

Triple 7 Iodosan

NSN 7930-66-153-2102

- > Iodine based sanitizer.
- > Broad spectrum microbiocide.
- > Quick kill & natural effective cleaning.
- > Used in most general cleaning & sanitizing applications.
- > Preferred supplier to the Department of Defence.

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triple⁷
environmental chemistries

What is Triple 7 Iodosan?

Triple 7 Iodosan is an acid formulation containing Iodine which is held in a complex chemical structure known as an Iodophor.

How does it work?

When **Triple 7 Iodosan** acts as a biocide, the free iodine is used up. This iodine is replaced by the release of iodine from iodophor. Figure 1 shows how this occurs at varying dilutions of **Triple 7 Iodosan**. The sanitizing capacity of **Triple 7 Iodosan** is determined by the total amount of free iodine. The disinfecting efficiency depends on the rate at which iodine is released from the complex. At recommended dilutions (iodine concentration with 25-75 ppm available iodine) practically all the iodine is free (90-100%) thereby ensuring rapid biocidal action.

Disinfecting Efficiency

Triple 7 Iodosan has a 99.9% kill rate in two minutes at a 1:500 dilution when tested against most organisms.

Advantages

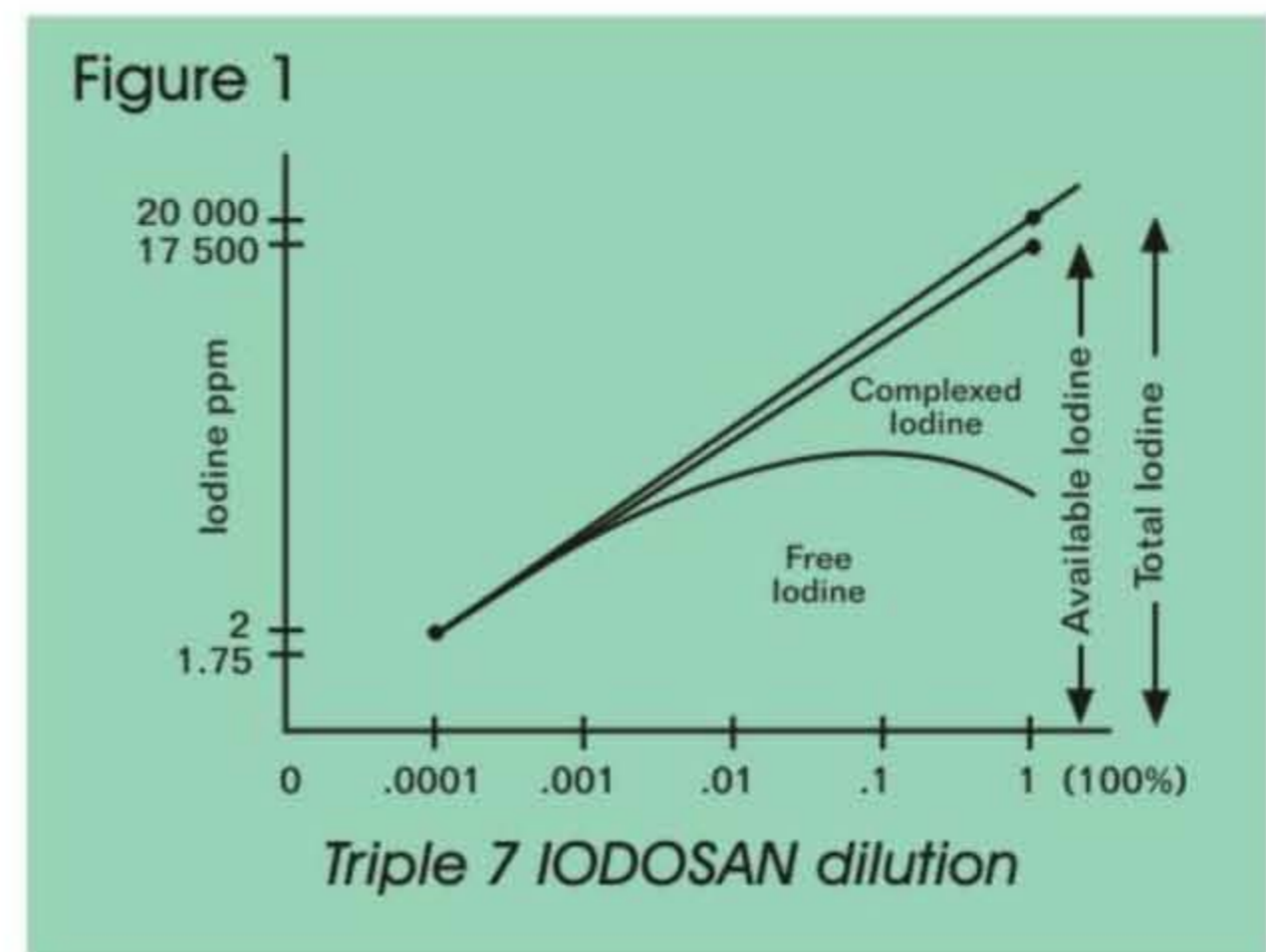
- * Quick kill.
- * Low residual.
- * Effective at low concentrations.
- * Rinse free at low dilutions.
- * Effective against broad range of bacteria, viruses, fungi & algae.
- * May be used in food preparation areas.
- * Not deactivated by hard water.
- * Readily biodegradable.
- * Stable for 2 years in unopened containers.
- * Less deactivated by organic matter than most other biocides.

