



assuredhygiene⁺
Advanced Antimicrobial Solutions

Specialist Cleaning and Disinfection Products

Tested and Approved against major harmful bacteria, viruses, moulds and spores
Residual kill lasts for 180 days

Technical Brochure



History of Assured Hygiene

Underpinned by years of experience in the fields of hygiene and disinfection, Assured Hygiene Ltd, a private British company, has developed a unique range of specialist cleaning and disinfection products utilising the very latest technologies.

Assured Hygiene Ltd manufacture a range of environmentally safer products which offer the most extensive control of micro-organisms seen anywhere in the world. Assured Sanitiser Plus's very high level of initial kill coupled with a 28 day residual efficacy (up to 180 days with MRSA and Legionella under test conditions) offers an outstanding ability to keep areas free of bacteria, viruses, spores and moulds.

Assured Hygiene delivers what no other technology can; water based broad spectrum anti-microbial control together with long lasting residual biocidal efficacy. Our products contain no alcohol. All this delivered in a safe and environmentally friendly manner.

Exhaustive testing of our products has resulted in

an impressive list of approvals, both for the initial biocidal kill and the long term residual biocidal efficacy. These tests demonstrate the quality and robustness of Assured Hygiene's product range and our ability to continue to satisfy the ever increasing demands of health and hygiene assurance.

Innovation has been the key to the success of our products. Expertise in the development of cleaners, sanitisers, disinfectants and associated application equipment has allowed our customers to achieve significant cost benefits, due to both the low concentrations required and the long term residual efficacy of the products.

Assured Hygiene supplies a range of unique environmentally friendly cleaning and disinfection products based on our novel technology.

Assured Hygiene Technology

Our anti-microbial technology works at two levels.

The initial high level microbial kill is given by a molecular matrix which incorporates a number of biocides.

These biocides are well known anti-microbials that act synergistically to kill micro-organisms. This synergy allows the biocides to be used in low concentrations that are safe to handle. In addition,

the nature of the matrix weakens and predisposes microbial cells to attack by the biocides.

Once the surface has been treated to kill and remove the resident microbial population, our products form a permeable co-valent mono layer on the surface which, when dry, continues to kill micro-organisms.

Active Infection Control

There are two main fundamental types of anti-microbial agent, 'unbound' anti-microbials and 'bound' anti-microbials. Assured Hygiene offer the only products to contain both these agents where the efficacy has been verified.

This water-based technology forms an invisible protective permeable mono layer delivering a unique anti-microbial barrier that kills bacteria on contact and offers long-term protection. (tested to 180 days against MRSA and Legionella). The technology acts as a magnet-type force to attract and draw the bacteria onto it. When a bacterium comes in contact with the coating, the cell walls are ruptured killing the micro-organism.

The technology developed attracts and kills bacteria in a way that is described as a physical kill by rupturing the cell wall. This offers commercial potential to protect everyday surfaces, materials and fabrics, and our products have never been shown to allow or cause microbial adaptation, resistance, mutation or migration.

This advanced innovative technology comes in the form of an easy to use spray or wipe and leaves a coating on the surface. The coating has been rigorously tested in British laboratories and has been shown to destroy up to 99.999999% of bacteria, mould, fungi and virus including spore-forming organisms such as C.difficile.

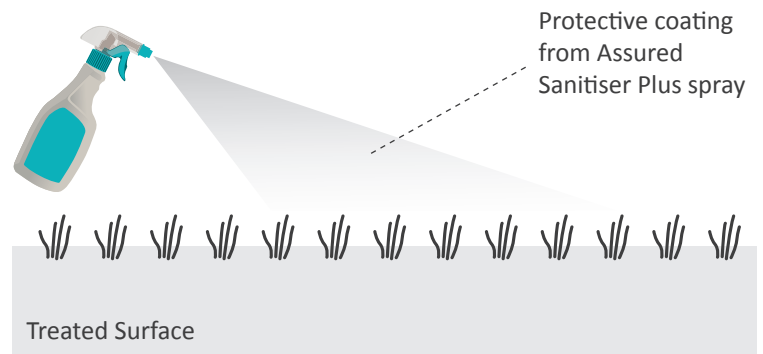
Assured Sanitizer Plus offers a real alternative to replace conventional sanitizers and disinfectants, which are powerless against many of the emerging superbugs. The Assured Sanitizer Plus formulation offers the industry's only 28 day and 180 day residual kill claim resulting from provided our residual, invisible, antimicrobial coating. Designed as a dual-action performer, with both micro-biocidal and micro-biostatic properties, our product range has incredibly diverse applications.

