



SAFETY DATA SHEET

SECTION 1 • COMPANY AND CHEMICAL IDENTIFICATION

Selective Micro Technologies, LLC
6200 Avery Rd., Suite A
Dublin, OH 43016
(855) 256-8299 (8:30 AM – 4:30 PM EST)

EMERGENCY SOURCE INFORMATION
24-Hour Emergency Chemtrec: 800-424-9300

SUBSTANCE: Inorganic Oxidizing Agent
DRY PRODUCT: Sodium Chlorite, proprietary ingredients
ACTIVATED PRODUCT: Chlorine dioxide
PRODUCT/TRADE NAMES/SYNONYMS: CIO₂BBERIZER™,
T.E.D. CIO₂BBERIZER-PRO, Transform Deodorizer.

Recommended Use and Restrictions: When activated, product generates aqueous chlorine dioxide. This product is to be used as a disinfectant or sanitizer on hard, non-porous surfaces, as an antimicrobial agent in poultry processing, and to wash fruits and vegetables that are not raw agricultural commodities. There are no known restrictions.

CREATED BY: Selective Micro Technologies, LLC
CREATION DATE: May 5, 2004 REVISION DATE: December 15, 2016

SECTION 2 • HAZARD IDENTIFICATION

DRY PRODUCT: Sodium chlorite
SIGNAL WORD: DANGER
CATEGORY: Oxidizing solids (category 2)



May intensify fire;
oxidizer



Causes burns to skin,
serious eye damage



Respiratory tract
irritant

ACTIVATED PRODUCT: Chlorine dioxide | SIGNAL WORD: CAUTION | CATEGORY: NA

INHALATION: Chlorine dioxide gas is a strong respiratory irritant. High exposure may cause bronchospasm and pulmonary edema, which may be delayed in onset. May also cause severe headache. All symptoms may be delayed and long lasting. Prolonged exposure may cause bronchitis.

SKIN CONTACT: Skin irritant. Gas phase may be absorbed, causing tissue and blood cell damage.

EYE CONTACT: Eye irritant. Exposure may cause visual disturbance such as seeing halos around lights.

INGESTION: Aqueous solutions of chlorine dioxide gas can be irritating and in high concentrations cause chemical burns. Not anticipated from this product.

ADDITIONAL DATA: May have increased effects with exposure to chlorine, other chlorine oxides and chlorine-fluorine compounds. Avoid directly inhaling fumes of activated solution. Read label carefully before use.

SECTION 3 • COMPOSITION/INFORMATION ON INGREDIENTS

DRY PRODUCT

COMPONENT	CASRN	RANGE
Activator*	N/A	55-85%
Sodium Chlorite	7758-19-2	15-40%
Inert*	N/A	≤ 2%

ACTIVATED PRODUCT

COMPONENT	CASRN	RANGE
Chlorine Dioxide	10049-04-4	0.01-0.05% (Depends on product, see label)

*Proprietary ingredients

SECTION 4 • FIRST AID MEASURES

CONTACT WITH DRY PRODUCT

SKIN: Brush off loose product. Rinse skin immediately with plenty of water, then wash area with soap and water. Call a poison control center or doctor for treatment advice.

EYES: 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 the eye. Seek medical attention immediately.

INGESTION: Call a poison control center or doctor immediately for treatment advice. Have person drink large quantities 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.

INHALATION: Remove individual from exposure to chemical. Seek fresh air. If individual is not breathing, administer CPR. If breathing is labored, seek medical attention.

SECTION 4 • FIRST AID MEASURES (cont.)

CONTACT WITH LIQUID PRODUCT (ACTIVATED PRODUCT)

SKIN: Remove contaminated clothing. Rinse skin immediately. If irritation persists, obtain medical attention.

EYES: 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 the eye. If irritation persists, obtain medical attention.

INHALATION: **The product produces chlorine dioxide gas when the contents are adequately wetted. Carefully observe label instructions, and Section 8 of this SDS.** Remove individual from exposure to chemical. Seek fresh air. If individual is not breathing, administer CPR. If breathing is labored, seek medical attention.

INGESTION: Call a poison control center or doctor immediately for treatment advice. Have person drink large quantities 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.

NOTE: Have the product container or label with you when calling a poison control center or doctor or going for treatment.

SECTION 5 • FIRE FIGHTING MEASURES

FIRE AND EXPLOSION HAZARD: Sodium chlorite in the unactivated product is a strong oxidizer, and can support combustion in the absence of air. Chlorine dioxide, which may evolve from exposure of the unactivated product to water, is explosive in the gas phase at concentrations greater than 10% by volume. Do not allow chlorine dioxide gas to accumulate in confined spaces.

EXTINGUISHING MEDIA: Fire-exposed containers should be watered and cooled with water fog. Decomposition can release oxygen that supports combustion and reduces effectiveness of suffocation-type extinguishing agents.

FIREFIGHTING: Wear full protective clothing and self-contained breathing apparatus with full facepiece (pressure-demand, NIOSH-approved). Approach fire from upwind to avoid hazardous vapors and toxic decomposition products.

HAZARDOUS COMBUSTION PRODUCTS: Decomposition can release oxygen that supports combustion and reduces effectiveness of suffocation-type extinguishing agents. Thermal decomposition products from incomplete combustion (pyrolysis) include carbon monoxide, carbon dioxide, and inorganic chlorine compounds.

