Eco-Friendly Antimicrobial Ironmongery Ranges

A guide to our sustainable ironmongery options

INTRODUCTION

Poole Waite & Co Ltd offer ultra-low carbon footprint ironmongery ranges to suit all types of commercial and residential buildings. Our options include rejuvenation of existing used ironmongery or supplying new products coated using low energy powders.

KEY STATS

- Our environmental product declaration (EPD) for our eco-friendly ranges offers an estimated **embodied carbon saving of between 29% – 72%** when assessed against similar products that used virgin materials, in accordance with ISO 14025.
- Finishes offered in the ECO 3 RANGE incorporate antimicrobial technology, proven to kill **up to 99.99% of microorganisms** in 10 minutes and over an **80% reduction of Human coronavirus** SARS-Cov-2 over a 2 hour period.

FINISHES AVAILABLE

The below table explains which of our finishes are eco-friendly, offer antimicrobial protection, or both.

Eco-friendly finishes are powder coated using the latest low energy powder from Akzonobel (Interpon 610E). We also offer other RAL colours and can colour match to your existing items.

EMBODIED CARBON IS THE CARBON DIOXIDE (CO_2) EMISSIONS ASSOCIATED WITH THE MANUFACTURING OF IRONMONGERY PRODUCTS, INCLUDING MATERIAL EXTRACTION, TRANSPORT + MANUFACTURING

ECO-FRIENDLY	ECO-FRIENDLY & ANTIMICROBIAL		ANTIMICROBIAL
RAL COLOURS BESPOKE TO YOUR CHOICE 	**ECO-FRIENDLY MATT BLACK** RAL 9005 30% GLOSS (approx) 	**ECO-FRIENDLY MATT WHITE** RAL 9010 30% GLOSS (approx) 	**CLEAR COAT SATIN STAINLESS STEEL** UNIQUE FORMULATION 

ECO 1 RANGE

IRONMONGERY REJUVENATION

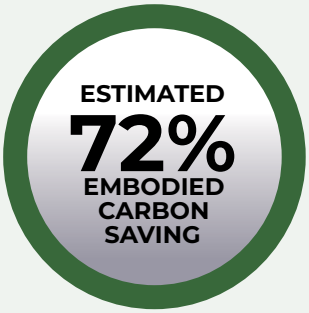
For any works being undertaken where it is preferred by clients to keep and reuse existing ironmongery, we can either rejuvenate the existing products to the same finish or apply a new powder coated finish to your specifications.

LCA Carbon savings over using new products

EPD's rely on Life Cycle Assessment (LCA) to provide information on a number of environmental impacts of products over their life cycle. Estimated 72% embodied carbon savings when assessed against similar products that used virgin materials.

OVERVIEW

- Used, upcycled and rejuvenated ironmongery
- Reduced global shipping and vehicular transportation compared to new products
- Sustainably packaged
- EPD estimating **72% embodied carbon saving**
- Choice of finishes available



