial solution for your product, including testing and marketing collateral, in as little as four weeks.



Trusted globally by major brands

Biomaster antimicrobial additives are exported globally and our growth and outstanding international sales performance has been recognised with many awards, including a prestigious Board of Trade Award.

We are also twice winners of the Queens Award for Enterprise in International Trade.

Biomaster is the acknowledged leader in antimicrobial technology and the trusted partner of global brands.

Our worldwide network of distributors are chosen for their knowledge of antimicrobial additives and local regulations. No matter where you are, our experts are there to help.

These are some of the famous brands we have added value to.



Biomaster protects the article in which it is incorporated. It is not intended to protect consumers against disease-causing microbes nor is it a replacement for cleaning.

Biomaster® is a registered trademark of:

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