Technology Modes of Action

How does Assured Sanitiser Plus technology work?

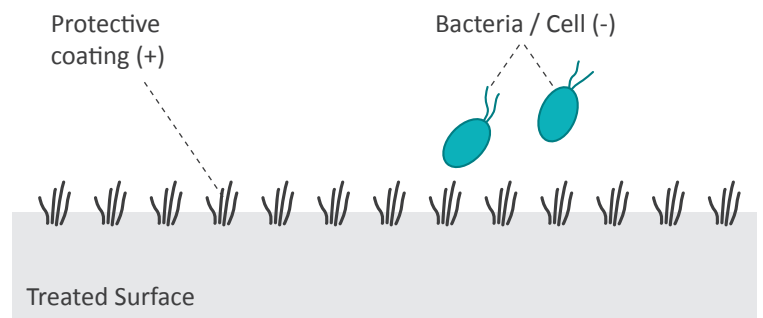
1.

When applied to a surface, the blend of biocides works synergistically to rapidly kill the resident micro population. An anti-microbial protective coating then bonds invisibly to the surface, be it solid or fabric.



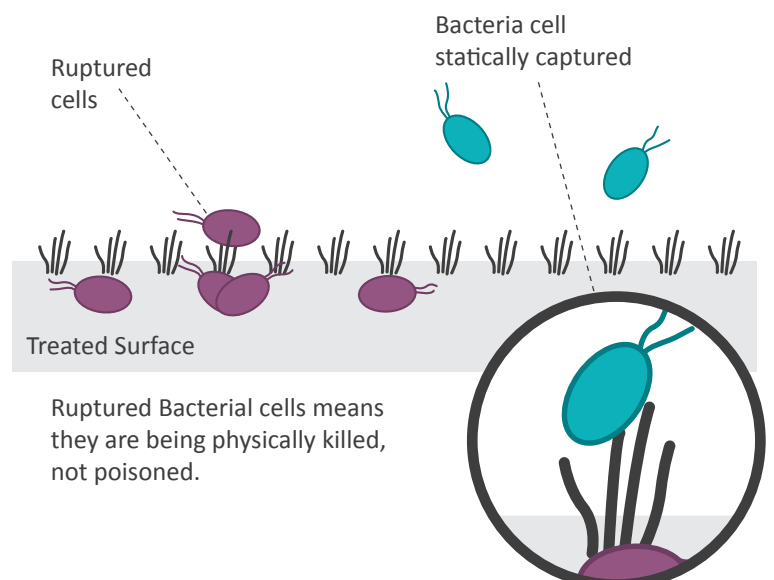
2.

The Bacterial cell is negatively (-) charged. The anti-microbial molecule is positively (+) charged. The bacteria are statically drawn onto the surface coating.



3.

Once the cell wall has been ruptured by the **Protective coating** the Bacterial cell dies.



Technical Specifications

Our novel water based products, when dried on a surface to form an invisible protective coating , gives residual biocidal efficacy tested to 180 days under laboratory conditions. As far as we are aware, this is an absolutely unique trait in the global disinfection market.

Assured Sanitiser Plus is available as a concentrate or ready to use liquid, for direct spraying or wiping onto surfaces. All products carrying the 'Plus' suffix, provide long term residual surface biocidal efficacy.

Our principle product, **Assured Sanitiser Plus**, exhibits the following:

Finished Product Features:

- Concentrate or ready to use liquid for the simultaneous cleaning and disinfection of surfaces.
- Comprehensive biocidal spectrum being bactericidal, fungicidal, sporicidal and viricidal.
- Intensive cleaning properties with excellent material compatability.
- Cost effective due to low in use concentrations.
- Increased surface bio-security due to long term residual biocidal effect.
- Very low chemical hazard.
- Non-corrosive.

Chemical Composition:

Assured Sanitiser Plus is based on a synergistic blend of biocides bonded to a complex matrix in an aqueous solution.

