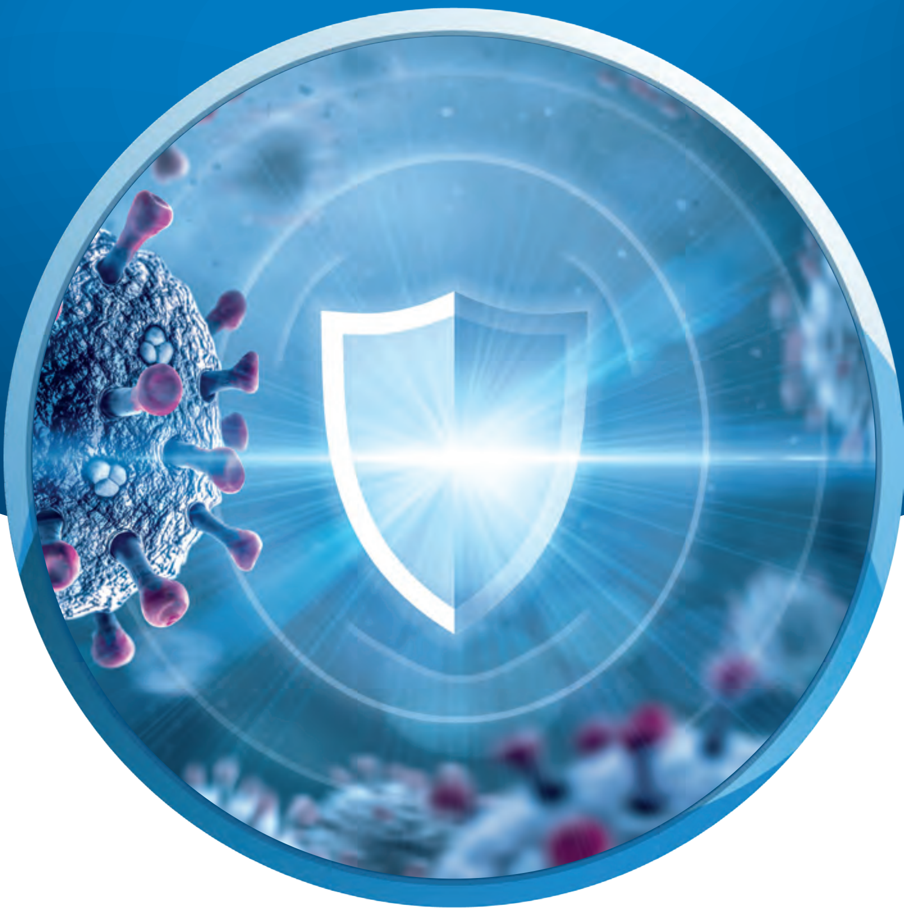
MICROBIOLOGICAL CONTROL AND POWERFUL DISINFECTION

Chlorine dioxide product portfolio



HIGHLIGHTS	
High efficacy	Odourless and tasteless
Wide range of applications	Long-lasting effect
Hardly any formation of harmful byproducts	Powerful and effective
Efficacy at different pH values	Ease of use

Your challenge – Our solution

EFFECTIVE AND MULTIFACETED

Chlorine dioxide – the most effective biocide and disinfectant for your application

Chlorine dioxide (ClO_2) is a gas that is generally used in aqueous solution. Chlorine dioxide has already been used to disinfect water for many years. It is a strong oxidising agent that is effective against a variety of microorganisms.

WHY CHLORINE DIOXIDE? THE MOST IMPORTANT BENEFITS AT A GLANCE:

