

ALPHASAN

POTABLE WATER TREATMENT SOLUTION



ALPHASAN is Chlorine Dioxide (ClO_2) gas in an aqueous solution that is a very powerful oxidising agent, high-level disinfectant and broad-spectrum bactericide, virucide, fungicide and algaecide. It has been developed as a very powerful yet inherently safe and biodegradable water treatment solution, approved by DWSNZ for potable-water treatment applications.

Chlorine Dioxide is now universally recognised as one of the most effective biocidal agents available for a wide range of industrial and domestic water treatment applications, recommended for use where control of microbiological activity is essential. According to U.S. Centres for Disease Control and Prevention, ClO_2 is added to drinking water to protect people from harmful bacteria and other microorganisms, EPA recognizes ClO_2 use as a drinking-water disinfectant, and it is in the World Health Organization's (WHO) Guidelines for Drinking-water Quality.

- **MUNICIPAL WATER TREATMENT**
- **COMMERCIAL & DOMESTIC POTABLE WATER TREATMENT SYSTEMS**
- **HOSPITAL & LABORATORY WATER PURIFICATION**
- **FOOD & BEVERAGE PRODUCTION & PROCESSING**
- **WATER BOTTLING & ICE MAKING**

ALPHASAN - The superior performance coupled with its safety and environmental benefits makes it the ultimate potable-water disinfection solution. It is the ideal solution where traditional methods, such as chlorine, UV and ozone need to be replaced with a safe and effective biocide that is environmentally friendly, biodegradable and complies with the stringent standards of drinking-water treatment regulations.

ALPHASAN®

FEATURES & BENEFITS

ALPHASAN Chlorine Dioxide has been described as “the ideal biocide” and has a number of important advantages over traditional disinfection methods and chlorination for treating water supplies and is a safer and more effective alternative to chlorine. Unlike UV treatment which has an instant/one-off effect, ClO₂ has residual killing power and will continue to sterilise the water throughout the entire system to prevent any re-contamination.

PERFORMANCE – Rapidly eliminates harmful pathogens and microorganisms, and has proven to be consistently reliable and effective against, bacteria, bacteria spores, viruses, protozoa, fungus and yeasts at up to 99.9999% (6-log reduction). Very effective at low concentrations and short contact times. Has more than 2.5 times the oxidation capacity of chlorine. Extraordinarily effective against most pathogens and microorganisms, including Legionella, E. coli, Coliforms, Salmonella, Pseudomonas, Listeria, Giardia, Cryptosporidium, as well as algae and amoebae. It is an especially effective disinfectant because it is impossible for any microbe to develop a resistance to it.

SAFE TO USE – Non-toxic, non-carcinogenic, non-corrosive and non-flammable. ERMA (HSNO) have also determined it as non-hazardous to handle and/or transport. ClO₂ does not react with organics in the water to form THM's or AOX's which are regulated as a known cause of many forms of cancer.

ECONOMICAL - Its efficacy at low concentrations (as low as 0.1 ppm) means it is very economical in use, with low capital & operating costs. Being a ready-to-dilute single pack solution, it is also very easily implemented into new or existing systems and is simple to test and monitor. It costs about the same to use as other sanitizers but is more effective, versatile and less harmful.

ECO-FRIENDLY - 100% biodegradable and breaks down to common salt (NaCl). ClO₂ does not chlorinate or form any dangerous DBP's (disinfection by-products) such as THM's, HAA's or AOX's. It also breaks down quickly and has far less of an impact on the environment than chlorine, bromine, ozone or sodium hypochlorite.

WATER STABILITY - One of the most important qualities of ClO₂ is its high water solubility. ClO₂ is approximately 10 times more soluble in water than chlorine and does not hydrolyse but remains a dissolved gas which stays active in water. This enables it to retain its biocidal effectiveness and ability to 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 both hard and soft water as well as in a much wider pH spectrum (pH4 – pH10) than chlorine, making it more versatile and forgiving in a variety of application situations. ClO₂ has limited reactions with organics. In addition, chlorine will react with and be consumed by ammonia or any amine, whilst ClO₂ reacts very slowly with secondary amines and sparingly with primary amines or ammonia.

