

100% Biodegradable!

INSTANT BIOXIDE™

Slimicide, Biocide, Biodispersant, Bio-oxidation

Watch-Water® **INSTANT BIOXIDE™** is a very high class bactericide, fungicide and Algaecide that kills the growth of microorganisms without any harms on the environment and considered as **GREEN BIOCIDES**.

Applications for **INSTANT BIOXIDE™**

Today's thinking and concern about biocides used in almost every industry starts from the knowledge of "Good Chemistry". It's well known that chlorinated biocides upon excretion from domestic or industrial application can react with other chemicals or compounds in water which creates gases that are harmful for the Ozone layer. Biocides are mostly liquid & toxic chemicals and these are likely to bio-accumulate in the fatty tissues of aquatic organisms. Almost all biocides available in the market are mostly harmful.

Watch-Water® has found out a way to Manufacture environment friendly biocides e.g. **GREEN BIOCIDES**

- Industrial Water disinfection
- Paper Industry Biocide
- Oil and Gas industry
- Disinfection of fruits and vegetables
- Food industry
- Livestock industry
- Hospitals and Hotels
- Fishing industry
- Maritime industry
- Wastewater disinfection
- Reverse Osmosis
- Ion Exchange Resins

Green Biocides – Protecting the world environment

Benefits of INSTANT BIOXIDE™

- Cause no corrosion
- Very cost-effective, rapid and safe
- No toxic disinfection by products
- Simple and fast to apply
- Halogen-free disinfection
- Lethal to microorganisms:
Oxidizes (burn) bacteria, fungus, algae and viruses without leaving nasty smell caused by toxic sulfides.

Warning!

Disinfection such as chlorine, chlorine dioxide, ozone, hydrogen peroxide, sodium or calcium hypochlorite causes unwanted disinfection by products (DBPs) and also cause high corrosion rates in piping systems.

General description

INSTANT BIOXIDE™ is an instant granular non-dusting white biocide compound. It is free flowing and very easy to handle. All the inert ingredients in INSTANT BIOXIDE™ have status as drinking water treatment disinfection and food processing chemical.

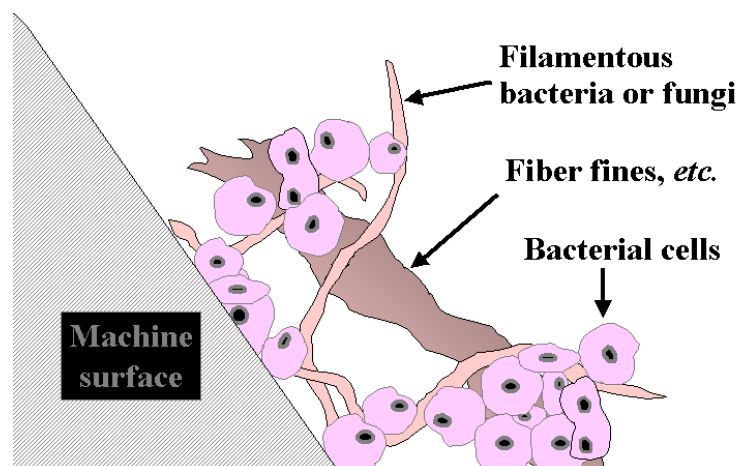
INSTANT BIOXIDE™ is a combination of OXYDES and other ingredients. It dissolves into water rapidly to release high oxidation energy and oxidize with its powerful peroxide capabilities every bacteria, viruses, fungus, algae and slime. INSTANT BIOXIDE™ cleans all surfaces and removes scale, corrosion and biofouling without any chemicals. It has a very added value of having no odor and being nontoxic and nonpolluting chemicals

under standard 60 of the National Sanitation Foundation and/or have either generally recognized as safe (GRAS) food additive clearances. INSTANT BIOXIDE™ has been used for years in Water treatment to control scale, corrosion and biofouling and slime removal. It is also used as a food

At the same time, it improves the Water quality and degrade all organic matter, reduce the toxicity of Ammonia, Nitrogen, Hydrogen sulfide and de-chlorination of chloramines and THM's in water. Water gets soft and nontoxic of pollutants. Every disinfection activity is based on active oxygen.

BIOCIDES or BIOXIDES

There are two main classes of biocides. On the other hand there are OXIDIZING agent agents such as **INSTANT BIOXIDE™** and these are widely used because they are convenient for every facility and these biocides are used in small amounts. The oxidizing action burns the bacteria and fungi outright or it destroys the cell wall without leaving any dead bacteria or nutrient for next generation of bacteria. The other class involves highly toxic organic chemical such as thiazoles, isothiazolins or any of the biocide containing sulfur (Thio) and these biocides should not be used in any applications.



Surface Chemistry

One has to keep in mind that the main goal is to limit the growth of SESSILE BACTERIA, i.e. those that are attached to surfaces. These types of bacteria tend to build up colony causing,

- Slime
- Biofilm
- Biofouling

-that hurts productivity and water quality and damages equipments.

Watch-Water® strategy of Biocides

The aim is to create a combination with oxidizing and non-oxidizing biocides adding scale and corrosion protection and dispersant. Non-oxidizing biocides without any toxic organic components or sulfur ("thio"). Special attention has been paid in the formulations for not using any phosphates or phosphonates, since phosphate is such a favored food material for slimes as well as helps aggravating bio-fouling. Phosphate is such a favorite food for slime as well as biofouling. The non-oxidizing agent has to be maintained at a sufficiently low level

that there are no problems with environment or eutrophication with phosphates etc.

Dosage: A starting level of 2 mg/L from 5% dilution (dosing @ 40 ml/m³) of incoming water/feed water should be sufficient.

