



Pro Oxine®

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

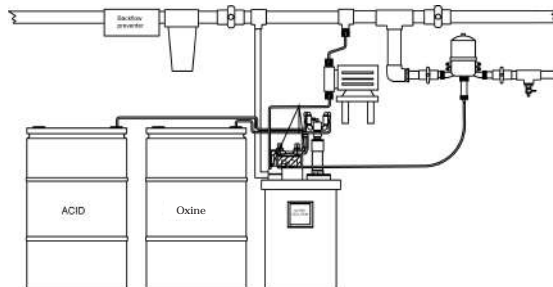
Activation involves lowering the pH of the concentrate with any GRAS acid. Activation may be accomplished manually (low volume or batch applications); with BCI's inexpensive hands-free activation unit, AANE (Automated, Activation, Non-Electric) system; with BCI's On-line Activation System (OLAS), which 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	Wetted Parts
Stainless Steel	Teflon®	Teflon®
Polypropylene	Afas® Kelrez® Chemrez® Durachlor®	PVDF
ABS	Viton®	CPVC
	PVC (Flexible tubing)	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



Bio-Cide International
 Corporate Offices
 2845 Broce Drive
 Norman, OK 73072

800.323.1398