NON-TAINTING – Virtually tasteless in its diluted form and does not have any detrimental effect on the taste, smell or colour of water. It is also non-corrosive to equipment and pipework.

APPROVALS: DWSNZ (New Zealand Drinking-water Standards) / NZFSA (New Zealand Food Safety Authority) / MPI

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TYPICAL APPLICATIONS

ALPHASAN is used wherever the highest standards of disinfection are required. It is a proven, fast and versatile broad-spectrum disinfectant used to purify drinking-water supplies, and to control the taste, odour and colour. Approved by DWSNZ (NZ Drinking-water Standard) for potable-water applications and is suitable for use in food and beverage production. At concentration levels accepted by MPI, EPA and WHO it is 100% safe to consume and is still highly effective. Consistently effective for eliminating pathogens and microorganisms such as Legionella, E. coli, Coliforms, Salmonella, Pseudomonas, Listeria, Giardia, Cryptosporidium, as well as algae and amoebae. It is also an excellent treatment option for eliminating biofilms, as well as removing iron and manganese.

ALPHASAN is very easily implemented into new or existing water treatment facilities, and the solution is usually applied by dosing pumps into the system. **ALPHASAN** can replace chlorine, UV and ozone in the pre-oxidation and main treatment stages. If you require chlorine in your system, ClO₂ can dramatically reduce its need and consequently improve the water quality without forming any DBP's.

PRE-OXIDATION (Iron & Manganese Removal)

ALPHASAN is a very powerful oxidising agent and has up to 2.6 times the oxidizing power of waterborne chlorine. As a strong and selective biocide, ClO₂ is an excellent treatment option to remove pollutants and effectively oxidise soluble iron, manganese, hydrogen sulphide (H₂S), cyanotoxin and arsenic. This process also helps control and prevent reoccurrence of unwanted biological growths in other parts of the treatment plant. A drawback of pre-oxidation with chlorine is that it tends to increase disinfection by-product (DBP) formation. **ALPHASAN** does not chlorinate and will not produce any undesirable side effects or harmful disinfection by-products such as THM's or AOX's.

RESIDUAL WATER TREATMENT DISINFECTION

ALPHASAN is a very strong and broad-spectrum disinfectant, providing water sterilisation that remains present in the water to provide a long-term disinfectant residual. Maintains the microbial quality of the water during distribution to consumers. It is an especially effective because it is impossible for any microbe to develop a resistance to it.

BIOFILM REMOVAL & CONTROL

ALPHASAN has been found to be one of the most highly effective solutions for destroying, removing and controlling problematic biofilms.

TASTE, ODOUR & COLOUR REMOVAL & CONTROL

ALPHASAN controls and improves water taste, odour and colour by oxidising elements such as iron, manganese, algae and bacteria that produce poor quality water in the form of bad tastes, odour and colour. Does not taint so enhances the water.

ALPHASAN®

Our technological advancements 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 decontamination solutions. Don't settle for anything less than **ALPHASAN** for your disinfection and sterilisation applications.

With our experienced Engineers, Chemists, and Technicians, we stand ready to assist you in every aspect of the evaluation, design, implementation, and long-term support of your Chlorine Dioxide disinfection requirements. Discover why a growing number of businesses and communities trust **ALPHASAN** to disinfect their water supplies effectively.

For more information, usage instructions and health & safety directions please refer to our website www.alphaenvironmental.co.nz/Sanitisers.html

ALPHASAN® is a registered disinfectant manufactured and marketed 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 MSDS BEFORE USE. ALPHASAN® IS A REGISTERED TRADEMARK. ALL RIGHTS RESERVED.