

PRODUCT DATA SHEET

Unique Formulation

BioPass is a unique formulation combining a powerful oxidising agent with combined additives and stabilising agents, producing a multi-action solution that desmuts, passivates and disinfects all in one. Requiring no activation, this product is effective in a single application.

Single Step Easy Application

It's as simple as that, no fuss, no waste, no further treatment. A single application is all that is required to effectively passivate, disinfect and sanitise a stainless steel surface.



- Assuming surfaces have previously been degreased, pickled or electro polished, application is by simply spraying liberally over all surfaces, ensuring that all areas are covered and wetted.
- The active ingredients and additives will do the rest, with the added benefit of general desmuting and complex metal salts removal - which may be present from previous processes.
- Following application, surfaces are left to react and dry, requiring no post rinsing.
- In hot conditions, surfaces should remain wetted for a minimum of 5 minutes to ensure adequate activation, passivation, disinfecting and sanitation.

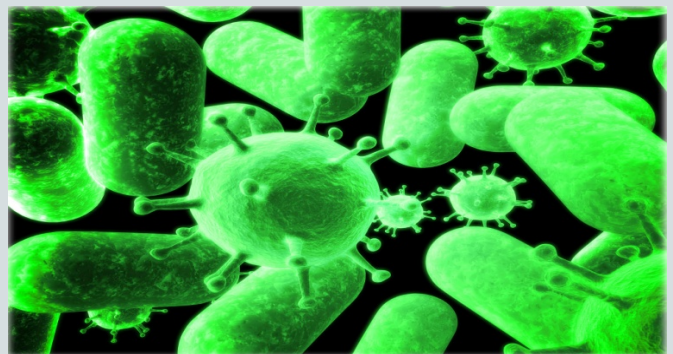
Ready to use



1 litre T-Spray
or 25 litre drum

Product features:

- Effective stainless steel passivation in compliance under alternative methods in globally recognised standard ASTM A967
- Biocide & disinfecting properties in compliance with European EN protocols.
- Non hazardous, biodegradable product, soluble in water and harmless to aquatic life forms
- Removes and desmuts undesired complex metallic salts and residues
- Can be used on other corrosion resistant hard surfaces as well as stainless steel.
- Effective algacide & fungicide, ideal for marine applications. Low sensitivity to light and temperature variation.
- Ready to use, supplied in 500 ml trigger spray applicators and 25 litre drums.



BioPass: effective against bacteria, viruses and fungi

Willowchem Technology Limited

Web: www.willowchem.co.uk

Email: sales@willowchem.co.uk

Stainless Steel Surface Finishing, Products & Consumables, Plant / Equipment & Consultation

Efficacy Test Results

BioPass is a highly effective against all bacteria, viruses, algae and fungi. The data below demonstrates positive efficacy test results.

BACTERIA	EFFICIAT LOG REDUCTION	TIME MINS	PROTEIN
ESCHERICHIA COLI	6	60	0
CLAVIBACTER MICHIGANENSIS	3	5	0
XANTHOMONAS CAMPESTRIS	>5.8	5	0
STAPHYLOCOCCUS AUREUS	>5.8	5	0
STREPTOCOCCUS FAECIUM	>5.8	5	0.03
PSEUDOMONAS ARUGINOSA	6.1	5	0.03
MYCOBACTERIUM TERRAE	3	5	0.03
PROTEUS MIRABILIS	>5.9	5	0.03
LEGIONELLA (SERO TYPE 1)	>7	10	0
AEROMONAS HYDROPHYLA	>6.8	5	0.03
SALMONELLA ENTRIDIDES	>6	5	0.03
LACTOBACTILLUS BREVIS	5	5	1
LACTOBACTILUS LINDRERI	>6	3	0.03
PIOCOCCUS DANNOSSUS	>6	10	0
ESCHERECHIA COLI	>6	10	0
PSEUDOMONAS SPEC.	>6	10	0
VIRUS			
PAPRIKA MOZAIK	3	5	120
FUNGI AND SPORES			
FUSARIUM OXYSPORUM	>5.4	5	0
ASPERGILLUS FUMIGATUS BACILLUS SUBTILIS VAR NIGER	>5.2	5	0.03
YEAST			
CANDIDA ALBICANS	>5.6	60	0
ACCHAROMYCES UVARUM	>6	10	0
PICHIA MEMBRANAEFACIENS	>6	10	0

Germicidal Effect

BioPass is a true no gap disinfectant. Effective against all bacteria, viruses, algae and fungi without exception.

A modern hard surface biocide, It is highly effective against:-

- *Gram-positive bacteria, gram-negative bacteria, pathogens like Legionella, Salmonella, and Listeria, and all virus groups, sheathed or unsheathed.*
- *Effective against yeast spores, moulds and biofilms the adhesive ecosystem, which attaches itself to pipe and vessel walls.*
- **BioPass** is very stable (up to 95 °C), and degrades in an environmentally friendly manner, breaking down to water and oxygen.