Microbial Effectiveness:

Assured Sanitiser Plus is effective against bacteria, viruses, spores, yeasts, mould and fungi and has been tested to EN's: 1275, 1276, 13704, 13697 and 14476, as well as independent long term residual tests.

Toxicology:

Assured Sanitiser Plus is non toxic and non hazardous.



Regulatory:

Assured Sanitiser Plus only uses components which are acceptable within the global regulatory framework:

- The products are covered and included in the European BPD & REACH
- EPA approval awaited

Assured Sanitiser Plus:

The product is characterised by its intensive cleaning properties and excellent material compatability. Assured Sanitiser Plus incorporates a neutral detergent and a blend of biocides at low concentrations which give surface safety when used regularly on account of its excellent resistance to microbial recolonisation after application.

Technology Benefits

Our products are based on a unique formulation 'Assured Sanitiser Plus' that has a number of key benefits and advantages over traditional sanitisers and disinfectants.

Our unique technology, when dry on a surface, be it a hard or fabric surface, will continue to kill micro-organisms for an excess of 180 days under test conditions. Our technology may be incorporated into other materials e.g. concrete, plastics, water filters and many liquids, to give ongoing microbial protection.

Safer to use - Assured Sanitiser Plus carries no hazard classification so handling issues are minimal.	Highly active against biofilm residues interfering with the biofilm structure. The neutralising of the biofilm surface attachment properties makes cleaning easier.
Environmentally friendlier utilising safer chemicals in an easy to use format. Fully biodegradable to EU standards.	Binds to treated surface preventing surface attachment of bacteria reducing biofilm growth.
Non-corrosive and safe to use on all surface types. High level of anti-microbial activity against all bacteria, viruses, spores and fungi. (see page for 11 for test results).	Biocide formulation prevents the development of resistant organisms.
Long term residual effect based on innovative development of the product matrix, ensuring once sanitised, the surface remains safe.	Special torch allows the protective coating to be seen allowing product coverage and residual longevity to be verified.

		Properties							
		Residual	Broad Spectrum	Damages Surfaces	Hazardous to users	Flammable	Obnoxious Odours	Unstable	Slow Kill Time
Sanitising Products	Alcohol	NO	NO	YES	YES	YES	YES	NO	YES
	Chlorine	NO	YES	YES	YES	NO	YES	YES	NO
	Glutaraldehyde	NO	YES	YES	YES	NO	YES	YES	NO
	Peroxygen	NO	YES	YES	YES	NO	NO	YES	NO
	Iodine	NO	YES	YES	YES	NO	NO	YES	YES
	Phenol	NO	YES	YES	YES	YES	YES	YES	NO
	QAC	NO	YES	NO	YES	NO	NO	NO	NO
	ASP*	YES	YES	NO	NO	NO	NO	NO	NO

*Assured Sanitiser Plus efficacy against other sanitisers and disinfectants.

Speciality Products

Assured Hygiene has a large product range. The products listed below either benefit from our unique technology, or form part of our advanced cleaning and hygiene range.

Assured Sanitizer

Combined cleaner & disinfectant, giving excellent cleaning results on any hard surface together with rapid high level initial microbial kill.

Assured Sanitizer Plus

Combined cleaner and disinfectant giving excellent cleaning results on any hard surface together with rapid high level initial microbial kill and going on to give long term residual surface kill when dry (tested to 180 days).

Assured Terminal Disinfectant

Terminal disinfectant giving both rapid initial high level microbial kill and which then forms an invisible permeable surface coating giving long term residual surface kill (tested to 180 days).

Deodoriser

Deodoriser.

Cleaner & Deodoriser

Cleaner & Deodoriser.

Cleaner & Deodoriser Plus

Cleaner and Deodoriser giving long term residual surface kill when dry.

Non alcohol hand sanitizer

A rapid drying hand cleaner and disinfectant with emollients.

Toilet Cleaner & Descaler

Toilet cleaner and descaler.

Eco Toilet Cleaner & Descaler

A 100% 'green' toilet cleaner and descaler.

Agrisafe

Cleaner for use in poultry sheds and for the effective control of Red Mite.