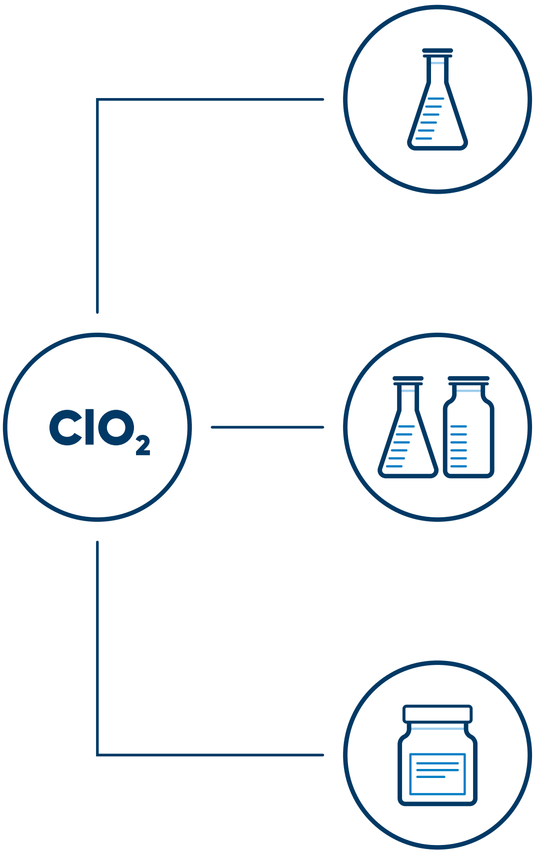
HIGH EFFICACY AGAINST MICROORGANISMS	Chlorine dioxide has a high oxidation potential and is therefore able to kill a large number of pathogenic microorganisms quickly and effectively. It acts against bacteria as well as viruses, protozoa (unicellular organisms) and algae. Compared to other disinfectants, such as chlorine, chlorine dioxide is more effective against stubborn, resistant microorganisms.
NO FORMATION OF BYPRODUCTS	There is no formation of chloramines, for example, with chlorine dioxide. Chloramines are unwanted byproducts as they can cause odour and flavour problems and are less effective against microorganisms.
REDUCED CORROSION	Chlorine dioxide causes less corrosion in water supply systems. It helps to reduce deposits and corrosion in pipes.
EFFECTIVE BIOFILM REMOVAL	Chlorine dioxide is highly effective in the removal of biofilms, as it is able to penetrate the mucus layer and kill the microorganisms contained within it, thereby dissolving the biofilm.
STABLE AT DIFFERENT PH VALUES	Chlorine dioxide retains its disinfectant effect, even at higher pH values.
DURABILITY AND TRANSPORTABILITY	Chlorine dioxide is either produced on site or can be transported and stored as a ready-to-use solution with a low active ingredient content.
ODOURLESS AND TASTELESS	Chlorine dioxide does not cause any unpleasant odours or flavour changes in treated water, which is a particular advantage in drinking water treatment and food manufacturing and processing.
LONG-LASTING EFFECT	Compared to other oxidising biocides, chlorine dioxide has a longer dwell time in water, which enables sustainable disinfection and lowers the risk of further contamination.
EFFECTIVE AND SUCCESFUL	Chlorine dioxide is is powerful and sustainable – it degrades quickly and leaves no harmful disinfection byproducts.

CLEAN AND SAFE

SYSTEMATIC

THE 1- AND 2-COMPONENT SYSTEM:

Two production systems for different disinfection tasks, specially tailored to individual areas of application and requirements.



1-COMPONENT SYSTEM

In-situ system to produce chlorine dioxide from sodium chlorite using oxidation. Due to the high concentration, the 1-component system offers the possibility of producing chlorine dioxide in situ, i.e. directly in the water to be treated, even with smaller dosing quantities.

Effect: bactericidal, fungicidal, algaecidal

2-COMPONENT SYSTEM

Production of chlorine dioxide at the site of application by combining individual components. After adding the solid, the solution reacts to form a pure chlorine dioxide solution. Safe production, high stability, gentle on materials, chlorine-free. Individual components can be stored for 5 years. Complies with DIN EN 12671, TrinkwV, DVGW W224, W557, W291.

Effect: bactericidal, fungicidal, algaecidal, virucidal

READY-TO-USE SOLUTION

Ready-to-use activated 0.29 % chlorine dioxide solution for immediate use. No hazardous substances, gentle on materials, chlorine-free. Complies with DIN EN 12671, TrinkwV, DVGW W224, W557, W291.

