Triple7 Iodosan Application Sheet

Distributor:

International Corrosion Services Pty Ltd
Phone: +61 (0) 8 9497 3500
Email: sales@internationalcs.com.au
www.internationalcs.com.au

envirofluid
FOR A BETTER WORLD

IODOSAN

POWERFUL IODINE BASED SANITISER

Triple7 Iodosan is a broad spectrum, detergent disinfectant with a light iodine odour. It is formulated to yield at least 1.75% m/v of available iodine and is effective against a wide range of bacteria & organisms.

Benefits

- For all practical purposes – **Triple7 Iodosan** is non-toxic, non-sensitising, non-irritating, non-staining, non-corrosive and virtually odourless.
- Is not deactivated by hard water and is far less deactivated by organic matter than other biocides.
- **Triple7 Iodosan** is effective against bacteria (gram positive and gram negative), viruses, moulds, fungi, spores, etc. including tubercle bacilli (TB), the AIDS virus, poliomyelitis, and Newcastle disease.
- Amber colour acts as an activity indicator - when colour disappears, iodine is exhausted.
- Complies with the requirements of SABS specification 1081 (1976).

How does Triple7 Iodosan work?

Like all iodine-based preparations, **Triple7 Iodosan** relies on free iodine for its anti-microbial activity. However, in the case of **Triple7 Iodosan** an additional antimicrobial factor operates.

As the product releases iodine, the ion H is generated, transforming the complex into a 'polyelectrolyte', which binds to the negatively charged bacterial cell wall. This, and the general affinity of iodine for cell membrane proteins, means that the iodine complex helps deliver iodine to its target organism. The iodine denatures sensitive proteins in the membranes resulting in lysis and cell death.

The chemical basis of the germicidal action of **Triple7 Iodosan** is by the oxidation and iodination of amina acids, sulphydryl compounds, peptides, proteins, enzymes, vitamin C, lipids, and cytosine, resulting in the in-activation of molecules that are essential for biological activity.

Applications for Disinfection & Sanitising

- Amphibious craft and bilges
- Sewage and effluent holding tanks
- Floors, walls, kitchen areas, etc., in clinics, hotels, restaurants, and aged care homes
- Hospital wards, operating theatres, and instruments
- Laboratory & instruments
- Mortuaries
- Glassware and utensils
- Food and dairy plants
- Bottling and canning industries
- Bins, garbage compactors
- Poultry drinking water
- Swimming pools, change-rooms
- Farm buildings, equipment, and foot baths
- Ambulances
- Cooling towers

Dilution Rates

Application	Dilution Ratio	mL of Iodosan per 10L water	ppm Iodosan (Titratable)	Contact Time (Minimum)	Remarks
Hospitals Walls, floors,equipment, morgues, laboratory, operating theatres	1:250	40	70	5 min	
Instruments	1:250	40	70	5 min	Add 0.2% Sodium Nitrate
Food Plants Processing equipment, cool rooms, work surfaces, transport equipment	1:666	15	25	5 min	Remove all food residuals first. No need for potable water rinse
Food Preparation Glasses, dishes, cutlery	1:666	15	25	5 min	Sanitises.
Dairy Industry Farm sanitising Plant sanitising Removing milkstone Cow's udders, teats and flanks	1:666 1:1333 Conc. 1:666	15 7.5 15	25 13 25	5 min 10 min 2 min 5 min	Rinse equipment before sanitising to remove milk residues. Soak, brush and rinse well
Poultry Farms Poultry drinking water Disinfection of hatching eggs, egg trays and incubators General cleaning, disinfecting and deodorising.	1:1333 1:350 1:250	7.5 29 40	13 50 70	 5 min 5 min	Replace when amber colour disappears. Remove all loose, heavy soiling before cleaning and disinfecting.
Marine Bilges, holding tanks	1:7000	1.4	2.2	10 min	
Cooling Towers	1:500	20	35	10 min	Add as a shock dose on a regular basis.