BioGreen MSC

A 'green' multi surface cleaner based on naturally occurring bacteria. Highly effective on organic soiling on hard and fabric surfaces.

PowerGuard

A safe but powerful hard surface cleaner for manual use or via a floor scrubber.

Bactericidal Brass Cleaner

A superior brass cleaner giving initial high level microbial kill.

Bactericidal Brass Cleaner Plus

A superior brass cleaner giving rapid microbial kill and which then forms an invisible permeable surface coating giving long term residual surface kill when dry.

Bactericidal Furniture Polish

A superior Furniture Polish which leaves no waxy deposits thus preventing any product build on the surface and giving initial high level biocidal kill.

Bactericidal Furniture Polish Plus

A superior Furniture Polish which then forms an invisible permeable surface coating giving long term residual surface kill.

Bactericidal Glass Cleaner

A superior glass cleaner which reduces the friction of the glass surface causing water and dirt to be repelled. Reduces the frequency of clean required.

Bactericidal Glass Cleaner Plus

A superior glass cleaner which reduces the friction of the glass surface causing water and dirt to be repelled and which then forms an invisible permeable surface coating giving long term residual surface kill. Reduces the frequency of clean required.

Stainless Steel Cleaner

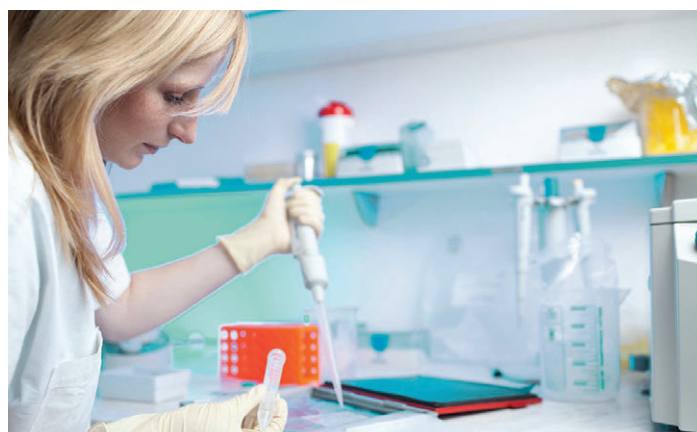
A superior stainless steel cleaner capable of removing smears and reducing the formation of smears on the surface by deposition of an inert oxide layer.

