To Our Customers:

The attached Safety Data Sheet (SDS) was prepared by the vendor of the product you purchased through one of our divisions. We used the manufacturer's electronic document directly or scanned a paper copy and generated a file for our automated SDS delivery system.

All statements, technical information, and recommendations contained therein are solely that of the manufacturer of the product. We at Zep Inc. did not verify the accuracy and completeness of the statements and do not warrantee or guarantee the information. We provide vendor SDSs to assist our customers in their compliance efforts. The attached document is in compliance with one of the respective country regulatory requirements noted below:

The OSHA Hazard Communication Standard (in the United States)
The Hazardous Products Regulations (in Canada)

We made every effort to deliver all of the information prepared by the manufacturer. We cannot anticipate all conditions under which this information will be used. If you have any questions about the statements on the SDS, please contact the company shown on the document.

Zep Inc. assumes no liability or responsibility for loss or damage resulting from the improper use or handling of this product, from incompatible product combinations, or from the failure to follow instructions, warnings, and advisories in the manufacturer's product label and Safety Data Sheet.

Sincerely,

Product Stewardship Team
Zep Inc.

PROOXINE®
SAFETY DATA SHEET

SECTION 1: IDENTIFICATION

Product Identifier:

ProOxine®

Other means of Identification:

CAS No. 7758-19-2; 8.35% sodium chlorite solution

Recommended Use:

ProOxine® is used in the food processing plants as a terminal sanitizing rinse for stainless steel and other hard nonporous food contact surfaces such as tanks, transfer lines and other food processing equipment. ProOxine® can be used to control the build-up of odor and slime forming bacteria in stainless steel transfer lines and also to control odor and slime forming bacteria in cooling and warming waters. Consult the ProOxine® label for a complete list of permitted uses.

Chemical Manufacturer:

Bio-Cide International, Inc.
2650 Venture Drive
Norman, Oklahoma 73069
Phone: (405) 329-5556
Fax: (405) 329-2681

Emergency Telephone Number:

Chemtrec for transportation emergencies in the United States, Canada, Puerto Rico, and Virgin Islands 1-800-424-9300; All other areas 1-703-527-3887
American Association of Poison Control Centers 1-800-222-1222
Chemtrec contract number 2749

SECTION 2: HAZARD(S) IDENTIFICATION

Classification in accordance with OSHA 29 CFR 1910.1200 (d):

Acute Toxicity: Oral (category 4)
Acute Toxicity: Inhalation (category 4)
Reversible Eye Effects (category 2B)
Corrosive to Metals (category 1)

GHS Label elements, including precautionary statements:

Signal word: **Warning**

Pictogram:

Hazard Statements:

May be corrosive to metals
Harmful if swallowed
Harmful if inhaled
Causes eye irritation

Precautionary statements:

Wash hands thoroughly after handling
Do not eat, drink or smoke when using this product
Avoid breathing mist or spray
Use only outdoors or in well-ventilated area
Keep only in original container

Response statements:

If in eyes; remove contact lenses if present and easy to do. Rinse cautiously with water for several minutes. If eye irritation persists; Get medical attention.

If swallowed; call a poison control center if you feel unwell. Rinse mouth.

If inhaled; remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a doctor or poison control center if you feel unwell.

Absorb spillage to prevent material damage.

Store in corrosive resistant container.

Dispose of contents and container in accordance with local regulations.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substance:	8.35% sodium chlorite	≤ 91.65% water
Formula:	$NaClO_2$	H20
CAS number:	7758-19-2	7732-18-5
EC number:	231-836-6	231-791-2

UN number (transport): 1908

If the specific chemical identity and/or the exact percentage of an ingredient are not specified, the information has been withheld as a trade secret.

SECTION 4: FIRST-AID MEASURES

In case of skin contact; remove and launder contaminated clothing and shoes immediately. Wash affected area with soap and water.

In case of eye contact; rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed; do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Chlorine dioxide vapors are emitted when this product contacts acids or chlorine. If these vapors are inhaled move person into fresh air. If not breathing, give artificial respiration. Consult a physician. Monitor patient closely for delayed development of pulmonary edema which may occur up to 48-72 hours post inhalation.

SECTION 5: FIRE-FIGHTING MEASURES

Substance does not burn but supports the combustion of flammable substances through the liberation of oxygen. Water is the preferred extinguishing media when it is compatible with the burning substance. If water is not compatible, use dry powder extinguisher.

Burning will release hydrogen chloride gas (HCl) and oxides of sodium (NaO_x).

Firefighters should wear self-contained breathing apparatus (SCBA) if necessary.

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PROCEDURE

Small spills, involving less than 5 gallons, may be flushed to a designated and permitted sewer system with the amount of water that is about 20 times the amount of the spill.