Effect: bactericidal, fungicidal, algaecidal, virucidal

VERSATILE AND RELIABLE

Applications and use

As a disinfectant (PT 2, PT 3, PT 4, PT 5), chlorine dioxide is particularly suitable for drinking water systems and use within food manufacture and processing. It is also particularly well-suited as a preservative (PT 11, PT 12) both for cooling and process water as well as for slime control, e.g. in the paper manufacturing process.

APPLICATIONS AT A GLANCE:

- **Surface disinfection and algae control in general areas of application (PT 2)**
  Filter and tank disinfection, biocide products for swimming pool applications
- **Disinfection in the veterinary sector (PT 3)**
  Spray applications for wall and floor disinfection, drinking water and drinking water distribution systems
- **Disinfection in food and feed manufacture (PT 4)**
  Water in process systems with product contact, drinking water distribution systems
- **Production of drinking water (PT 5)**
  Disinfection of drinking water for human and animal use
- **Microbiological control in cooling and process systems (PT 11)**
- **Slime control e.g. paper industry, sand filters (PT 12)**

SUCCESS STORIES WITHIN THE DAIRY INDUSTRY

Use of EVC®-PW 500 Oxi

By adding a 0.5% pH-neutral chlorine dioxide solution, process water is reliably disinfected without additional water treatment. The storage tank no longer has any biofilm in the areas that are in contact with the water. The handling and activation of the 2-component product is simple, monitoring takes place via redox potential. The water requirement of 120 m^3/day for what is known as sealing water can be safely met by reusing process water from production instead of soft water.

It was possible to save 42,000 m^3 of soft water per year with a product application of max. 40 ml per m^3 water.

SUCCESS STORIES WITHIN THE STEEL INDUSTRY

Use of EVC® 511 Oxi

By switching from conventional chlorine bleaching to the single-component system EVC® 511 Oxi in a heavily contaminated spray water system, it was possible to effectively prevent legionella concentrations exceeding the intervention value.

The quantities of biocides used were reduced by 40% in compliance with the requirements of the 42nd BImSchV.

CHLORINE DIOXIDE PRODUCT PORTFOLIO

1- and 2-component systems

PRODUCT	SYSTEM	PRODUCT TYPE	APPLICATIONS
EVC® POOL	**1-component system, approx. 10%**	PT 2	Swimming pool, pond water and fountain
EVC® 511 OXI	**1-component system, approx. 10%**	PT 2 PT 11 PT 12	Filter disinfection, wastewater disinfection, water in recooling plants, process water, slime control
EVC®-PW 500 OXI	**2-component system, 0.5%**	PT 2 PT 3 PT 4 PT 11 PT 12	Disinfection of water distribution systems, pipes and tanks in accordance with DVGW Code of Practice W291 and W557, filter disinfection DIN 19643 Part 2, tank disinfection, air disinfection, spray disinfection, CIP systems, recooling systems, process water
EVC®-TW 300 OXI	**2-component system, 0.3%**	PT 2 PT 3 PT 4 PT 5	Water in process systems with product contact (CIP), disinfection of drinking water in accordance with the German Drinking Water Ordinance (TrinkwV) and DVGW Code of Practice W224
EVC®-TW 500 OXI	**2-component system, 0.5%**	PT 2 PT 3 PT 4 PT 5	Disinfection of water distribution systems, pipes and containers in accordance with DVGW Code of Practice W291 and W557, water in process systems with product contact (CIP), disinfection of drinking water in accordance with the German Drinking Water Ordinance (TrinkwV) and DVGW Code of Practice W224
EVC®-PW CHLORINE DIOXIDE 2900	**Ready-to-use solution, 0.29%**	PT 2 PT 3 PT 4 PT 5 PT 11	Disinfection of water distribution systems, pipes and tanks in accordance with DVGW Code of Practice W291 and W557, filter disinfection DIN 19643 Part 2, tank disinfection, air disinfection, spray disinfection, CIP systems, recooling systems, process water
EVC®-TW CHLORINE DIOXIDE 2900	**Ready-to-use solution, 0.29%**	PT 5	Disinfection of drinking water in accordance with the German Drinking Water Ordinance (TrinkwV)

Use biocidal products carefully. Always read the label and product information before use.

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