MATERIAL SAFETY DATA SHEET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME
EnviroCon™

MANUFACTURER
Bio-Cide International, Inc., 2650 Venture Drive, Norman, OK 73069 U.S.A. (800.323.1398)

EPA REGISTRATION NUMBER:
9804-3

EFFECTIVE DATE:
March 2011

SUPERSEDES:
March 2007

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	C.A.S. No.	% by Wt.
Sodium Chlorite	7758-19-2	0.17%

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Clear liquid with very faint chlorinous odor
May cause skin reaction. May cause eye irritation.

POTENTIAL HEALTH EFFECTS

INHALATION: EnviroCon™ normally has no respiratory effects. If exposure to chlorine dioxide produced from activation occurs, remove victim to fresh air. Consult a physician if respiratory distress continues.

SKIN: Based on rabbit studies, product is listed as “practically not an irritant”. Prolonged exposure may produce localized irritation, contact dermatitis, mild erythema and edema.

EYE: Based on rabbit studies, product has been given an EPA Toxicity Category IV rating as a mild irritant with minimal effects. Exposure can produce slight irritation of conjunctiva, cornea and eyelid.

INGESTION: Ingestion may produce gastric discomfort, nausea, vomiting and diarrhea. Intake of large quantities may produce methemoglobinemia.

SYSTEMS OF OVER EXPOSURE

Skin and eye irritation

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE

Skin disorders, such as dermal allergies and dermatitis.

CHRONIC EXPOSURE EFFECTS

May cause localized irritation to areas exposed to product.

SECTION 4: FIRST AID MEASURES

The following procedures are recommended as emergency first aid only. They are not intended to replace or supplant the treatment advice of a physician or other authorized health care specialist.

Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance, and then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

Skin Contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.

Eye Contact: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice.

If Swallowed: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center of doctor. Do not give anything by mouth to an unconscious person.

NOTES TO PHYSICIAN

Chlorine dioxide vapors are emitted when this product contacts acids or chlorine. If these vapors are inhaled, monitor patient closely for delayed development of pulmonary edema which may occur up to 48-72 hours post inhalation.

SECTION 5: FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Autoignition temperature	*Not Applicable*
Flash Point	*Not Applicable*
Flammable Limits – LEL	*Not Applicable*
Flammable Limits – UEL	*Not Applicable*

EXTINGUISHING MEDIA

Water unless contraindicated by other materials involved in the fire.

FIRE-FIGHTING EQUIPMENT

Standard protective gear with self-contained breathing apparatus.

SPECIAL FIRE-FIGHTING PROCEDURES

Do not allow product to evaporate to dryness. If chlorine dioxide gas is produced, vent to atmosphere. Open or vent any large containers.

UNUSUAL FIRE OR EXPLOSIVE HAZARDS

The sodium chlorite in dried EnviroCon™ is a strong oxidizer, which supports combustion.

SECTION 6: ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL NOTIFICATION

All spills and leaks involving more than 10 gallons should be reported to the nearest regional EPA office or designated state emergency response office with 24 hours. Spills from ocean vessels or which may contaminate U.S. costal waterways should be reported to the nearest Coast Guard office within 24 hours.

SPILL OR LEAK PROCEDURE

Small spills, involving less than 10 gallons, may be flushed to a designated and permitted sewer system with the amount of water that is about 10 times the amount of the spill. Do not discharge this product to storm drains or to any surface or groundwater source unless specifically allowed under a valid NPDES permit.

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, dark area in original container. Do not contaminate water, food, or feed by storage or disposal. Do not re-use container.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS

VENTILATION

Open air or good room ventilation is normally adequate for safe use of this product

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Eye/Face Protection

Good manufacturing practice recommends use of chemical safety goggles for all applications involving chemical handling.

Skin Protection

Good manufacturing practice recommends that, at a minimum, rubber, neoprene, or other chemically impervious gloves be worn for all applications involving chemical handling.

Respiratory Protection

None required

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Odor, Color, Grade	Clear liquid with very faint chlorinous odor
General Physical Form	Liquid
Volatile Organic Compounds	*<0.1% by weight*
Flash Point	*Not applicable*
Evaporation Rate	*Comparable to water*
Solubility in Water	*Complete*
Boiling Point	*213ºF (100.5ºC)*
Vapor Density	*0.02 kg/m^3*
Vapor Pressure	*23.7 mm Hg (25ºC)*
Specific Gravity	*1.01 g/ml (20ºC)*
pH	7.5 – 9.0
Melting point:	*Not determined.*

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY

Stable

Materials and Conditions to Avoid:

Avoid storing product under conditions in which it could evaporate to crystalline salt. Avoid accidental contact of concentrate with acids, chlorine compounds, hypochlorites (bleach), sulfur and sulfite compounds, phosphorous, organic solvents and combustible/flammable material

Hazardous Reaction and Decomposition Products:

Exposure to acids or chlorine compounds may produce chlorine dioxide gas.

Hazardous Polymerization:

Hazardous polymerization will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

ANIMAL TOXICOLOGY

Inhalation LC_{50}:	>5.61 mg/l
Dermal LD_{50}:	>5,000 mg/kg (rabbit)
Oral LD_{50}:	>5,000 mg/kg (rat)

CARCINOGENICITY

Active ingredients are not listed by ROTECS, OSHA, IARC, NTP or EPA. No evidence to date implicating product as a carcinogen or tumor promoter.

MUTAGENICITY

Though product active ingredient is a chemical oxidant, no evidence to date for mutagenicity from whole animal or in vitro studies.

REPRODUCTIVE/DEVELOPMENTAL TOXICITY

No known effects to date.

SECTION 12: ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION

This product is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant 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.

SECTION 13: DISPOSAL CONSIDERATIONS

CONTAINER DISPOSAL

Wrap container in newspaper and discard in trash. Triple rinse then offer for recycling or reconditioning; or puncture and dispose of in a sanitary landfill, or by incineration; or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

PESTICIDE DISPOSAL

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

DISPOSAL PROCEDURE

Small quantities, less than 10 gallons, may be flushed to an authorized and permitted sewer with copious amounts of water.

SECTION 14: TRANSPORT INFORMATION

Not DOT Regulated
Transportation emergency 24 hour telephone # 800-424-9300 Chemtrec

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS

TSCA

All product ingredients are in inventory

SARA TITLE 312/313

Neither the product nor its constituent ingredients are listed under SARA reporting requirements. Chlorine dioxide produced from activation is listed under SARA 313.

RCRA

Not considered a hazardous waste either categorically or by chemical listing.

FIFRA

EnviroCon™ is an EPA registered antimicrobial (EPA No. 9804-3)

FEDERAL OSHA REGULATIONS

Neither product nor constituent ingredients is classified as an acute or chronic health hazard by OSHA. Chlorine dioxide produced by activation is regulated with an air exposure limit of 0.1 ppm TL V and 0.3 ppm STEL.

STATE LAWS

CALIFORNIA: Not regulated under the provisions of Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

NEW JERSEY: Sodium Chlorite is listed under New Jersey's Chemical Inventory Notification Requirement (NJAC 7:1Z). Estimated release notification, however, is not required.

NOTE: Regulatory requirements are subject to change and may vary from one location to another. It is the user's responsibility to ensure compliance with all applicable federal, state and local regulations pertaining to the purchase, transport, storage, use and disposal of this product.

CHEMICAL INVENTORIES

This material contains one or more substances listed on the TSCA Inventory. Commercial use of this material is regulated by the EPA.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200

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.

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.

Product may bleach clothing and fabric materials, such as draperies and carpets.

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