



ProOxine®

Technical Data Sheet

PRODUCT OVERVIEW

ProOxine is a highly refined blend of oxychloro species containing purified sodium chlorite. When activated, chlorine dioxide is produced, greatly enhancing ProOxine's antimicrobial activity. With applications in the food processing and water treatment industries, ProOxine displays broad-spectrum antimicrobial activity, proven effective against E. coli O157:H7, Salmonella, Aspergillus, Listeria, Staphylococcus and Pseudomonas, among others. This product is especially suited for the removal and subsequent control of biofilm. ProOxine has a myriad of EPA and FDA approvals.

BENEFITS

- Ultra high antimicrobial activity
- Low corrosion potential at use concentrations
- Does not chlorinate (no THM formation)
- Effective over a broad pH range (1-10)
- Uniquely effective against biofilm
- Resists neutralization due to organic load
- Very soluble in water
- Disinfectant (activated)
- Bacteriostat (unactivated)
- Excellent deodorant

CONCENTRATE PROPERTIES

Concentration: 5.0 - 5.20% available chlorine dioxide
Appearance: Colorless liquid
Odor: Very faint chlorinous odor
pH Concentrate: of 8.5 - 9.0
Boiling point: 221 °F (105 °C)
Melting point: N/A
Freezing point: 25.2 °F (-3.78 °C)
Vapor Pressure: 23.7 mm Hg (25 °C)
Vapor Density: 0.02 kg/m³
Specific Gravity: 1.06 - 1.10 g/ml (20 °C)
Volatiles (by volume): 97% (Water)
Solubility in water: Complete
Evaporation rate: Comparable to water
Very low acute toxicity (EPA Cat. III)
Non-flammable, non-explosive, stable solution
NFPA Rating: Fire: 0 Health: 1 - Reactivity: 1 - Special: None

Bio-Cide International
Corporate Offices

2845 Broce Drive
Norman, OK 73072

ACTIVATED CONCENTRATE PROPERTIES

Green-Yellow liquid, chlorine-like odor
Solution of oxychloro species, including ClO₂

APPLICATIONS

Dairy, Brewery, Soft Drink Plants, Food Processing Plants

No-rinse sanitation of all food contact surfaces
CIP sanitizing of processing lines
Water additive to pasteurizers, bottle warmers and coolers
Water systems disinfectant for biofilm removal and control
Sanitation of filler head assemblies
Sanitation of tank trucks and rail tankers
Bacterial, mold and odor control throughout the facility
Sanitation of cold rooms, freezers and spirals
Deodorization of rendering areas
Footbath and door spray bacteriostat
Microbial control in sweet water & recirculating cooling water systems

Fruit and Vegetable Processing

Flume water treatment for bacteria, slime and odor control
Sanitizing rinse
No-rinse sanitizing of all food contact surfaces

Red Meat and Poultry

Antimicrobial additive in carcass spray or dip
Antimicrobial additive in chiller and pre-chiller for poultry
No rinse sanitizing on all food contact surfaces

EPA & FDA Approvals

For a comprehensive list of approvals, please contact your ProOxine distributor.

ACTIVATION

Activation involves lowering the pH of the concentrate with any GRAS acid. Activation may be accomplished manually (low volume or batch applications); with BCI's inexpensive hands-free activation unit, AANE (Automated, Activation, Non-Electric) system; with BCI's On-line Activation System (OLAS), which combines activation with injection into a water stream on the fly; or by an alternate method recommended by your ProOxine distributor.

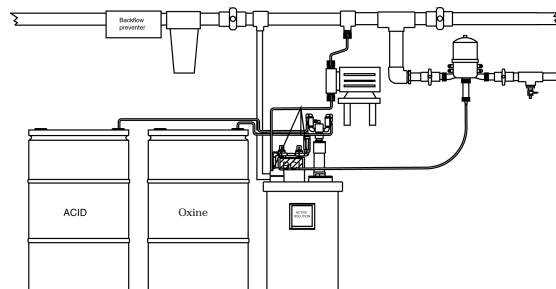
A sample installation of BCI's AANE is illustrated below (Fig. 1). This unit requires only a 1/2" water supply line with at least 25 PSI of water pressure to mix the correct ratio of acid to ProOxine, dilute to stock solution concentration and serve as a reservoir for application to process waters. A simple dosing or water driven proportioning pump is then installed to transfer the activated ProOxine solution to makeup water lines or directly into process waters (Fig. 2). Pumps used to dose concentrated activated product should be compatible with acid and chlorine resistant. The most serviceable pump materials are listed below:

Pump Body	Elastomers	
Stainless Steel	Teflon®	
Polypropylene	Afas® Kelrez® Chemrez® Durachlor®	
ABS	Viton®	
	PVC (Flexible tubing)	

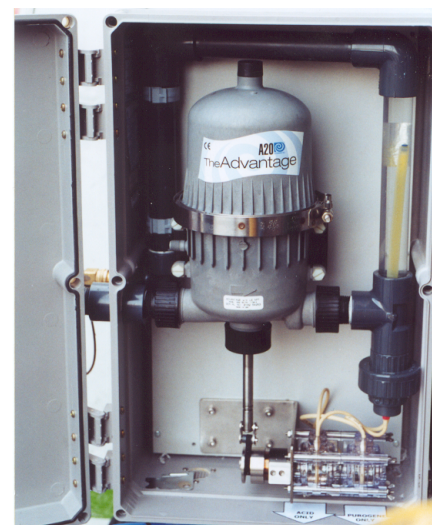
Wetted Parts
Teflon®
PVDF
CPVC
PVC
Kynar®

Concentration of ProOxine in process waters can be conveniently monitored using BCI's ProOxine's Test Kit. This simple titration test is available through your ProOxine distributor.

PROOXINE ACTIVATION SYSTEM



OLAS



AANE



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