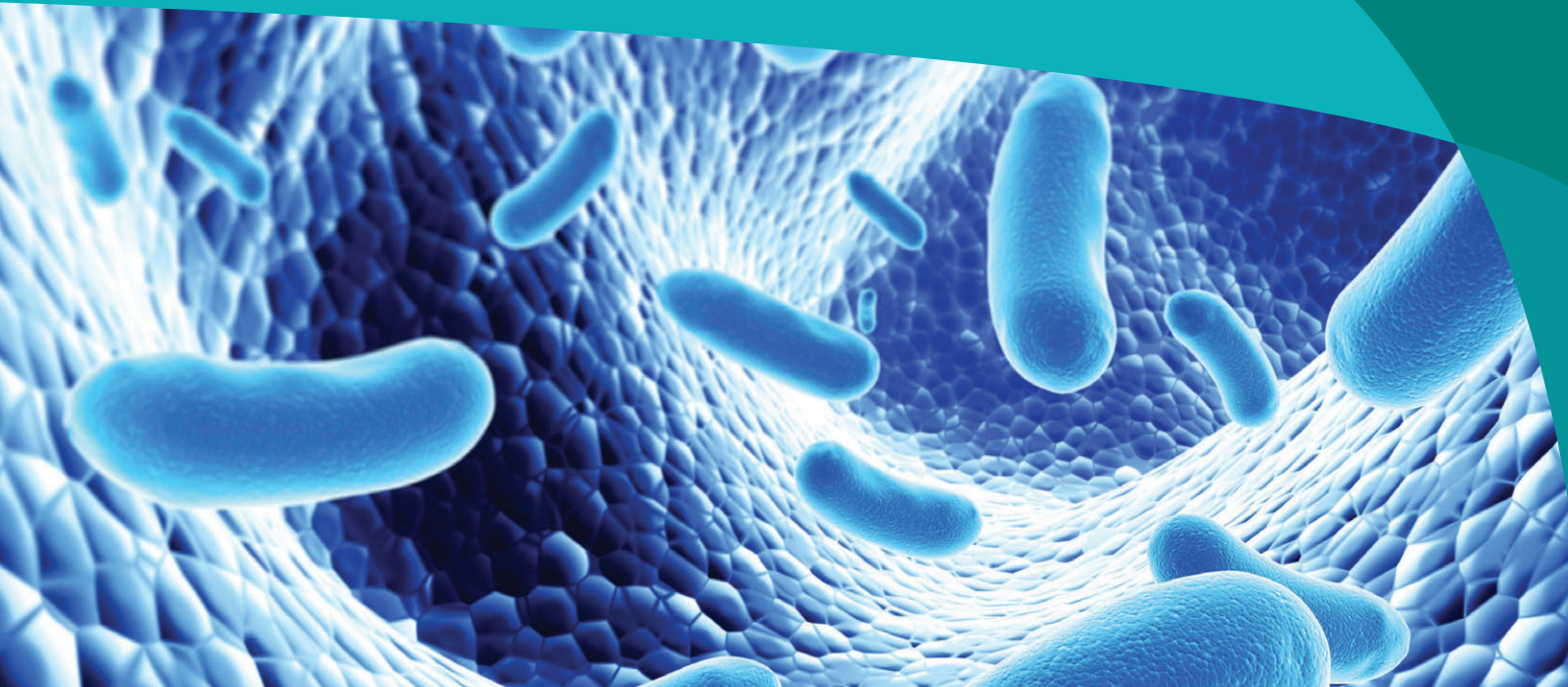
Stainless Steel Cleaner Plus

A superior stainless steel cleaner capable of removing smears and reducing the formation of smears on the surface by deposition of an inert oxide layer and which then forms an invisible permeable surface coating giving long term residual surface kill. Invaluable in e.g. commercial kitchens.

Soy Green

A 100% natural cleaner based on plant extracts offering outstanding cleaning and grease removal properties.

