



# Product Introduction



# What is Steri-max Biocide?

The latest generation in equipment and plant sanitation.

A “double chain” Quaternary Ammonium Compound (quat)

120 g/L (Didecyldimethyl-Ammonium Chloride)



Steri-max has replaced many older single chain “quats”

e.g. Benzalkonium Chloride

- Easily broken down due to organic matter
- No real strengths on Virus’
- Single site activity



**Steri-max is made in Australia**



- **Registered by APVMA – Approval No. 59462**  
*(beware of unapproved cheap imitations)*
- **Manufactured to highest QC levels**
- **Available in 10L & 200L plastic drums**



*The active ingredient in Steri-max is acknowledged as having the following strengths:-*

- Broad Spectrum biocidal activity against both gram positive and gram negative organisms.
- Better performance at lower use concentrations.
- Greater hard water tolerance at lower use concentrations.
- Superior fungicidal performance.
- Greater tolerance for anionic contaminants than previously possible.



## *SOFT ON EQUIPMENT*

*Unlike many other sanitation products (e.g. Chlorine, Iodine etc), Steri-max is non corrosive and therefore will not damage the following when used at label rates:-*

- *Paint work on equipment*
- *Sprayers /application equipment*
- *Packing lines and instruments*



# How does Steri-max work?

It breaks down the proteins which form cell walls of

Bacteria

Fungi

Viruses

Algae

Nematodes



# What does it control?

Fungal Species	
Corynebacterium sepedonicum	Alternaria spp.
Xanthomonas campestris	Aspergillus spp.
Pseudomonas syringae	Bipolaris spp.
Botrytis cinerea	Cladosporium spp.
Fusarium oxysporum	Epicoccum spp.
Phytophthora cinnamomi	Fusarium spp.
Pythium spp.	Mucor spp.
Rhizoctonia solani	Penicillium spp.
Verticillium dahliae	Rhizopus spp.
Phytophthora spp	Ulocladium spp
Can also be effective on resting spores.	



# What does it control?

Bacteria	Virus
Pseudomonas aeruginosa	Proteus vulgaris
Escherichia coli	Shigella flexineri
Staphylococcus aureus	Herspes simplex virus
Mycobacterium smegmatis .	Vaccinia
Streptococcus faecalis	Others
Salmonella choleraesois	Green, mustard and black algae
Serratia marcescens	Moulds and yeasts
Klebsiella spp.	Nematodes
Adeno virus	
Erwinia spp.	
Salmonella typhimurium	
Burkholderia solanacearum	



# How is Steri-max applied?

Mixed with clean water

Rates varying from 0.01% to 1% dilution

As a contact biocide – moist conditions enhance performance

# SUGARCANE

Situation	Rate	Critical Comments
<p><b>Sugarcane</b></p> <p>Aid in the control of the spread of sugarcane smut (<i>Ustilago scitaminea</i>)</p>	1% solution	<p>Appliances: Apply to appliances that are clean and free of detergent. Apply a 1% solution of the disinfectant to all parts of the appliance and keep the surfaces wet for a minimum of 5 minutes.</p> <p>Prior to leaving the property: Disinfection of equipment associated with, for example, surveying for sugarcane smut, maintenance of gas pipes, etc. Apply to equipment that is clean and free of detergent. Apply by spraying a 1% solution of the disinfectant to all parts of the equipment. Keep the surfaces wet for a minimum of 5 minutes. Alternatively, immerse the equipment in the solution (eg a footbath) for a minimum of 5 minutes.</p> <p>Equipment includes hats, plastic bags (used to enclose, for example, GPS equipment and folders), footbaths, immersion containers, spray equipment.</p> <p>Disposal: Dispose of used treatment solutions (from footbaths/immersion containers) onto the ground before leaving the property.</p> <p>General hygiene measures for vehicles: Remove visible soil and plant material from the vehicle and tyres. Spray tyres with disinfectant (1% solution) to run-off.</p>
For control of the spread of sugarcane Ratoon Stunting Disease	100 mL/10L water (1% solution)	Clean knives of all debris and sugar sap, which will reduce strength of solution. Immerse knives in solution for a minimum of 5 minutes making sure blades completely covered with solution. Dispose of unwanted solution safely – refer to disposal statements as shown below.



# PLANT SANITATION

Plant sanitation Camations, Chrysanthemums and cut flowers	100 mL/100L water (0.1% solution)	Growers are advised to check for varietal differences by first treating a small sample. Apply to foliage with first application after transplanting or 6 weeks after planting seed. Apply at 7 day intervals.
Plant sanitation Roses in green/shade houses	50 mL/100L water (0.05% solution)	Growers are advised to check for varietal differences by first treating a small sample. Apply to foliage at 10-14 day intervals.
Post-harvest treatment of Cut Flowers in containers	15 mL/10L water	The stock solution may be used for up to 7-10 days if kept clean. Do not keep cut flowers in solution for longer than 48 hours



# COLD ROOMS AND EQUIPMENT

General disinfection of cold rooms, packing sheds, tunnels, seed trays & other hard surfaces	100 mL/100L water (0.1% solution)	First remove all organic matter from surfaces and keep wet with Steri-maX solution for over 10 minutes for best results.
Disinfection of irrigation water (non food crops only)	5-20 mL /1000L water	When doing so for the first few times, the dirt/algae/organic matter will be discharged and may clog your drippers, spitters or sprinklers. Therefore, rinse your irrigation pipes frequently. The cleaner the irrigation water to be treated, the better the results. May be used in fertigated water. Do not apply directly via fertiliser tank



