

# WHAT IS TWINOXIDE

## WHY DO I NEED TWINOXIDE

## WHERE IS TWINOXIDE USED



# WHAT IS TWINOXIDE

**TwinOxide is a unique, delivery system of two solid components.**

Once powder **Component A** and **Component B**, are added to water they will generate 99.9% pure, and stable Chlorine Dioxide aqueous solution.

TwinOxide is available as powders and as tablets for smaller applications.



# WHAT IS TWINOXIDE

The “Chlorine Dioxide” molecule ( $\text{ClO}_2$ ) was discovered in the 19th century as an extremely powerful disinfectant.

Over time there are several way's developed to produce Chlorine Dioxide.

Experts agree that Chlorine Dioxide is, the most effective and safe disinfectant available on earth.

# WHY DO I NEED TWINOXIDE

The Center for Disease Control and Prevention estimates that in the US alone, infections are the cause of 99,000 deaths.

Many organisms that cause infections can linger and survive on surfaces who is able to make a distinction between cleanliness and hygiene?

Given the growing problem of antibiotic resistance, environmental cleaning and **disinfection** can play an **important** role in helping to prevent the spread of antibiotic-resistant bacteria.



# WHY DO I NEED TWINOXIDE

Many chemical and mechanical concepts have been tested and evaluated but with only limited results or new problems to be tackled.

The most commonly used disinfectant is Chlorine.

For more than a century, the addition of Chlorine to drinking water has been saving millions of lives by destroying the germs in unsafe water sources.

However, Chlorine does involve safety, environmental and serious health related risks and effects.

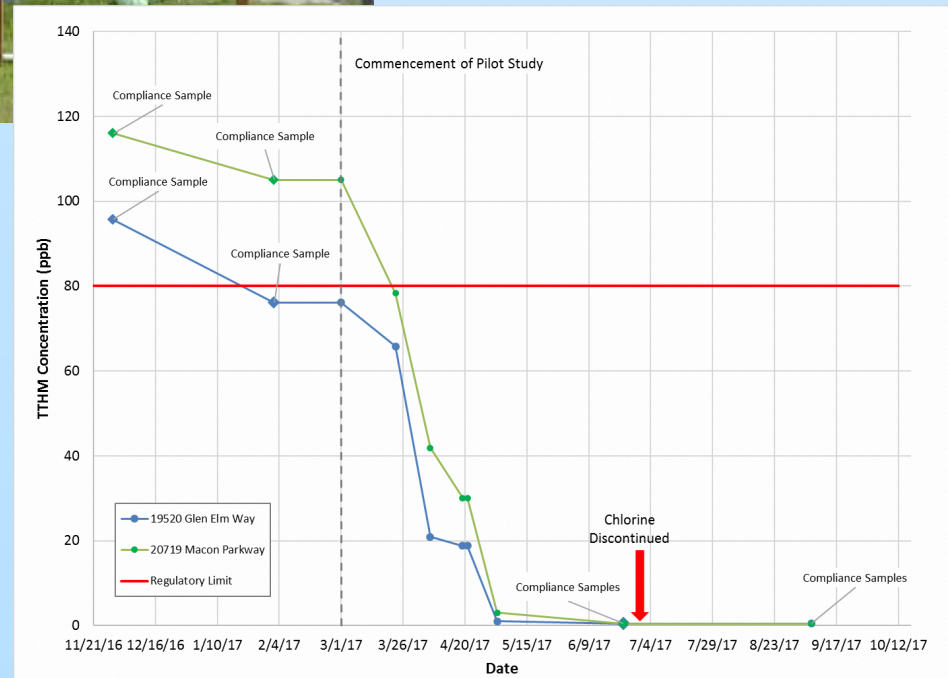
# WHERE IS TWINOXIDE USED

## Municipal Water Treatment



### Chlorine Dioxide Treatment for Disinfectant Byproduct Reduction

Lance Littrell, P.E., Steve Romano, P.E.,  
Rhea Dorris, E.I., and Gina Parra, Kimley-  
Horn and Associates, Inc., Maurice  
Gallarda, P.E. and Joe Kuhns, Pluris  
Wedgefield, Inc.



# WHERE IS TWINOXIDE USED

## Industrial Water Treatment



Cooling Water Microbiological Control  
Process Water Microbiological Control  
Waste Water Disinfection  
Reverse Osmosis Bio Fouling Control  
Odor Control  
Iron and Manganese Removal  
Phenol Oxidation and Cyanide Destruction  
THM Control



# WHERE IS TWINOXIDE USED

## Pulp and Paper Industry



White Water Slime Control  
Iron Control  
Bleaching of Specialty Papers  
Waste Water Disinfection  
Cooling Water Efficiency  
Microbiological Control  
Algae Control

# WHERE IS TWINOXIDE USED

## Textile Industry



Wientjens / Ecolab / TwinOxide

## Carnival Cruise line

TwinOxide    no TwinOxide





# WHERE IS TWINOXIDE USED

## Oil and Gas Industry



Microbiological Control of Oil Wells and Bores  
Sulphide Destruction  
Pipeline and Tank Cleaning  
THM and Biofilm Control  
Iron and Manganese Removal  
Wastewater Disinfection  
Removal of H<sub>2</sub>S and Phenolic Compounds