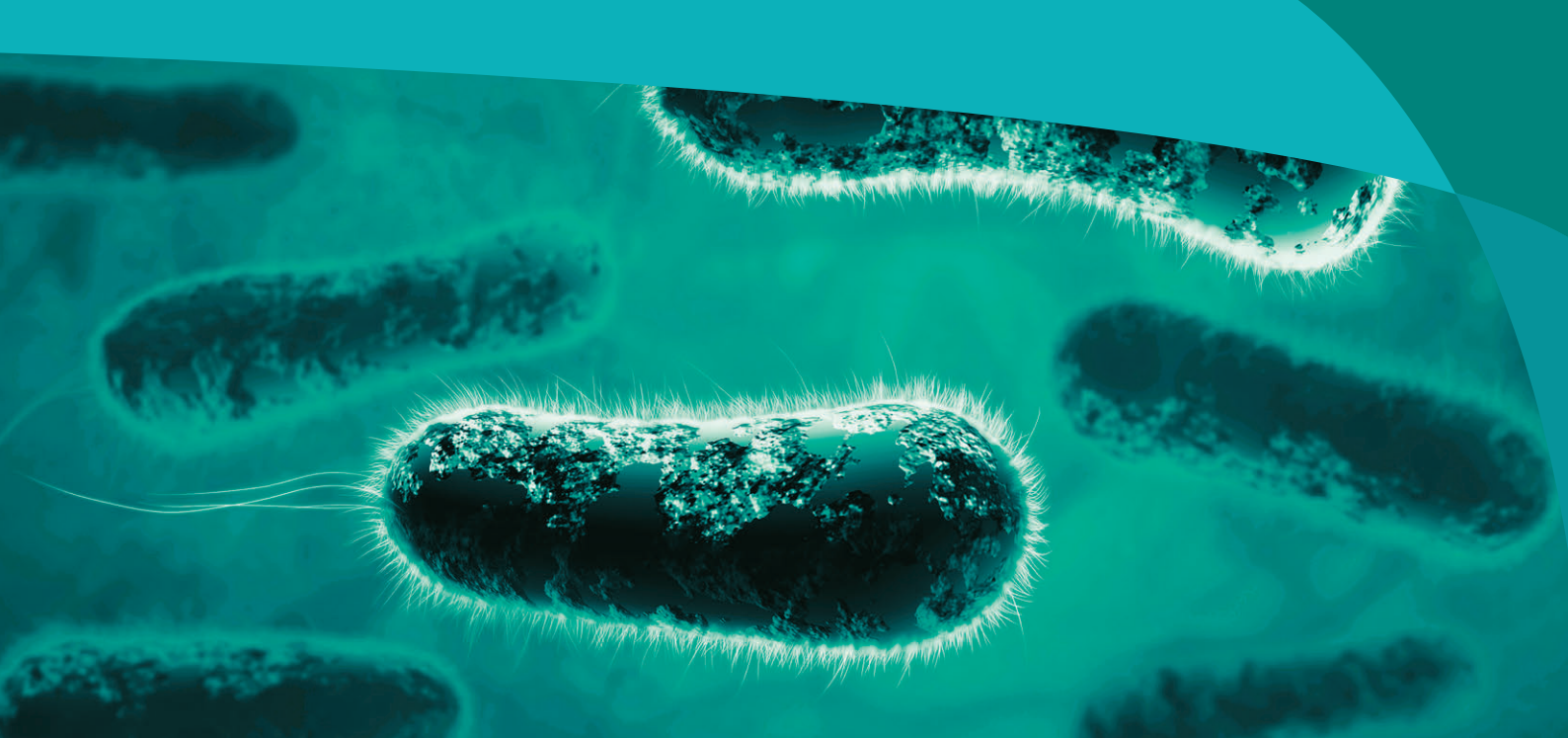




Standard Product Range

Product	Pack Size
Toilet & Washroom	
Toilet Cleaner/Descaler	10x1 Litre
Toilet Cleaner/Descaler	5 Litre
Triple S Toilet Cleaner	10x1 Litre
Triple S Toilet Cleaner	5 Litre
Toilet Freshener	10x1 Litre
Toilet Freshener	5 Litre
Apple Toilet Freshener 10x1 Litre	10x1 Litre
Apple Toilet Freshener 5 Litre	5 Litre
Limescale Remover 10x1 Litre	10x1 Litre
Limescale Remover 5 Litre	5 Litre
Citrus Toilet & Washroom Cleaner	10x1 Litre
Citrus Toilet & Washroom Cleaner	5 Litre
Peach Toilet & Washroom Cleaner	10x1 Litre
Peach Toilet & Washroom Cleaner	5 Litre
Thickened Bleach 10x1 Litre	10x1 Litre
Thickened Bleach 5 Litre	5 Litre
Triple Clean 5 Litre	5 Litre
Triple Clear	6x750ml spray
Lime Disinfectant	5 Litre
Lemon Channel Blocks (Non PDCB)	3 kg
Spray & Wipe with Bleach	6x750ml spray
Catering	
Bactericidal Cleaner	5 Litre
Sanitiser	5 Litre
Neutral Detergent	5 Litre
Washing Up Liquid	5 Litre
Concentrated Neutral Detergent	5 Litre
Lemon Washing-up Liquid	5 Litre
Lemon Washing-up Liquid	10x1 Litre

Product	Pack Size
Catering Continued	
Bactericidal Detergent	5 Litre
Concentrated Machine Dishwash	5 Litre
Concentrated Machine Dishwash	20 Litre
Machine Dishwash	5 Litre
Machine Dishwash	20 Litre
Rinse Aid	5 Litre
Rinse Aid	20 Litre
Auto Rinse Aid	5 Litre
Auto Rinse Aid	20 Litre
Concentrated Machine Glasswash	5 Litre
Machine Glasswash	5 Litre
Descaling Liquid	5 Litre
Beer Line Sanitiser	5 Litre
Oven Cleaner	5 Litre
Oven Cleaner RTU	6x750ml spray
Spray & Wipe Sanitiser	6x750ml spray
Spray & Wipe Sanitiser	5 Litre
Hand Glasswash	10x1 Litre
Hand Glasswash	5 Litre
Hard Surface Cleaners	
Heavy Duty Degreaser	5 Litre
Solvent Free Cleaner	5 Litre
Universal Cleaner	5 Litre
Universal Cleaner RTU	6x750ml spray
Degreaser	5 Litre
Perfumed Sanitiser	5 Litre
Neutral Cleaner	5 Litre
Orange MPC	5 Litre
Lemon Cleanser	5 Litre