These are suggested dilutions only and changes should be made if contact times vary from recommendations or if heavy soil loads are encountered.

Spectrum of Activity

The anti-microbial activity of **Triple7 Iodosan** can be described as broad spectrum and the product acts against many species from the major groups of micro-organisms such as bacteria, fungi, viruses, and protozoans, including the following:

Gram-negative Bacteria
Aeorbacter aerogenes, Bacteroides sp. (Oralis), Citobacter sp., Edwardsiella sp., Escherichia coli, Heaemophilus sp. (Vaginalis), Herellea sp., Klebsiella sp., Mimea polymorpha, neisseria gonorrhoea, Proteus sp., Mimea polymorpha, neisseria gonorrhoea, Proteus sp., Psudomonas sp., Salmonella sp., Serrotia sp., Shigella sp.

Gram-positive Bacteria
Bacillus sp., Clostridium sp., Corynebacterium sp., Diplococcus pneumoniae, Dephtheroides sp., Micrococcus flavus, Sarcina lutea, Staphylococcus sp., Streptococcus sp.

Yeast and other Fungi
Aspergillus sp., Candida sp., Cryptococcus neoformans, Epidermophyton floccosum, Microsporum audoulnil, Nocardia sp., Penicillum sp., Pityrosporan ovale, Saccharomyces carlsbergensis, Trichopyton sp.

Protozans
Entamoeba histolytica, Trichomonas vaginalis.

Treponema
Treponema pallidum.

Acid-fast Bacteria
Mycobacterium sp.

Triple7 Iodosan showed good microbicidal activity against 'Candida albicans' and 'pseudomonas aeruginosa' killing the organisms within 10 seconds at a 1:50 or greater dilution; 'Staphylococcus aureus' requires 30 seconds to be effective at the 1:50 dilution. Killing times between 15 seconds and 5 minutes is required for most strains of bacteria treated with a 1% solution (1:90) (available iodine 0.1%).

Storage

The product has a shelf life of 2 years when stored in closed containers and away from direct sunlight.

Marine Applications

Triple7 Iodosan may be used for disinfection flushes, being more beneficial than chlorines when organics are present. The product quickly biodegrades, so that flush tanks can usually be entered within four hours of being sanitised.

Disclaimer

Envirofluid accepts no liability for any loss or damage caused directly or indirectly through the use of **Triple7 Iodosan**. Intending users should carry-out appropriate tests to determine the suitability of this product for any particular purpose.

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Time required for 99% reduction of viral titres with Triple7 Iodosan

	POVIDONE-IODINE 10% SOLUTION DILUTION			
Virus	**Undiluted**	**1:10**	**1:100**	**1:200**
Herpes simplex	15 sec	15 sec	15 sec	15 sec
Paliovirus	15 sec	15 sec	15 sec	15 sec
Rubella	15 sec	15 sec	5 sec	5 sec
Vaccinia	15 sec	30 sec	30 sec	1 min

The MIC (Minimum Inhibitory Concentrations) values for **Triple7 Iodosan** range from 0.256 to 1.2ppm available iodine.

Minimum inhibitory concentrations for Triple7 Iodosan against bacteria:

MICRO-ORGANISM	MIC (microgram/mL)
Erysipelothrix rhusiopathlae	512.0
Eschericia coll NCTC 10418	512.0
Klebsiella pneumoniae NCTC 11228	512.0
Listeria monocytogenes NCTC 5348	1024.0
Micrococcus luteus ATCC 9341	512.0
Pseudomonas aeruginosa ATCC 9341	512.0
Staphylococcus aureus (6 strains)	256.0 - 512.0
Staphylococcus epidermidis ATCC 12228	512.0
Staphylococcus haemolyticus 1225	256.0
Staphylococcus saprophyticus NOVOI	256.0
Streptolococcus agalactiae 2787	1024.0
Streptolococcus faecalis NCTC 775	512.0