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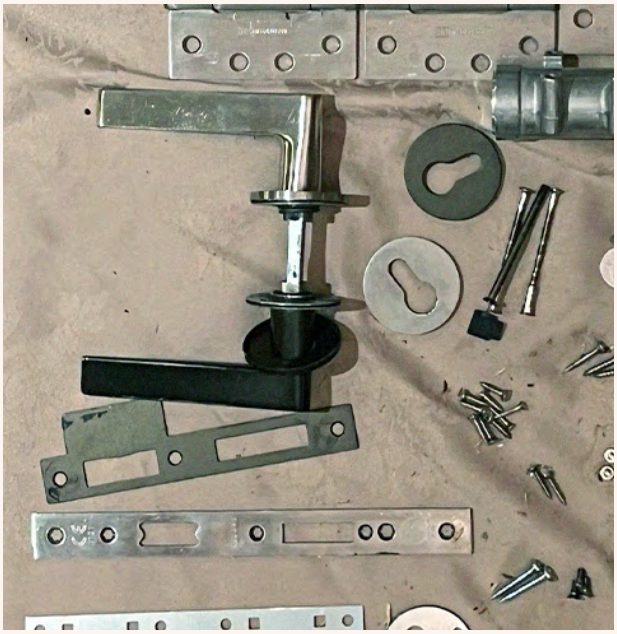
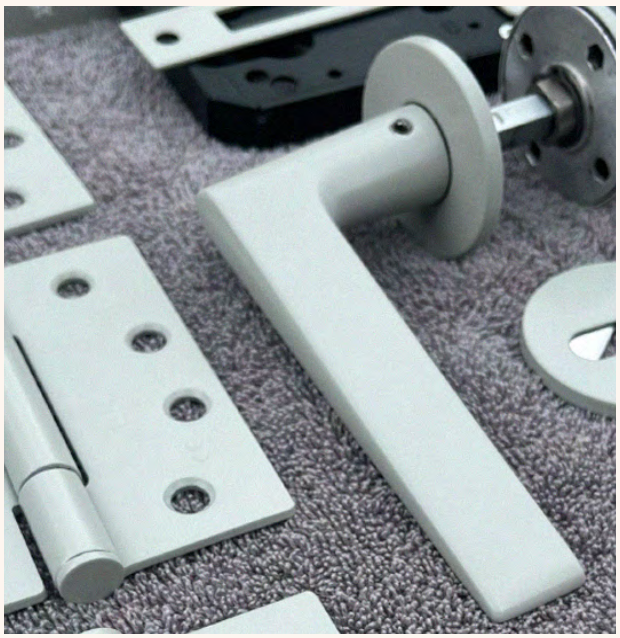
	