Applications

- | | | |
|-----------------------|---------------------|-------------|
| * Water holding tanks | * Work benches | * Amenities |
| * Sewage tanks | * Instruments | * Morgues |
| * Plant & cool rooms | * Plant & equipment | |

Dilutions

For sanitising and cleaning of hard surfaces dilute **Triple 7 Iodosan**, 1:500 (20ml/10 litres of water). This dilution gives 35 ppm titratable iodine. Normal contact time for effective sanitizing at this dilution is 5 minutes. For no-rinse sanitisation the recommended dilution is 1:700. Refer to the Product Data Sheet and MSDS for dilution rates and product information.





Product Application Sheet - IODOSAN

TRIPLE 7 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.

How does Iodosan work?

Like all iodine-based preparations, TRIPLE 7 Iodosan relies on free iodine for its anti-microbial activity. However, in the case of TRIPLE 7 Iodosan an additional antimicrobial factor operates.

As TRIPLE 7 Iodosan 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 for the germicidal action of TRIPLE 7 Iodosan may be mediated through the oxidation and iodination of amina acids, sulphhydryl compounds, peptides, proteins, enzymes, vitamin C, lipids and cytosine, resulting in the in-activation of molecules that are essential for biological activity.

Applications

- > Disinfecting bilges on amphibious craft.
- > Disinfecting sewage and effluent holding tanks.
- > General disinfection of floors, walls, kitchen areas etc. in clinics, old age homes, hotels and restaurants etc.
- > Disinfecting hospital wards, operating theatres, instruments etc.
- > Laboratory and instrument disinfection.
- > Sanitising and deodorising mortuaries.
- > Sanitising glasses and dishes.
- > Food and dairy plant sanitising.
- > Sanitising bottles etc. In the bottling and canning industries.
- > Deodorant for garbage bins, refuse containers, etc.
- > Sanitising poultry drinking water.
- > Food baths; on farms, swimming pools, change-rooms, etc.
- > Cleaning, sanitising and disinfecting shower cubicles.
- > Sanitising and disinfecting farm buildings and equipment.
- > Sanitising ambulances, etc.
- > Cooling tower disinfection

Product features

- > TRIPLE 7 Iodosan is a broad spectrum microbiocide which 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.