Standard Product Range

Product	Pack Size
Housekeeping	
Furniture Polish	6x750ml spray
Furniture Polish	5 Litre
Furniture Polish Spice	6x750ml spray
Furniture Polish Spice	5 Litre
Window & Glass Cleaner	6x750ml spray
Window & Glass Cleaner	5 Litre
Peach Air Freshener	6x750ml spray
Peach Air Freshener	5 Litre
Cranberry Air Freshener	6x750ml spray
Cranberry Air Freshener	5 Litre
Telephone Sanitiser	6x750ml spray
Fabric Conditioner	5 Litre
Cream Cleaner	12x500ml
Peek Metal Polish	20x100g Tube
	6x1000ml can
	12x250ml can
	12x500ml mousse
Odour Neutraliser	6x750ml spray
Specialised Products	
Stainless Steel Cleaner	6x750ml spray
Conc.Traffic Film Remover	5 Litre
Conc.Traffic Film Remover	20 Litre
Antifoam	5 Litre
Marble/Terrazzo Renovator	5 Litre
Graffiti Remover	5 Litre
Graffiti Remover	6x750ml spray
Aluminium Cleaner	5 Litre
Acidic Concrete/ Masonry Clnr	5 Litre
Deodorising Fluid	5 Litre
Cherry Deodorising Fluid	5 Litre

Product	Pack Size
Floorcare	
Extra High Solids Floor Polish	5 Litre
High Solids Floor Polish	5 Litre
Wet Look Floor Polish	5 Litre
Floor Maintainer	5 Litre
Wet Look Floor Maintainer	5 Litre
Pine Floor Gel	5 Litre
Lemon Floor Gel	5 Litre
Floor Polish Stripper	5 Litre
Rinse Free Floor Stripper	5 Litre
Extraction Carpet Cleaner	5 Litre
Dry Foam Carpet Shampoo	5 Litre
Carpet Pre-Spotter	6x750ml spray
Neutral Scrubber Dryer Det	5 Litre
H Duty Scrubber Dryer Det	5 Litre
Handcare	
Ivory Lotion Soap	5 Litre
Ivory Lotion Soap	6x1 Litre
Ivory Lotion Soap	6x500ml pump
Apple Lotion Soap	5 Litre
Apple Lotion Soap	6x1 Litre
Apple Lotion Soap	6x500ml pump
Apple Lotion Soap	12x250ml pump
Pink Lotion Soap	5 Litre
Pink Lotion Soap	6x1 Litre
Bactericidal Lotion Soap	5 Litre
Bactericidal Lotion Soap	6x1 Litre
Bactericidal Lotion Soap	6x500ml pump
Bactericidal Lotion Soap	12x250ml pump
Bulk Fill Soap Dispenser	Unit

Testing & Approvals

Assured Sanitiser

BS EN 13697; Quantitative non-porous surface test for the evaluation of bactericidal and / or fungicidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas.

Independent UK Laboratory

BS EN 13697; Quantitative non-porous surface test for the evaluation of bactericidal and / or fungicidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas.

Independent UK Laboratory

BS EN 13727; Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants used in the medical area. (verses MRSA)

Independent UK Laboratory

Assured Terminal Disinfectant

BS EN 1276; Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas.

Independent UK Laboratory

Hand San

EN 12054; Quantitative suspension test for evaluation of bactericidal activity in products used for hygienic and surgical handrub and handwash.

Independent UK Laboratory

Furniture Polish

BS EN 1276; Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas.

Independent UK Laboratory

Agrisafe

In vitro testing to determine the acaricidal effect of Agrisafe on the red poultry mite, *Dermanyssus gallinae*

Moredu Scientific Ltd

Assured Sanitizer Plus

Microbiological Testing of Assured Sanitizer Plus.
Manchester University

Evaluation of the surface residual activity of Assured Sanitizer Plus against *Pseudomonas aeruginosa* and methicillin-resistant *Staphylococcus aureus* over 90 days.

The Hong Kong Polytechnic University

Evaluation of the surface residual activity of Assured Sanitizer Plus against *Pseudomonas aeruginosa* and methicillin-resistant *Staphylococcus aureus* over 180 days.