A rejuvenation project completed for a client in Finsbury Circus, London.

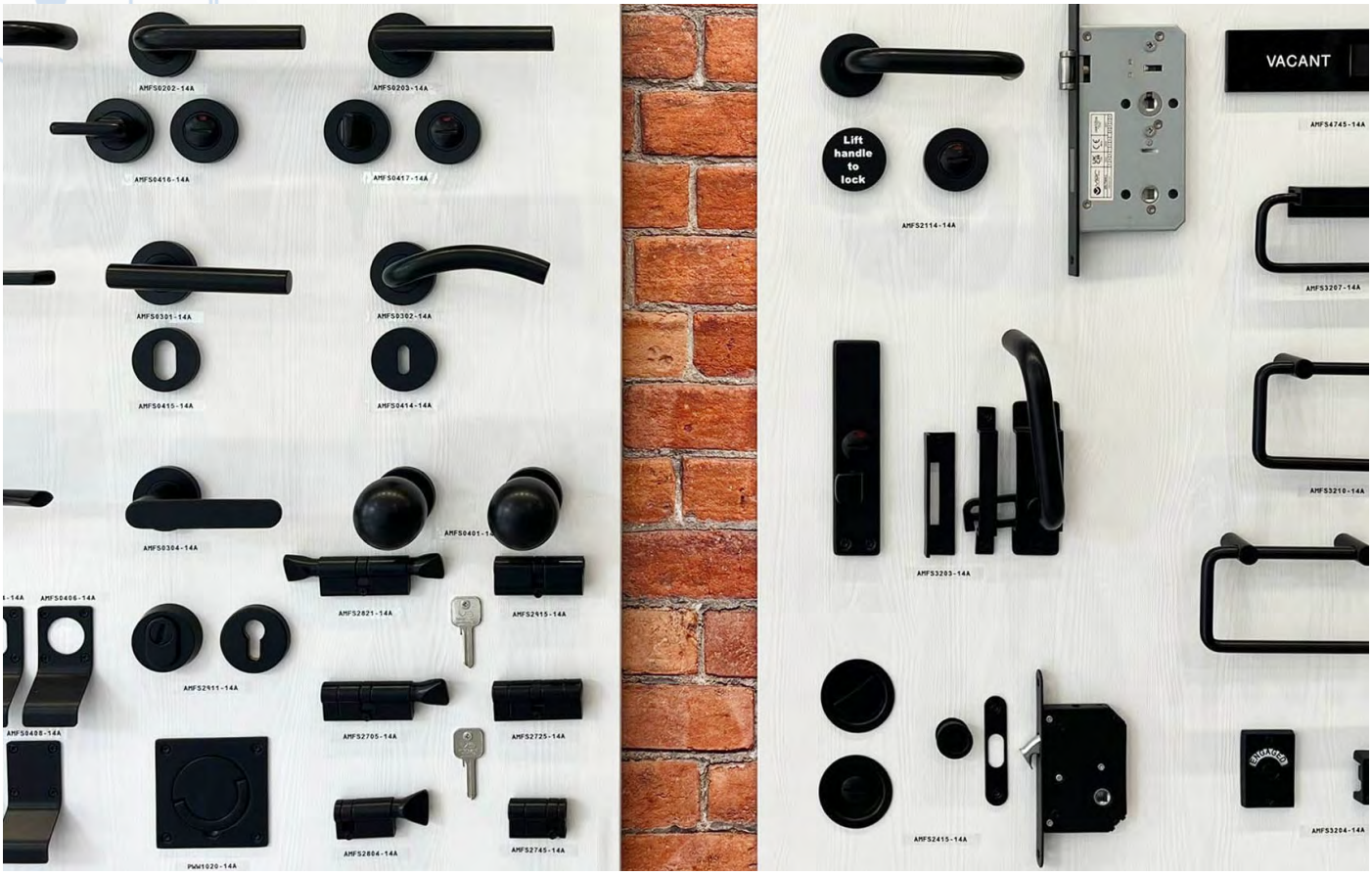
ECO 3 RANGE
WITH ANTIMICROBIAL PROTECTION