# POULTRY SHEDS AND EQUIPMENT

<p><b>Poultry Sheds &amp; Equipment</b> For disinfection of poultry sheds and equipment to kill pathogenic bacteria and some poultry viruses #.</p> <p>Step 1. Cleaning Surfaces</p> <p>Step 2. Rinsing Surfaces</p> <p>Step 3. Disinfecting Surfaces</p>	<p>200mL/100L water (1:500)</p> <p>10mL/100L water (1:1000)</p> <p>1L/100L water (1:100)</p>	<p>Use only on hard non-porous surfaces. Not to be used on dirt floors, wooden structures.</p> <p>Use 500-1,000 mL solution per m2. Leave for 30 minutes</p> <p>Rinse off cleaning solution</p> <p>Wet surfaces thoroughly with 300-400mL solution per m2 and leave surfaces to dry. DO NOT RINSE.</p> <p>Steri-maX cleans and disinfects hard surfaces, eg metal, cement, etc, and equipment in poultry sheds and hatcheries. Steri-max does not act as a disinfectant on dirt floors or wooden structures. For heavily infected sheds and/or very dirty sheds, use two full applications.</p> <p>Before using Steri-maX, remove all litter, faeces, residual feed, dust and other loose debris. Before disinfection, surfaces should be cleaned and rinsed. Steri-maX can be applied by manual application or spraying through standard application equipment. All three steps must be followed for full disinfection.</p> <p>Precaution: # Steri-maX is not 100% effective against all poultry viruses.</p>
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# IRRIGATION LINES AND PIPES

Disinfection of irrigation water (non food crops only)	5-20 mL /1000L water	When doing so for the first few times, the dirt/algae/organic matter will be discharged and may clog your drippers, spitters or sprinklers. Therefore, rinse your irrigation pipes frequently. The cleaner the irrigation water to be treated, the better the results. May be used in fertigated water. Do not apply directly via fertiliser tank
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## FOOTBATHS & PRUNING EQUIPMENT

General disinfection of growing medium (inert or organic), equipment (such as pruning shears & ploughs), footbaths and hands	100 mL/10L water (1% solution)	Keep wet for over 10 minutes for best results.
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*See info note on footbaths on website*



# SYNTHETIC HOCKEY PITCHES

## 1. Preventative program - Continuous (prophylactic) applications—water cannon / irrigation system

*Applications with the sprinkler water are suggested as the preferred method for ongoing levels of control.*

***World Hockey** fact sheet suggests that a rate of the specific quaternary compound equivalent to 27 ppm of Steri-max for this prophylactic treatment.*

*Agricrop believe this to be too low for Australian conditions and therefore suggest a rate of Steri-max of 0.01% (100ppm) may be a more effective dose in these circumstances*

*A lower rate of somewhere between 0.01% (100ppm) and 0.05% (50ppm) might be ultimately settled on if control is proving effective.*

***Example :** A hockey centre wish to treat the 50,000 storage tank before watering the synthetic fields. A 0.01% dose would equate to an addition of 5L Steri-max Biocide to the 50,000L tank*

*See info note on hockey pitches on website*



# FOOT BATH HYGIENE TREATMENT

## **As a foot bath hygiene treatment**

Rubber boots, leather boots & shoes etc

*For the control of soil borne diseases such as Phytophthora and Pythium.*

100 mL-500mL  
per 10L of water  
(1% solution)

Use the higher rate where heavy traffic and organic matter are present.

Steri-max is a contact Biocide.

Keep wet for at least 5 minutes for best results.  
Clean all debris from footwear then leave to soak.







"No biocide can be effective if the person simply walks straight through the footbath".

***Replace solution daily as organic matter will degrade biocide activity.***

***See info note on equipment hygiene  
and footbaths on website***



# TEST STRIPS

	Dilution
	0.01%
	0.1%
	0.25%
	0.5%
	1.0%

*Test strips may be purchased from Agricrop sales office*



# CROP PHYTOTOXICITY

- *Preliminary work has shown some phytotoxicity on leafy vegetables at a dilution rate of 1% (1:100).*
- *There have been no reported cases of phytotoxicity on foliage at dilution rates of 0.1% (1:1000) or lower.*
- *If you are considering the use of Steri-max over plant foliage, an initial test application at the chosen rate should be done to determine crop safety.*



# COMPATABILITY

- *Always perform a jar test if considering mixing Steri-max with another product.*
- *Steri-max may not be compatible with some Mancozeb based products.*
- *No wetting agents are required.*



# USER SAFETY

- *Steri-max or DDAC has a low toxicity to mammals*
- *DDAC is registered and widely used for the sanitation of hard surfaces in hospitals, nursing homes and public institutions.*
- *They are also commonly used in swimming pools and industrial water treatment applications.*

***NB: Concentrate solutions may cause irritation to eyes and should be treated as per the MSDS which is available from [www.agricrop.com.au](http://www.agricrop.com.au)***



# IMPORTANT TIPS

- *Steri-max is a contact biocide – it cannot kill pathogens it doesn't touch*
- *It only works whilst in solution on the target*
- *Use late or early in the day or when moist conditions are more likely*
- *Steri-max has no activity once dry. It is not a residual biocide.*
- *Always treat a whole room/area in one operation to prevent reinfection*



*For more information on Steri-max*

*Phone 07-3348 4113*

*Or visit*

*[www.agricrop.com.au](http://www.agricrop.com.au)*