



**BioFresh® cd**  
**SAFETY DATA SHEET**

**SECTION 1: IDENTIFICATION**

**Product Identifier:**

Bio-Fresh® cd (4126-34, 4126-38)

**Other means of Identification:**

CAS No. 7758-19-2; 0.17% sodium chlorite solution

**Recommended Use:**

Bio-Fresh®cd is a registered antimicrobial pesticide (EPA Registration Number: 9804-3-65516). Bio-Fresh® cd is used to deodorize HVAC system ductwork as a Bacteriostat, Fungistat and deodorizer. Bio-Fresh® cd is used for microbial control of evaporator coils, drip pans and associated air conditioning parts and evaporative cooler excelsior mats. It is also used for residual control of odors with bacteria, mold, mildew, animals, smoke, etc. Consult the Bio-Fresh® cd label for a complete list of permitted uses.

**Distributed by:**

Nu-Calgon  
2008 Altom Court  
St. Louis MO 63146  
Phone: 800-554-5499

**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**

Bio-Fresh® cd is not classified as hazardous under 29 CFR 1910.1200 (d) and is not subject to GHS / SDS hazard statement requirements

**SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS**

|                    |                       |                  |
|--------------------|-----------------------|------------------|
| <b>Substance:</b>  | 0.17% sodium chlorite | >99.99% water    |
| <b>Formula:</b>    | NaClO <sub>2</sub>    | H <sub>2</sub> O |
| <b>CAS number:</b> | 7758-19-2             | 7732-18-5        |
| <b>EC number:</b>  | 231-836-6             | 231-791-2        |

**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 or doctor. Do not give anything by mouth to an unconscious person.

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<sub>x</sub>).

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

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### SPILL OR LEAK PROCEDURE

Spills 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

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.

Open air or good room ventilation is normally adequate for safe use of this product. Good manufacturing practice recommends use of chemical safety goggles, and at a minimum, rubber, neoprene, or other chemically impervious gloves be worn for all applications involving chemical handling. Respiratory protection none is required.

## 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;** 8.0 – 8.5
- (e) **Melting point/freezing point;** not determined
- (f) **Initial boiling point and boiling range;** 213°F (100.5°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<sup>3</sup>
- (m) **Relative density;** 1.01 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<sup>2</sup>/ 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<sub>2</sub>)
- (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

### ANIMAL TOXICOLOGY

|                               |                       |
|-------------------------------|-----------------------|
| Inhalation LC <sub>50</sub> : | >5.61 mg/l            |
| Dermal LD <sub>50</sub> :     | >5,000 mg/kg (rabbit) |
| Oral LD <sub>50</sub> :       | >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

Bio-Fresh® cd is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, rivers or streams. Do not discharge effluent containing this product to sewer systems without first notifying the sewage treatment plant.

Bio-Fresh® cd does not bio-accumulate and is biodegradable.

Bio-Fresh® cd 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 the remaining contents into applications equipment or a mix tank and drain for ten seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Pour rinsate into applications equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

## SECTION 14: TRANSPORT INFORMATION

**Not regulated in transport**

**Environmental Hazards:** Toxic to fish and aquatic organisms. Not a marine pollutant. 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 not 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):

Not regulated

#### 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:** listed 1689

**New Jersey Special Health Hazards Substance List:** Listed 1689

**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

### **WHMIS - Classifications of Substances:**

Not classified

### **FIFRA Regulations:**

Registered pesticide under 40 CFR 152.10, Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), EPA Reg. No. 9804-3-65516 (Bio-Fresh® cd)

### **FIFRA Labeling Requirements:**

This chemical is a pesticide product registered by the United States Environmental Protection Agency and it subject to certain labeling requirement under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions for use.

FIFRA Signal Word – CAUTION

Corrosive

Harmful if swallowed

Avoid Breathing spray mist

Causes moderate eye irritation

Remove contaminated clothing and wash clothing before reuse

Wash thoroughly with soap and water after handling

Handlers applying chlorine dioxide must wear gloves

This pesticide is toxic to fish and aquatic invertebrates

## SECTION 16: OTHER INFORMATION

### 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<sub>2</sub>). 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**

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