The ECO 3 range are newly manufactured products purchased in an unfinished state, thus removing the finishing process and reducing the amount of plastic packaging used. This product range has been independently assessed to ISO 14025, and has EPD certification showing an estimated 29% embodied carbon saving when assessed against similar products powder coated overseas.

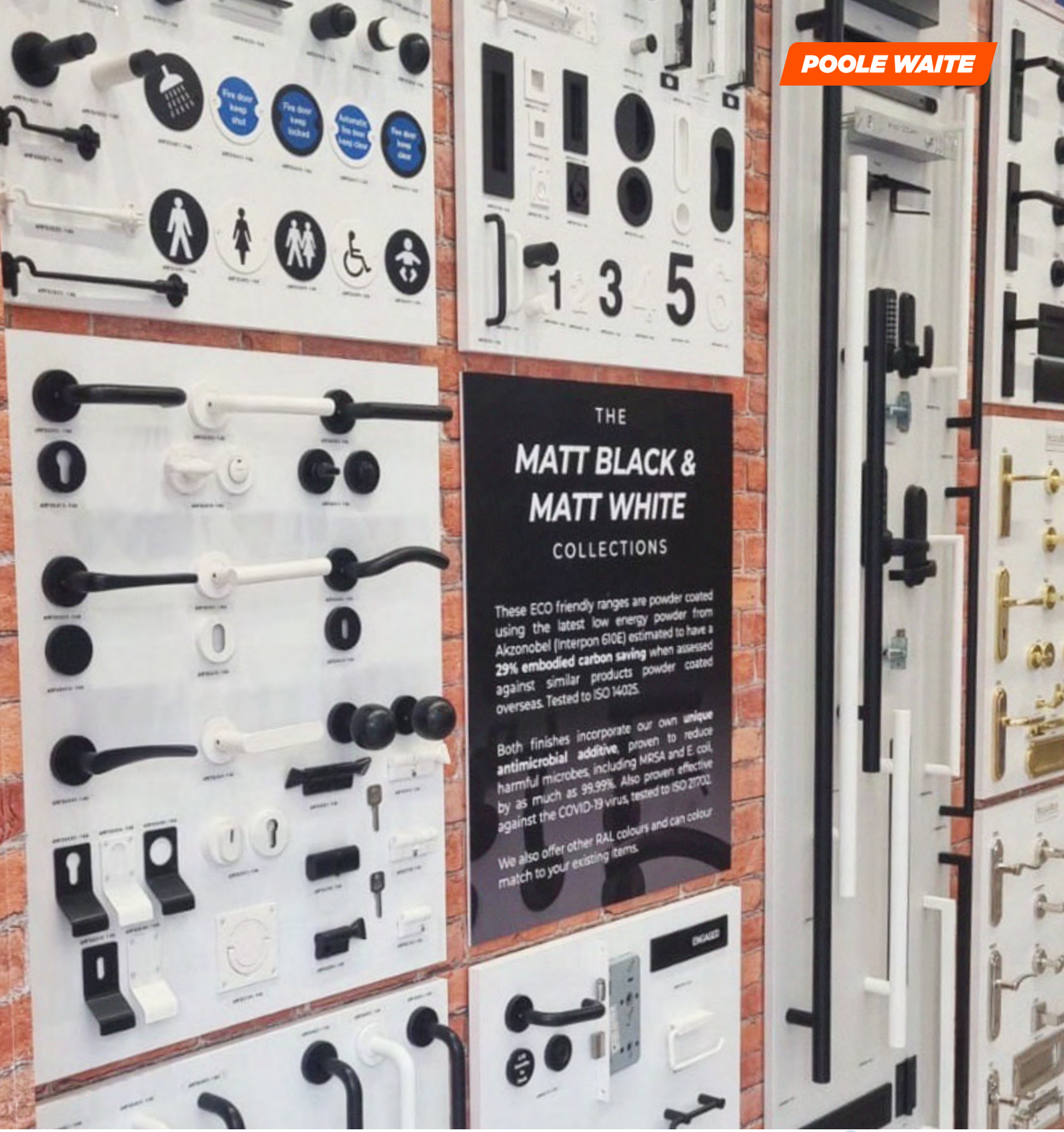
OVERVIEW

- Newly manufactured products
- Sustainably packaged
- EPD estimating **29% embodied carbon saving**
- Powder coated using the latest low energy powder from Akzonobel (Interpon 610E).
- Choice of finishes available
- The Matt Black and Matt White finishes in this range both incorporate our unique **antimicrobial additive.**

ESTIMATED
29%
EMBODIED CARBON SAVING



The ECO 3 Matt Black range on display in our London showroom.



ECO-FRIENDLY ANTIMICROBIAL IRONMONGERY RANGE:
a range of ironmongery estimated to have a 29% embodied carbon saving when assessed against similar products power coated overseas. Tested to ISO 14025. Both finishes incorporate our own unique antimicrobial additive proven to kill **up to 99.99% of microorganisms** in 10 minutes, and proven effective against the COVID-19 virus, tested to ISO 21702.

HOW DOES OUR ANTIMICROBIAL PROTECTIVE COATING WORK?

Opening just one door is potentially comparable to shaking hands with thousands of individuals.

Under the right conditions, microbes can last on touch points such as door handles and push plates for many hours, and even weeks!

WHAT DOES ANTIMICROBIAL MEAN?

Antimicrobial describes a sanitising agent that will kill or slow down the spread of microorganisms.

WHAT ARE MICROORGANISMS?

A microorganism, or microbe, is a microscopic unicellular organism invisible to the naked eye. They are the oldest form of life and include viruses, bacteria, mould and fungi which contribute to many infectious diseases such as Listeria, Salmonella, MRSA, Cold and Flu.

HOW EFFECTIVE IS OUR ANTIMICROBIAL IRONMONGERY RANGE?