Product Application Sheet - IODOSAN

Product features

- > For all practical purposes - TRIPLE 7 Iodosan is non-toxic, non-sensitising, non-irritating, non-staining, non-corrosive and virtually odourless.
- > Is not de-activated by hard water and is far less de-activated by organic matter than other biocides.
- > Amber colour acts as an activity indicator - when colour disappears, iodine is exhausted.
- > Complies with the requirements of SABS specifications 1081 (1976).

Dilution Rates

Application	Dilution Ratio	mL Iodosan per 10 litres water	ppm Iodosan (Titratable)	Contact time (Minimum)	Remarks
Hospitals Walls, floors, equipment, morgues, laboratory, Operating theatre.	1:250	40	70	5 min	
Instruments	1:250	40	70	5 min	Add 0.2% Sodium Nitrate
Food Plants Processing equipment, cold 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 Sanitising on the farm. Sanitising in the plant. 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.

Product Application Sheet - IODOSAN

The 'Dilutions Rate Chart' are only suggested dilutions. Variations should be made if contact times vary from recommendations or if heavy soil loads are encountered.

Spectrum of Activity

The anti-microbial activity of TRIPLE 7 Iodosan can be described as broad spectrum. TRIPLE 7 Iodosan acts against many species from the major groups of micro-organisms; bacteria, fungi, viruses and protozoans including the following.

Gram-negative Bacteria

Aerobacter aerogenes, *Bacteroides* sp. (Oralis), *Citobacter* sp., *Edwardsiella* sp., *Escherichia coli*, *Haemophilus* sp. (Vaginalis), *Herellea* sp., *Klebsiella* sp., *Mimeba polymorpha*, *Neisseria gonorrhoea*, *Proteus* sp., *Mimeba polymorpha*, *Neisseria gonorrhoea*, *Proteus* sp., *Pseudomonas* sp., *Salmonella* sp., *Serratia* sp., *Shigella* sp.

Gram-positive Bacteria

Bacillus sp., *Clostridium* sp., *Corynebacterium* sp., *Diplococcus pneumoniae*, *Diphtheroides* sp., *Micrococcus flavus*, *Sarcina lutea*, *Staphylococcus* sp., *Streptococcus* sp.

Yeast and other Fungi

Aspergillus sp., *Candida* sp., *Cryptococcus neoformans*, *Epidermophyton floccosum*,

Microsporium audouinii, *Nocardia* sp., *Penicillium* sp., *Pityrospora ovale*, *Saccharomyces carlsbergensis*, *Trichopyton* sp.

Protozoans

Entamoeba histolytica, *Trichomonas vaginalis*.

Treponema

Treponema pallidum.

Acid-fast Bacteria

Mycobacterium sp.

TRIPLE 7 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*' requiring 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 TRIPLE 7 Iodosan 1% solution (available iodine 0.1%).



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Product Application Sheet - IODOSAN

Time required for 99% reduction of viral titres by TRIPLE 7 Iodosan.

Virus	POVIDONE-IODINE 10% SOLUTION DILUTION			
	Undiluted	1:10	1:100	1:200
Herpes simplex	15 sec	15 sec	15 sec	15 sec
Poliovirus	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

TRIPLE 7 Iodosan is quickly able to inactivate a wide range of micro-organisms.
Minimum Inhibitory Concentrations (MIC)

The MIC values for TRIPLE 7 Iodosan range from 0.256 to 1.2ppm available iodine.

Minimum inhibitory concentrations for TRIPLE 7 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

Product Application Sheet - IODOSAN

Storage

TRIPLE 7 Iodosan has a shelf life of 2 years when stored in closed containers and away from direct sunlight.

Marine Applications

Triple 7 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. TRIPLE 7 Iodosan has a NSN 7930-66-153-2102.

Disclaimer

As the actual conditions of use are out of our control, no liability is accepted for any loss or damage caused directly or indirectly through the use of our products. Intending users should satisfy themselves, by carrying out appropriate tests, as to the suitability of this product for any particular purpose.



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