The residual level of **INSTANT BIOXIDE™** can be conveniently estimated by measuring the redox potential of furnish with a Pt electrode relative to a standard reference electrode.

INSTANT BIOXIDE™ Mechanism

INSTANT BIOXIDE™ reaction involves the breaking of chemical bounds and the removal of electrons. The electrons are transferred from the contaminant to the Oxidant. The process is called, the oxidation reduction potential (ORP) Shift by a factor of -350mV or more in water which controls microorganism growth. **INSTANT BIOXIDE™** reduces bacteria and all other microorganism by disrupting electron transport, causing cellular damage. With all other biocides or chemical treatments, scale continues to form in the cooling towers' heat exchangers, which often results in expensive descaling, biofouling and corrosion problems.

Using **INSTANT BIOXIDE™**, mineral hardness scale is virtually eliminated at about 50-60% of the cost of liquid chemicals and none of the cooling towers and heat exchangers need service or exchange inclusive repairs.

INSTANT BIOXIDE™'s Oxidation/reduction biocide, bio-dispersant provide the most effective, less costly instant powder is absolute an alternative to any other chemical treatment.

- Major industrial cooling towers depend on Katalox Light media for filtration and on **BIOXIDE™** for all slimicide, bacteria, virus and algae control without the use of harmful chemicals to the environment.

Innovative

This new, complete and innovative **INSTANT BIOXIDE™** is manufactured by Watch-Water® GmbH in Mannheim, Germany. this revolutionary water disinfection solution is based on a combination of different Oxidants and non-oxidizing biocides.

BIOXIDE™ is so surprising since **OXYDES** provide enhanced biocidal activity when used as combination with Watch-Water® non-oxidizing biocide.

INSTANT BIOXIDE™ provide enhanced biocidal activity which is greater than 2 **oxidizing** and **non-oxidizing** individual dosings treatment. The microbicidal combination of Watch-Water®'s unique process has the highest slimicide destroying power than any other known biocide. The enhanced combination activity of the oxidizing and non-oxidizing permits a significant reduction in the total quantiles of biocides required for a super effective treatment of any treatment of water systems. The biocidal effectiveness of Watch-Water® **INSTANT**

Watch-Water® has made it possible to combine the oxidant and the non-oxidizing biocide at the same time. This combination has no reaction with each other even in their concentrated forms. The combination of Instant Bioxide also contains surfactants and dispersants to disperse biomass and to keep every surface neat and clean. The anti-corrosive material added in the combination is to protect all metals from corrosive attack by the oxidant. The **INSTANT BIOXIDE™** contains an anti-scale material based on bio protectable materials without using any kind of phosphates, phosphonates, EDTA or NTA.



Killing the Bacteria is NOT Cleaning

Katalox Light

Every person using Biocide this has to be taken into account, bacteria, pathogens and biomass itself. Regardless Alive or Dead still causes problems. It does not help to only inactivate a part of the population – Alive you kill and Dead you decompose with oxidation (Bioxidation) – water is clean and you will catch the biomass on Katalox Light, the most advanced cleaning filter available in water treatment industry. High surface of Katalox Light continuously filters biomass, nutrients and remove them with a very simple backwash.

INSTANT BIOXIDE™ Cleaning

Cleaning of surfaces:

This part of the literature deals with the cleaning of every equipment or parts related to Water treatment. Cleaning of equipments with oxidizing agents as **INSTANT BIOXIDE™** cleaning agent for the perfect cleanliness.

Advantages:

- Economical Online Cleaning
- Technical
 - Good de-greasing properties
 - Easily soluble
 - Non-Liquid
 - Non-corrosive
 - Non-flammable
- Compatible with commonly used metallic and non-metallic materials.
- Environmental safety
 - Non-toxic
 - Non-Ozone depleting
 - Environmentally safe
 - Disposable
 - Contains no Volatile Organic Compounds
- Surface to be cleaned
 - Inner
 - Outer
 - Rough surfaces

Additional benefits:

INSTANT BIOXIDE™ can clean every part of the machines, compressors, heat exchangers, chillers, vaporizer and cooling towers on the installation site or during manufacturing, commissioning or at the period of maintenance. State of the equipment to be cleaned in assembled or disassembled form. If the cleaning is desired during all time **INSTANT BIOXIDE™** can be used continuously before Katalox-Light.

NOTES on **INSTANT BIOXIDE™** cleaning

Note 1

With continuous cleaning, the mechanical cleaning is not essential. Mechanical cleaning is not suitable for many reasons like costs, labor and very expensive shut-down at companies' costs. Mechanical cleaning creates the formation of dust and other particles these materials on breathing are hazardous to health.

Note 2

Acid cleaning is not generally used or used to fully remove biomass, bio-fouling, nutrients, phosphate scale contaminants. If present, these should be removed by **BIOXIDE™** alkaline solution.

Complete filling of **INSTANT BIOXIDE™** solution as cleaning material and forced circulation of liquid **BIOXIDE™** will give a perfect cleaning of metal surfaces and do the best passivation to retard corrosion. After the successful completion of cleaning/On-Line cleaning on bypass circulation all residuals will be completely filtered by Katalox-Light and by flushing/backwash with clean water to drainage.

INSTANT BIOXIDE™ combined ingredients having a function of softening, corrosion inhibition, and bio-dispersant will protect particularly to avoid the risk of any cleaning stress corrosion. **BIOXIDE™** cleaning method has replaced all other cleaning methods because of safety and environmental reasons.

Please see Technical Datasheet for Usage Information

Distributed by:

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