Large spills, involving more than 10 gallons, should be contained and neutralized using any one of the three neutralizers: i) sodium sulfite, ii) sodium bisulfite, or iii) sodium thiosulfate. The neutralization reaction can be extremely exothermic, and therefore, care should be taken to add the neutralizer in small increments. The contained solution should be first diluted with a volume of water that is approximately four times the volume of the contained spill. Sodium sulfite is the most preferred (least exothermic) neutralizer that can be used in the ratio of 2.1 lb per gallon of spilled material. Sodium thiosulfate can be used in the ratio of 5 lbs of anhydrous salt or 7.7 lbs. of pentahydrate salt per estimated gallon of the spilled material. The neutralized solution can then be flushed to a designated and permitted sewer system with double the amount of water. The product that is not neutralized may be disposed of as chemical waste in the manner indicated below. The vicinity of the spill should be thoroughly flushed with water after clean-up. At no time should the spilled material be allowed to dry to a crystalline salt. Do not discharge this product to storm drains or to any surface or groundwater source unless specifically allowed under a valid NPDES permit. If the neutralizer is not available, volumes larger than 10 gallons should be carefully transferred into a container and taken to an authorized chemical disposal site (Class I or landfill) in accordance with all federal, state, and local regulations. Consult with selected facility regarding the need for prior neutralization of waste.

SECTION 7: HANDLING AND STORAGE

HANDLING:

Use product only as directed by the label. Avoid contact with skin and eyes; avoid breathing any vapors or fumes resulting from product activation. Wash thoroughly after handling. Thoroughly rinse all protective gear and handling equipment, such as transfer pumps and lines, with water prior to reuse or storage. Keep away from children, animals, and unauthorized personnel.

PRODUCT STORAGE:

Store in a cool, dry, well-ventilated location away from acids, chlorine and chlorine compounds, hypochlorite (bleach), organic solvents, sulfur and sulfite compounds, phosphorus, combustible/flammable materials, and direct sunlight. Keep containers tightly closed when not in use and open carefully to prevent spillage. Storage on wooden floors and pallets is not recommended. Do not contaminate water, food or feed by storage or disposal.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

No Occupational Safety and Health Administration (OSHA) permissible exposure limit (PEL) or American Conference of Governmental Industrial Hygienists (ACGIH) threshold limit values (TLV) have been established for this product.

Wear splash proof goggles to protect the eyes. Use gloves and protective clothing to protect against skin contact. Remove contaminated clothing immediately and laundry before reuse.

Wear a NIOSH approved N95 respirator to protect against mist and spray.

In accordance with OSHA regulations (29 CFR 1910.134 and 29 CFR 1910.1000), fogging or spraying applications may require worker respiratory protection using a NIOSH/MSHA approved air purifying respirators (APR) with cartridges approved for chlorine dioxide (ClO_2)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

(a) Appearance (physical state, color, etc.); Clear to pale yellow liquid

(b) Odor; Slight odor of chlorine

(c) Odor threshold; Not determined

(d) pH; 8.5 – 9.0

(e) Melting point/freezing point; 23°F (-5°C)

(f) Initial boiling point and boiling range; 221°F (105°C)

(g) Flash point; Not applicable

(h) Evaporation rate; Comparable to water

(i) Flammability (solid, gas); Not flammable

(j) Upper/lower flammability or explosive limits; Not flammable

(k) Vapor pressure; 23.7 mm Hg (25°C)

(l) Vapor density; 0.02 kg/m^3

(m) Relative density; 1.065 g/ml – 1.095 g/ml (20°C)

(n) Solubility(ies); Miscible (water)

(o) Partition coefficient: n-octanol/water; Not applicable (not a mixture)

(p) Auto-ignition temperature; Not applicable

(q) Decomposition temperature; Not determined

(r) Viscosity; 0.6409 mm^2/ sec

SECTION 10: STABILITY AND REACTIVITY

(a) Reactivity; Not reactive under normal temperatures and pressures.

(b) Chemical stability; Stable at normal temperatures and pressures.

(c) Possibility of hazardous reactions; Contact with acids or chlorine can result in the evolution of chlorine dioxide gas (ClO_2)

(d) Conditions to avoid: Avoid heat, flames, sparks and other sources of ignition. Avoid evaporation to dryness. Dried material can ignite upon contact with combustibles. Avoid contamination with foreign materials. Avoid exposure to sunlight or ultraviolet light.

(e) Incompatible materials; Acids, Reducing agents, Combustible material, Oxidizing agents, Hypochlorite, Organic solvents and compounds, Garbage, Dirt, Organic materials, Household products, Chemicals, Soap products, Paint products, Vinegar, Beverages, Oils, Pine oil, Dirty rags, Sulfur-containing rubber, or any other foreign matter

SECTION 11: TOXICOLOGICAL INFORMATION

Likely routes of exposure:
Oral (ingestion): Hazard Class 4 gastro intestinal distress
Dermal: Hazard Class Non-hazardous but may produce mild skin irritation in some individuals.
Inhalation: Hazard class 4; may induce mild respiratory symptoms
Eye contact: Hazard class 2B; may cause mild, reversible eye irritation but no non-reversible effects.