BioPass was applied for final desmuting, passivation, disinfecting and sanitation of marina handrails

Material Corrosion Data

BioPass is suitable for a wide range of other materials as well as stainless steel. This data should be referred to when there is potential of overspray on other parts of an assembly or fabrication. At a pH of around 5, it is a extremely strong oxidising agent. It decomposes readily in the presence of soluble iron and attacks reactive organic materials enabling the removal of biofilm and microbiological slimes . The following tables are based on the best corrosion data available.

Metals

Material of Construction	Corrosion Rate (mpy)	Comments on Corrosion
Cast Iron (Grey)	< 20	Satisfactory
Silicon cast iron	20 - 50	Do Not Spray Apply
Mild Steel	< 20	Satisfactory, possible catalytic breakdown
Copper & Alloys	< 50	Not recommended
Nickel	< 20	Satisfactory
Nickel / Copper	< 20	Satisfactory
Ni /Cr / Fe 76-16-7	< 20	Satisfactory
Ni / Mo		Satisfactory
Aluminium	< 20	Satisfactory
Lead		Satisfactory
Platinum	< 2	All concentrations suitable
Silver	< 2	All concentrations suitable
Titanium	< 2	All concentrations suitable
Zinc		Not Recommended
Galvanised Steel		Not Recommended

Plastics & Other Materials

Material of Construction	Comments
Acetyl Co polymer	Satisfactory
ABS	Apply with care. Test
Cellulose Acetate	Apply with care. Test
Epoxy	Satisfactory
Chlorine Sulphonyl Poly	Satisfactory
Fluorocarbons	Satisfactory
Chemical Glass	Satisfactory
Nylon	Satisfactory
Polyester fibreglass	Satisfactory
Polyethylene fibreglass	Satisfactory
Polypropylene	Satisfactory to 80°C
PVC	Satisfactory
PVDF	Satisfactory
Butyl Rubber	Satisfactory
Fluorine containing rubbers	Satisfactory
Natural Rubber	Do not use

Notes

- Corrosion rates are as “mpy” (thousands of an inch per annum)
- Unless otherwise stated all corrosion rates apply up to 100 °C



When applying BioPass to this control panel the plastic conduit & fittings were unaffected.

Disclaimer

The views expressed in this report are those of its authors. These views should not be considered representative of the parent institutions of the expert authors.

Surface Finishing Product Range

PRODUCT	APPLICATION	METHOD
CLEANER	RANGE	
<i>Cleaner 60</i>	A concentrated highly efficient stainless steel cleaning product that may be applied by spray and diluted for use in immersion processes.	Solution maybe applied by pump action hand spray or used dilute in an immersion application.
<i>Cleaner 61</i>	A low classification "Irritant" stainless steel cleaner with high cleaning power.	Applied by spray by 1000 ml trigger sprays or pump action spray device.
PICKLE	RANGE	
<i>Pickle Gel 50</i>	A universal clear pickle gel, capable of efficiently removing all types of thermal oxides and weld discolouration	Brush or roller on, 15 – 30 minutes application
<i>Pickle Solution 80</i>	A full strength pickling solution capable of combating the most difficult and stubborn thermal oxides and weld scales.	Mixed 1:1 with water and for immersion and enclosed spray processing only
<i>Pickle Solution 81</i> <i>(Inhibited)</i>	An inhibited pickle solution that lowers the fume evolution and stabilises the process on initial application	Mixed 1:1 with water and for immersion and enclosed spray processing only
ELECTROPOLISH	RANGE	
<i>Electrolyte 90</i>	A highly efficient universal electrolyte capable of processing a wide range of stainless steel alloys.	For electrolytic processing in accordance with the product data sheet.
<i>Electrolyte 91</i> <i>Medical Grade</i>	Similar to that of Willowchem 90 but with the added factor of first fill solution only contain high grade stainless steel metal in solution and the product is supplied with full certification of analysis and conformity.	For electrolytic processing in accordance with the product data sheet.
<i>First Fill 90 & 91F</i>	For first filling of tank the electropolishing products require metal in solution and therefore may be supplied precondition and ready for use.	For use when starting up a new electropolishing installation.
<i>High Specific Gravity</i> <i>90 & 91 HGS</i>	Due to the hygroscopic nature of the electrolyte (Absorbs water for the atmosphere) Willowchem HGS may be added to a working solution in order to maintain the specific gravity within the limits detailed in the data sheets.	For use as additions on an electropolishing installation to increase the specific gravity.
<i>Anodic Etch 95</i>	An electrolytic non toxic pickling alternative highly effective electrolyte capable of processing a wide range of stainless steels.	For electrolytic processing in accordance with the product data sheet.
PASSIVATION	RANGE	
<i>BioPass</i>	A multipurpose Desmut, Passivation Sanitiser. Non Hazardous & Biodegrade.	Applied by spray by 1000 ml trigger sprays or pump action spray device.
<i>Passivation 70</i>	Nitric acid based concentrate to making up solutions inline with ASTM A697	Usually mixed 1:1 with water for immersion or spray application.
<i>Desmut 71</i>	Sulphuric acid based product for rapid desmutting following pickling or electropolishing	Usually mixed 1:1 with water for immersion or spray application.

Willowchem Technology Limited

Web: www.willowchem.co.uk

Email: sales@willowchem.co.uk

Stainless Steel Surface Finishing, Products & Consumables, Plant / Equipment & Consultation