The Hong Kong Polytechnic University

Evaluation of the surface residual activity of Assured Sanitizer Plus against *Pseudomonas aeruginosa* and methicillin-resistant *Staphylococcus aureus* over 8 days.

Independent UK Laboratory

EN 14476; Standard Test Method for Efficacy of Antimicrobial Agents Against Viruses in Suspension modified for Feline Calicivirus.

BluTest

BS EN 1276; Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas.

Independent UK Laboratory

BS EN1276; Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas.

Independent UK Laboratory

BS EN 13727; Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants used in the medical area.

Independent UK Laboratory

BS EN 13727; Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants used in the medical area. (verses *Listeria* & *Salmonella*)

Independent UK Laboratory

BS EN 1275; Quantitative suspension test for the evaluation of fungicidal activity of chemical disinfectants.

Independent UK Laboratory

BS EN 1275; Quantitative suspension test for the evaluation of fungicidal activity of chemical disinfectants.

Independent UK Laboratory

BS EN 13704; Quantitative suspension test for the evaluation of sporicidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas.

Independent UK Laboratory

BS EN 13704; Quantitative suspension test for the evaluation of sporicidal activity of chemical disinfectants used in food, industrial, domestic and institutional areas.

Independent UK Laboratory

Evaluation of the residual activity on surfaces of Assured Sanitizer Plus against *Legionella pneumophila*.

Independent UK Laboratory

Surface test to determine the organoleptic effect of Assured Sanitizer Plus on fresh cooked ham.

Independent UK Laboratory

Efficacy Data

Assured Sanitizer Plus

Test	Organism	ASP %	Clean	Dirty	Time	Log Kill	Log Pass
EN1276	Escherichia coli	5		D	5min	8.21	5
EN14476	Norovirus	10	C		5min	4.67	4
EN1276	Pseudomonas aeruginosa	5		D	5min	6.566	5
EN1276	Escherichia coli	5		D	5min	>6.459	5
EN1276	Staphylococcus aureus	5		D	5min	>6.298	5
EN1276	Enterococcus hirae	5		D	5min	>6.269	5
EN13727	MRSA	4		D	5min	>6.50	3
EN13727	MRSA	4	C		5min	>6.50	3
EN13727	MRSA	4		D	30secs	>6.85	3
EN13727	Listeria monocytogenes	5		D	5min	>6.512	5
EN13727	Salmonella typhimurium	5		D	5min	>6.194	5
EN1275	Aspergillus niger	4		D	1min	>6.46	4
EN1275	Candida albicans	4		D	1min	>6.50	4
EN1275	Aspergillus niger	4		D	30secs	>6.46	4
EN1275	Candida albicans	4		D	30secs	>6.50	4
EN13704	Clostridium difficile (spores)	4	C		5min	>6.70	3
EN13704	Clostridium difficile (spores)	4	C		1min	>6.70	3
EN13697	Pseudomonas aeruginosa	5		D	5min	6.548	4
EN13697	Escherichia coli	5		D	5min	>6.358	4
EN13697	Staphylococcus aureus	5		D	5min	>6.439	4
EN13697	Enterococcus hirae	5		D	5min	>6.315	4
EN13697	Pseudomonas aeruginosa	5		D	5min	7.538	4
EN13697	Escherichia coli	5		D	5min	7.451	4
EN13697	Staphylococcus aureus	5		D	5min	7.177	4
EN13697	Enterococcus hirae	5		D	5min	7.242	4

		% Microbial Reduction				
		Day 1	Day 7	Day 30	Day 90	Day 180
Hong Kong University	Pseudomonas aeruginosa	100	99.6	100	100	33.5
	MRSA	100	100	100	100	100
Hong Kong University	Pseudomonas aeruginosa	100	99.6	100	100	
	MRSA	100	100	100	100	
Independent UK Lab	Pseudomonas auriginosa	100	99.92	100		
	MRSA	99.96	99.98	99.96		
Manchester University	A series of tests were conducted using different test methodology. The results are very impressive and show the residual activity of Assured Sanitiser Plus to be effective at 1:10,000 dilution of the ready to use product. A copy of the report is available on request.					



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