# WHERE IS TWINOXIDE USED

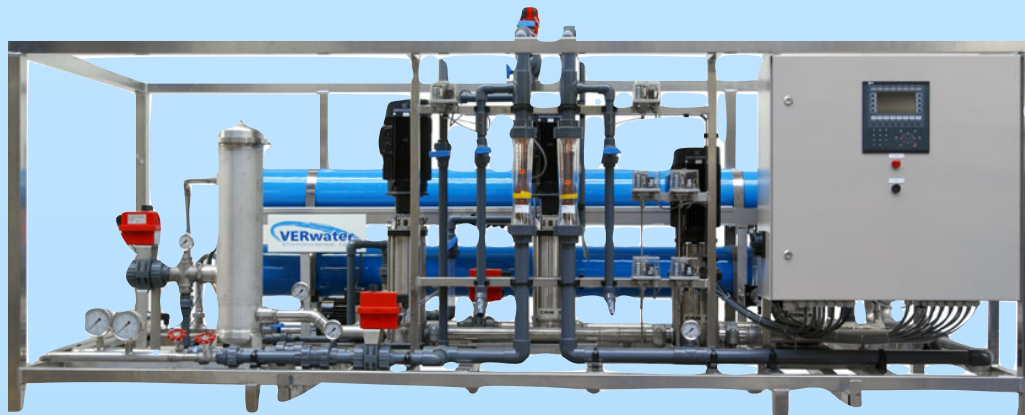
## Desalination



Bio fouling control at the inlet of RO membranes.

TwinOxide contains 0% Chlorine

TwinOxide will not damage membranes



# WHERE IS TWINOXIDE USED

## Cooling Towers



Algae Control  
Bio Film Removal / Legionella Control  
Efficiency Recovery  
Odor Control  
Non Corrosive  
Less Chemicals  
    No Chlorine  
    No Corrosion Inhibitors  
    No pH Correction





# WHERE IS TWINOXIDE USED

## Food and Beverage



Production Line Disinfection

Carbon Filter Regeneration

THM / HAA Elimination

Odor Control (amines, sulphur compounds)

Sanitation (Cleaning In Place)

Microbiological Control

# WHERE IS TWINOXIDE USED

## Life Stock

- Healthier for Animal and Human
- No slime forming on drink systems
- Dry stools
- Drink more eat less
- Gain more weight at less cost
- No Carcinogenic by products
- Top Quality Meat Production



# WHERE IS TWINOXIDE USED

## Meat and Poultry Processing



Production Tools Sanitation

Production Line Sanitation

Cutter Sanitation

Carcass Spraying

Chilled Water Disinfection (Chlorine free)

Cleaning in Place



# WHERE IS TWINOXIDE USED

## Fishing Industry



Used in Ice Production  
Processing, Transport, Retail Outlets  
Prolongs Shelf-Life.

Disinfection

Fish Ponds, Floors, Equipment,  
Instruments

Controls and Reduces the  
Biological Load in Effluent Water



# WHERE IS TWINOXIDE USED

## Horticulture



Root Rot Prevention

Algae Control

Mildew and Fungus Control

Nematode Eradication

Root Growth Propagation

Disinfection of Irrigation Water

# WHERE IS TWINOXIDE USED

## Commercial and Institutional Hospitals, Hotels, Buildings, Offices



Microbiological Control

MRSA Disinfection

Cleaning In Place

Hot and Cold Water System

Sterilization

Legionella Control





# WHERE IS TWINOXIDE USED

## Pool's and Spa's



Algae Control

Non Corrosive

Elimination of Odors (Chloramines)

THM control (Brown Scum)

Increased Pool Aesthetics

Swimmer Comfort

No More Red Eyes

No Bleaching of Clothing

# WHERE IS TWINOXIDE USED

## Marine Industry



Technical Water Disinfection  
Cooling System Disinfection  
Legionella Control  
Drink Water Disinfection  
Pool's and Spa's Disinfection  
Nora Virus Control  
Kitchen Sanitation  
Fruit and Vegetable Disinfection  
Laundry Disinfection



# WHERE IS TWINOXIDE USED

## Recreation Industry

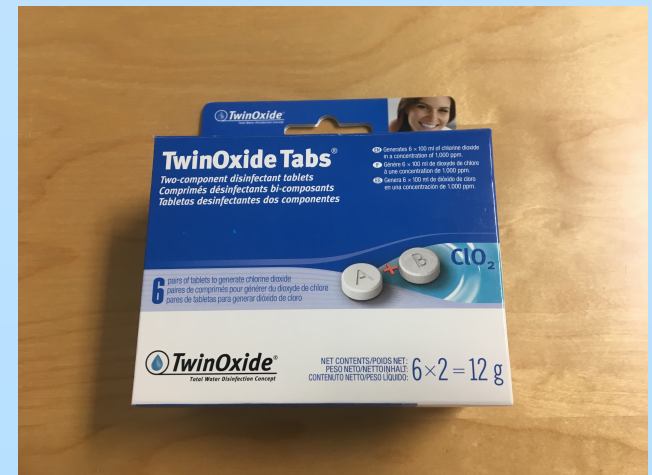
Drinking Water Disinfection

Tank Disinfection

Algae Elimination

Bacterial Control

Odor / Taste Control



# WHERE IS TWINOXIDE USED

## To Much To Mention

