

ALPHASAN®

AGRICULTURAL & HORTICULTURAL WATER TREATMENT SOLUTION



Large volumes of water are used during the growing and harvesting of fruits, vegetables, food-crops and other plants, so managing water quality and controlling microbial activity is essential for sustaining a successful organisation, optimising crop yields and soil productivity, as well as protecting the environment.

Regardless of the source of your water, the use of untreated water for irrigation has the potential to introduce plant pathogens and other harmful microorganisms into your facilities. If you have an irrigation system you probably have biofilm in it, potentially causing operational problems and blockages, as well as having negative impacts on water quality, plant health and crop yields. Biofilm consumes the oxygen in water and dispenses potentially pathogenic microorganisms to your plants every time you irrigate, which can lead to plant nutrient deficiency, stunted growth and devastating plant and crop diseases, resulting in substantial yield losses.

ALPHASAN is Chlorine Dioxide (ClO_2) gas in an aqueous solution that is an exceptionally versatile broad-spectrum microbiocide, registered to inactivate pathogenic microorganisms and biofilms. This solution is universally recognised as one of the most effective, safest and environmentally harmless biocides available and is used for a wide range of applications where effective control of microbial activity is essential. This solution has multiple uses in the horticultural, agricultural and plant nursery sectors.

KEY BENEFITS

- **ENHANCE THE MICROBIAL QUALITY OF YOUR WATER**
- **CONTROL HARMFUL MICROORGANISMS & PLANT PATHOGENS**
- **SUSTAINABLY IMPROVE CROP GROWTH & HEALTH**
- **OPTIMISE CROP YIELDS & QUALITY**
- **MAINTAIN OPTIMUM SYSTEM EFFICIENCY & RELIABILITY**

FEATURES & BENEFITS

ALPHASAN - An exceptionally versatile, broad-spectrum and high-level bactericide, virucide, sporicide, fungicide and algacide that has several important advantages over standard and traditional high-risk chemicals such as hydrogen peroxide, chlorine and sodium hypochlorite. The superior performance coupled with its unrivalled safety and environmental benefits makes it the ultimate water treatment solution, providing complete and sustainable biosecurity.

ALPHASAN has proven to be consistently reliable and is especially effective because it is impossible for bacteria and viruses to develop a resistance to it. This powerful solution has proven to be consistently reliable for the control of, but not limited to, the following pathogens:

<i>Alternaria</i>	<i>Agrobacterium</i>
<i>Botrytis (Grey mould)</i>	<i>Campylobacter</i>
<i>Cryptosporiopsis perennans</i>	<i>Cryptosporidium</i>
<i>Erwinia amylovora (Fire-Blight)</i>	<i>E. coli</i>
<i>Fusarium oxysporum</i>	<i>Giardia</i>
<i>Penicillium expansum (Blue mould)</i>	<i>Hepatitis A</i>
<i>Phytophthora cinnamomic (Root rot or dieback)</i>	<i>Legionella</i>
<i>Plasmopara viticola</i>	<i>Listeria</i>
<i>Pythium ultimum</i>	<i>Pseudomonas aeruginosa</i>
<i>Sclerotinia</i>	<i>Salmonella</i>

HIGH PERFORMANCE – Rapidly & consistently eliminates bacteria, spores, viruses, fungus, mould, mildew, algae, yeasts, protozoa, as well as problematic biofilms and other waterborne microorganisms. ClO₂ has over 2.5 X the oxidising power of chlorine and has proven to be exceptionally effective and sustainable at low concentrations.

SAFETY - Non-toxic, non-flammable & non-hazardous. A chlorine-free, ready-to-dilute solution with no mixing of dangerous chemicals, ensuring staff safety.

ECONOMICAL - Its efficacy at low concentrations and short contact times makes it very economical in use, with low capital & operating costs. Being a single pack solution, it is also easy to handle, monitor & test. It costs about the same as other sanitisers but is more versatile and beneficial to the environment.

ECO-FRIENDLY - Breaks down to a common salt (NaCl). Does not chlorinate or form any dangerous disinfection by-products (DBP's) such as AOX, HAA or THM's. It also breaks down quickly & will not leave any harmful residues or add toxic deposits to soil, making it the most environmentally harmless microbiocide available.

NON-TAINTING – Does not affect the taste, smell or colour of produce. Does not leave any harmful residues & does not corrode irrigation pipework or equipment.

APPROVALS: NZDWS – New Zealand Drinking Water Standards

ClO₂ has high water solubility, remaining as an active dissolved gas in water, giving it the ability to retain its biocidal effectiveness and kill organisms within the water as well as on any surfaces below the water – a unique trait among disinfecting agents. ClO₂ has a neutral pH value in water and is effective in a wide pH spectrum (pH4 – pH10).

TYPICAL APPLICATIONS

ALPHASAN - Used wherever the highest standards of disinfection are required. This versatile broad-spectrum microbiocide is exceptionally effective and safe. Perfect for multiple horticultural applications, disinfecting water and entire water facilities to eliminate pathogenic microorganisms, without leaving a chemical residue or forming harmful disinfection by-products.

The solution is easily implemented into new or existing systems and can be applied via automatic dosing, spraying, fumigation or soaking. It may be safely applied directly onto seeds, foliage, flowers, fruit and vegetables, as well as the soil.

WATER TREATMENT & DISINFECTION

This sanitiser is commonly used for the disinfection of municipal drinking water and food processing. It is ideal for disinfecting irrigation water, fresh produce sterilisation and stock drinking water treatment. By dosing the water with low levels of this drinking water approved microbiocide, biological loading of your water can be minimised and the spread of disease significantly reduced.

- **WATER QUALITY** - Improve & maintain the microbial quality of water, controlling pathogenic microorganisms
- **CONTROL WATER POLLUTANTS** - Control water pollutants such as iron & manganese
- **ODOUR CONTROL** – Eliminate unpleasant odours & off-flavours in water

WATER FACILITIES DISINFECTION

ALPHASAN - Disinfect the entire water system including storage tanks, irrigation systems, as well as hydroponics, aquaponics and other facilities. Provides a long-term disinfectant residual, controlling pathogenic microorganisms & biofilms to ensure complete biosecurity.

- **SYSTEM DISINFECTION** – Disinfects the inside of storage tanks & irrigation lines to prevent the spread of plant pathogens.
- **BIOFILM CONTROL** - Penetrates biofilms, which are likely to be the largest source of water-borne plant pathogens, & effectively inactivates the biofilm microbes that feed off nutrients that are meant for plants.
- **PREVENTS CLOGGING** - Helps to maintain optimum water flow & pressure in irrigation lines, as well as prevention of clogged irrigation sprinklers & drippers.

ALPHASAN®

Our technological advances have made it possible for us to produce a consistent 1000ppm aqueous solution of ClO₂ which has a minimum 6-month shelf-life and is sold in various container sizes. With our experienced Chemists we are ready to assist you in every aspect of the evaluation, design, implementation and long-term support of your Chlorine Dioxide requirements.

Pack sizes: 10L Containers, 60L Drums, 200L Drums & 1000L IBCs

ALPHASAN is a registered disinfectant, manufactured in New Zealand by:

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As the actual conditions of use and storage 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 as to the suitability of this product for any particular purpose, by carrying out appropriate tests.

USE DISINFECTANTS SAFELY. ALWAYS READ THE LABEL AND SDS BEFORE USE. ALPHASAN® IS A REGISTERED TRADEMARK. ALL RIGHTS RESERVED.