Our oven-cured protective coating is extremely durable and is suitable for both internal and external applications. Its antimicrobial performance has been scientifically proven by a leading laboratory (test data available).

OVERVIEW

- Provides continuous protection against COVID-19 and harmful microbes, 24 hours a day.
- Built-in protection for the expected lifetime of our products, as long as the coating remains intact.
- Suitable for internal and harsh external environments.
- Extremely safe as they do not contain nano-silver or other organic antimicrobial components which have health or environmental concerns.

UP TO **99.99%** EFFICACY ON TREATED PRODUCTS IN 10 MINUTES

NO LOSS OF PERFORMANCE AFTER **10 YEARS**

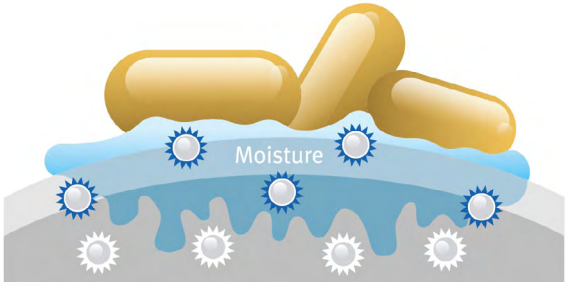
KEY STATS

>80% reduction of Human coronavirus SARS-Cov-2 over a 2 hour period when compared to a stainless steel control surface. Tested to ISO 21702 (2019).

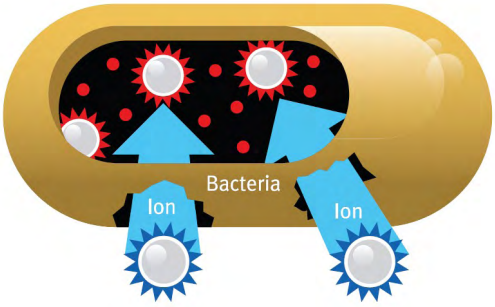
99.99% reduction of MRSA, E. coli, Salmonella and other superbugs found in hospitals and nursing homes, achieved within 10 minutes. Tested to ISO 22196.

HOW DOES OUR PROTECTIVE COATING WORK?

Our products incorporate our uniquely blended antimicrobial additive which uses silver-ion technology. Illustration showing how silver ion technology works to kill harmful microbes:



Silver ions embedded in the material substrate are released via ambient moisture and enter the cell membrane.



Silver ions destabilise cell membrane, stop respiration and inhibit cell division, whilst blocking the replication of DNA.

LIST OF HARMFUL MICROORGANISMS

Shown on the following pages is a list of harmful microorganisms our antimicrobial protective coating will help eliminate.