No chronic or delayed effects have been observed in short term exposures. No data is available for long term exposures.

Acute Toxicity, Oral: Hazard class 4; > 500 mg/kg and < 5050 mg/kg
Acute Toxicity, Dermal: Hazard Class Non-Hazardous; > 5050 mg/kg
Irreversible Eye Effects: Hazard Class Non-Hazardous; Conclusion from 29 CFR 1910.1200 Table A.3.1
Reversible Eye Effects: Hazard Class 2B; Conclusion from 29 CFR 1910.1200 Table A.3.1
Respiratory Sensitization: No Data Available.
Skin Sensitization: Hazard Class Non Hazardous; 29 CFR 1910.1200 Table A.4.2
Carcinogenicity: Sodium chlorite is not classified as a carcinogen by NTP, IARC, or OSHA

SECTION 12: ECOLOGICAL INFORMATION

ProOxine® is toxic to fish and aquatic Invertebrates, oysters and shrimp. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or public waters unless in accordance with the requirements of a National Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

ProOxine® does not bio-accumulate and is biodegradable.

ProOxine® does not migrate in soil.

SECTION 13: DISPOSAL CONSIDERATIONS

Product Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Do not reuse or refill this container. Offer for recycling if available. Offer for reconditioning if appropriate. Triple rinse container, or equivalent, promptly after emptying.

Triple rinse as follows: Empty remaining contents into application equipment or mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip the container on its side and roll it back and forth, ensuring at least one complete revolution for 30 seconds. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this process two more times.

SECTION 14: TRANSPORT INFORMATION

DOT UN number: 1908
Proper shipping name: Chlorite solution
Class: 8
Packing group: III
Labeling No. : 8

IATA number: 1908
Proper shipping name: Chlorite solution
Class: 8
Packing group: III
Labelling No. : 8

IMDG UN number: 1908
Proper shipping name: Chlorite solution
Class: 8
Packing group: III
Labeling No.: 8

Environmental Hazards: Toxic to fish and aquatic organisms. Not a marine pollutant.
IBC code does not apply (less than 40% chlorite by weight)
In case of spill, flush with copious amounts of water. Do not allow to dry to crystalline form.

SECTION 15: REGULATORY INFORMATION

U.S. REGULATIONS

OSHA REGULATORY STATUS:

This material is considered hazardous by the OSHA Hazard Communication standard (29CFR 1910.1200)

CERCLA SECTIONS 102a/103 HAZARDOUS SUBSTANCES (40 CFR 302.4):

Not regulated.

SARA EHS Chemical (40 CFR 355.30):

Not regulated

EPCRA SECTIONS 311/312 HAZARD CATEGORIES (40 CFR 370.10):

Acute Health Hazard

EPCRA SECTION 313 (40 CFR 372.65):

Not regulated.

OSHA PROCESS SAFETY (PSM) (29 CFR 1910.119):

Not regulated

NATIONAL INVENTORY STATUS

U.S. INVENTORY STATUS: Toxic Substance Control Act (TSCA):

All components are listed or exempt.

TSCA 12(b):

This product is not subject to export notification.

Canadian Chemical Inventory:

All components of this product are listed on either the DSL or the NDSL

STATE REGULATIONS

California, Proposition 65:

Cancer WARNING: Not Listed

CRT List – Male reproductive toxin: Not Listed

CRT List – Female reproductive toxin: Not Listed

Massachusetts Right to Know Hazardous Substance List: Listed

New Jersey Right to Know Hazardous Substance List: 1689

New Jersey Special Health Hazards Substance List: Corrosive; reactive – second degree

New Jersey Environmental Hazardous Substance List: Not Listed

Pennsylvania Right to Know Hazardous Substance List: Listed

Pennsylvania Right to Know Special Hazardous Substances: Not Listed

Pennsylvania Right to Know Environmental Hazard List: Not Listed

Rhode Island Right to Know Hazardous Substance List: Not Listed

CANADIAN REGULATIONS

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products regulations.

WHMIS - Classifications of Substances:

Class D – Division 2B, Class E – Corrosive Material

SECTION 16: OTHER INFORMATON

NFPA Hazard Classification

Health: 1 **Flammability:** 0 **Reactivity: 1** **Special Hazards:** None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard rating primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Product is used on site by mixing with a generally regarded as safe (GRASS) acid. There is the potential for release of chlorine dioxide gas (ClO_2). Appropriate personal protection equipment (PPE) should be employed. (see section 8)

NOTICE: Manufacturer believes the information contained herein is accurate; however we make no guarantees with respect to such accuracy and assume no liability in connection with the use of the information contained herein by any party. Any party using this product should review all such laws, rules or regulations prior to use.

NO WARRANTY IS MADE, EXPRESS OR IMPLIED FOR A PARTICULAR PURPOSE OR OTHERWISE

Prepared: April 2015