MICROBE	SOURCE OF INFECTION:	SYMPTOMS
Human coronavirus SARS-CoV-2 	Primarily transmitted when someone with COVID-19 breathes, talks coughs or sneezes releasing droplets containing the COVID-19 virus for another to inhale. It can also be transmitted indirectly through contact with particles which have landed on hard surfaces.	The main symptoms may include a high temperature, a continuous cough, and / or a loss or change to your sense of smell or taste.
Serratia marcescens	Found in: A harmful human pathogen which can be spread through hand to hand contact by healthcare workers. An opportunistic bacteria.	Urinary tract infections, wound infections, respiratory infections and Pneumonia.
CRE klebsiella	Found in: Humans, animals and the environment. Spread through: Patients whose care requires ventilators, urinary catheters, or intravenous catheters.	Meningitis, Pneumonia, Urinary tract infections.
MRSA 	Found in: The skin, nose and throat of colonised individuals Spread through: Skin-to-skin contact and contaminated objects e.g towels, sheets, clothes, dressings, surfaces, door handles and floors.	Wound infection, skin infection, Septicaemia, Endocarditis.
VRE	Found in: The human intestine, our skin and urinary tract. Spread through: Most commonly through the hands of Healthcare workers.	In a wound: Red, inflamed and tender skin In the urinary tract: Back pain burning sensation and increased urination. Others symptoms include diarrhoea, weakness, chills, and fever.
Chaetomium globosum	Found in: A common indoor fungi contaminant of water damaged buildings.	Causes health effects such as skin and nail infections. In some cases it can produce mycotoxins that are especially dangerous to individuals with compromised immune systems.
Bacillus subtilis	Found in: Soil and water. Spread by: Spore producing microbes, it is a cause of food spoilage.	Can cause nausea, vomiting and abdominal cramps.
Campylobacter	Found in: Raw meat (usually poultry), raw milk. Spread by: Consumption of undercooked meat or contaminated surfaces.	Diarrhoea (often with blood), Abdominal pain and cramping, fever, headache, nausea and/or vomiting Symptoms take 3-6 days to develop.
Streptococcus mutans	Found in: The human oral cavity.	A significant contributor to tooth decay, It can be identified by chalky white spots on the surface of the tooth, indicating an area of demineralisation of enamel, and is the earliest sign of tooth decay.
E. coli & E. coli 0157	Found in: Intestines of animals, environments infected with E. coli containing faeces. Spread by: Consumption of contaminated food and drink and contaminated surfaces.	Diarrhoea, vomiting, stomach cramps, high temperature and aching muscles. O157 causes more severe infections. For example, kidney complications.
Micrococcus luteus	Found in: Soil, dust, water and air, and as part of the normal microbiota of the mammalian skin. The bacterium also colonises in the human mouth, mucosae, oropharynx and upper respiratory tract. The main transmission path is direct or indirect contact with contaminated persons or objects.	Generally harmless but can cause illnesses such as Meningitis, Septic arthritis, Endiocarditis, chronic cutaneous infections in HIV positive patients and catheter infections. In immunocompromised people it can lead to skin infections.
Enterococcus faecalis	Found in: Human intestines, female genital tract and is also often in the environment. Spread by: Intravascular or urinary catheters.	In a wound: Red, inflamed and tender skin. In the urinary tract: Back pain, burning sensation and increased urination.
Proteus rettgeri	Found in: Water, soil and animal reservoirs and are opportunistic pathogens in hospitalised patients and elderly residents in care homes.	Causes infections usually confined to the urinary tract.

LIST OF HARMFUL MICROORGANISMS

MICROBE	SOURCE OF INFECTION:	SYMPTOMS
Legionella pneumophila	Found in: Water, especially warm water such as hot tubs, cooling systems (e.g. air con) Spread by: Inhaling contaminated water droplets.	Coughing & shortness of breath, high fever, muscle aches, headaches. Symptoms can take 2 weeks to develop.
Listeria monocytogenes	Found in: Chilled ready-made food such as deli meat, smoked salmon, soft cheese and pâté. Spread by: Consumption of contaminated food. If pregnant, mothers can pass the infection to their baby.	Headache, stiff neck, confusion & loss of balance, Fever and muscle aches.
Pseudomonas aeruginosa	Found in: Soil and water. Spread by: Infections after surgery and urinary tract infections by catheterisation etc.	Skin: rash, ulcers, headaches, Ear: pain, itching, ear discharge, Eye: swelling, redness, and discharge, Blood: fever, chills, fatigue, muscle pain, Lungs: pneumonia.
Salmonella spp	Found in: Poultry, pigs and cattle. Reptiles also carry the bacteria. Spread by: Consumption of contaminated food or drink, person to person or animal to person.	Diarrhoea, fever, nausea, abdominal cramps. Symptoms usually last around 4-7 days.
Paecilomyces variotii	Found in: common environmental mould widespread in air and food products.	Associated with many types of human infections, such as Fungemia, Endocarditis, Peritonitis and Osteomyelitis
Staphylococcus aureus	Found in: The skin, nose and throat of colonised individuals. Spread by: Skin-to-skin contact and contaminated surfaces.	Wound infection, skin infection, Septicaemia, Endocarditis.
Staphylococcus epidermidis	Found in: The skin, nose and throat of colonised individuals. Spread by: Biofilms growing on catheters and intravenous lines.	Wound infection, skin infection, Septicaemia, Endocarditis.
Streptococcus faecalis	Found in: Human intestines, female genital tract and is also the environment Spread by: Intravascular or urinary catheters devices.	In a wound: Red, inflamed and tender skin. In the urinary tract: Back pain, burning sensation and increased urination.
Aspergillus niger	Found in: Soil, indoor and outdoor environment Spread by: Mould spores in the air.	Can cause Aspergillosis diseases: Allergic bronchopulmonary aspergillosis, Allergic Aspergillus sinusitis, Aspergilloma (fungus ball), Chronic pulmonary aspergillosis.
Candida albicans	Found in: The mucoid membranes and on the skin. Spread by: Usually an opportunistic pathogen in immunocompromised patients and those receiving certain therapies.	Thrush, fever and chills, invasive infections.
Penicillium sp.	Found in: Common cause of food spoilage by microbial contamination. Spread by: Mould spores in the air.	Endocarditis: heart murmur, fever and chills, fatigue, Mycotic keratitis: eye pain, redness, blurred vision.
Trichophyton mentagrophytes	Found in: A fungus found in moist, carbon-rich environments.	Known to cause a skin infection known as Dermatophytosis or Ringworm. The invasion of the skin, hair and nails can cause diseases such as tines pedis or athletes foot.
Aureobasidium pullulans	Found in: Soil, water and air, bathrooms, laundry rooms. A black yeasty mould.	Causes infections of the eye, skin and nails and should never be touched directly with bare skin. It is a major allergen and irritant and should never be tolerated in the house.
Aspergillus flavus	Globally found in soil, cereal grains and tree nuts.	Although rare, it can cause fever, coughing blood, wheezing, fatigue and severe asthma are the commonest symptoms. Severe cases can be life threatening.
Sphingomonas paucimobilis	Found in: both wet and dry environments. Spread through: hospital equipment, humidifiers, water, air, bedside water bottles, sinks and temperature probes.	Fever, chills, sore throat, cough, aching muscles.

Q&A

Are your products effective against COVID-19?
Yes, independent testing undertaken in February 2022, in accordance with standards set out in ISO 21702 (2019), confirmed our products deactivated over 80% of the virus within a 2 hour period.
How long can the COVID-19 virus survive on metal surfaces eg: door handles, push plates?
72 hours
Will the antimicrobial technology eventually stop working and can it be washed or rubbed off?
No, the SteriTouch® additives are permanent and provide built-in protection for the expected lifetime of our products, unaffected by most cleaning products, oils, greases, acids and alkalis.
Are your door handles and push plates more hygienic than standard Ironmongery products?
Yes absolutely. Our products will not host microbes, significantly reducing the potential to cross-contaminate multiple users. In addition to preventing the growth of microbes it reduces both staining and bad odours caused by mould and fungi in areas like kitchens, bathrooms and toilet cubicles etc.
How effective is the antimicrobial technology incorporated within our Antimicrobial Ironmongery range?
Very effective. Silver ions are embedded within our uniquely formulated protective coatings. These start working immediately by killing and therefore preventing the reproduction of harmful microbes such as MRSA, E. coli, listeria, legionella plus many more, reducing up to 99.999% in just 10 minutes. (Please refer to the list of harmful organisms on previous pages).
Is the Matt Black, Matt White and clear coat formulation hard wearing and suitable for external use?
Yes, our protective coatings have passed arduous testing which includes salt fog spray, boiling water immersion, impact hardness, and ultraviolet light exposure. This demonstrates our products are suitable for both internal and harsh external installation. (Please refer to our technical data sheet).