SECTION 6 • ACCIDENTAL RELEASE MEASURES

DRY PRODUCT:

If contents of pouch are exposed, spilled, or otherwise introduced into the environment:

- Wear protective rubber gloves (see manufacturer details for tolerances)
- Wear protective goggles or other eye protection
- Wear an approved NIOSH mask to prevent inhaling fumes/dust
- Place contents on pouch in a plastic container
- Fill container with water to allow degradation/neutralization

ACTIVATED PRODUCT:

If activated product is spilled, or otherwise introduced into the environment:

- Wear protective rubber gloves (see manufacturer details for tolerances)
- Wear protective goggles or other eye protection
- Wear an approved NIOSH mask to prevent inhaling fumes
- If spillage is heavily concentrated, dilute
- Soak up spillage and dispose of according to local ordinance

SECTION 7 • HANDLING AND STORAGE

HANDLING: Use product as directed by label. Avoid breathing mist or vapors generated by activated product. Use only with adequate ventilation. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Thoroughly rinse any protective gear and handling equipment used prior to storage and reuse.

STORAGE: Observe all applicable regulations when storing this substance. Keep unactivated product in a cool, dry, ventilated area away from direct sunlight. Do not store with acids, chlorine and chlorine compounds, hypochlorites (bleach), organic solvents, sulfur and sulfite compounds, phosphorus, and combustible/flammable materials. Do not store in areas where sparking may occur.

After envelope is spent, liquid product should be disposed of down designated disposal sink and flushed thoroughly with water. Throw away envelope. Ensure the micro-reactor used for air treatment or odor elimination is spent before discarding; see product label for total time to be emerged in water prior to discarding.

SECTION 8 • EXPOSURE CONTROLS/PERSONAL PROTECTION

VENTILATION: General exhaust ventilation is sufficient for safe use of this product. Avoid breathing any vapors, mists or fumes generated by the inactivated and activated product. Local exhaust ventilation or NIOSH approved mask may be appropriate in applications, in confined spaces or where large quantities are used.

SECTION 8 • EXPOSURE CONTROLS/PERSONAL PROTECTION (cont.)

EYE PROTECTION: Whether handling dry ingredients or activated product, approved safety goggles or face shield should be worn.

EMERGENCY WASH FACILITIES: None normally required when handling intact product. Safety shower and chemical eyewash facilities may be necessary if handling large quantities of dry ingredients.

GLOVES: None normally required when handling intact product. If handling exposed dry ingredients in product, use appropriate hand protection. Gloves made of rubber, neoprene or other chemically impervious gloves may be suitable. Consult glove manufacturer.

RESPIRATOR: None normally required when handling intact product. Where overexposure to chlorine dioxide may occur, use appropriate respiratory protection and follow OSHA requirements at 29 CFR 1910.134 and 29 CFR 1910.1000. A NIOSH-approved air-purifying respirator or a NIOSH approved canister/cartridge respirator rated for chlorine/acid gas or specified for chlorine dioxide may be appropriate.

FOR FIREFIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE OR HEALTH CONDITIONS: For firefighting, see section 5.

EXPOSURE LIMITS:

COMPONENT	CASRN	OSHA	ACGIH	NIOSH
Activator	N/A	None Listed	None Listed	None Listed
Sodium Chlorite	7758-19-2	None Listed	None Listed	None Listed
Inert	N/A	15 mg/m3 ^{^*}	10 mg/m3 ^{^*}	None Listed

[^]Time Weighted Average +Particulates Not Otherwise Regulated

ACTIVATED PRODUCT	CASRN	OSHA	ACGIH	NIOSH
Chlorine dioxide (airborne)	10049-04-4	0.1 ppm/8hrs	0.1 ppm/10hrs 0.3 ppm STEL	0.1 ppm/10hrs 0.3 ppm STEL

SECTION 9 • PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Dry Product-white powdery substance. Activated Product-light green to yellow liquid.
UPPER/LOWER FLAMMABILITY LIMITS: NA
ODOR: Dry Product-NA
 Activated Product-faint chlorine smell
VAPOR PRESSURE: NA
ODOR THRESHOLD: 0.1 PPM
VAPOR DENSITY: NA
pH: NA
RELATIVE DENSITY: NA

MELTING/FREEZING POINT: NA
SOLUBILITY: COMPLETE
INITIAL BOILING POINT & BOILING RANGE: NA
FLASH POINT: 185°C
EVAPORATION RATE: NA
FLAMMABILITY: NA
PARTITION COEFFICIENT: NA
AUTO-IGNITION TEMPERATURE: NA
DECOMPOSITION TEMPERATURE: 160°C
VISCOSITY: NA

SECTION 10 • STABILITY AND REACTIVITY

STABILITY: Product is stable under normal storage conditions. Ingredients are oxidizers and may decompose if heated above 160 °C, opened, or wetted.

CONDITIONS TO AVOID: Avoid storing product where it might become wet, or where the spilled contents of a damaged, unactivated pouch could dry to a crystalline salt or produce chlorine dioxide gas. Do not store where dry material may come into contact with sparking.

INCOMPATIBILITIES: Avoid accidental contact of dry ingredients or activated product with acids, chlorine compounds, hypochlorites (bleach), sulfur and sulfite compounds, phosphorus, organic solvents, and combustible/flammable materials.

HAZARDOUS DECOMPOSITION: Exposure of dry ingredients or activated product to acids or chlorine compounds can produce uncontrolled release of chlorine dioxide gas.

SECTION 11 • TOXICOLOGY INFORMATION

CARCINOGEN STATUS: Not Listed.

TARGET ORGANS: Skin, eyes.

ADDITIONAL DATA: None.

HEALTH EFFECTS OF UNACTIVATED PRODUCT: None anticipated under normal conditions of use. Contact with dry ingredients may cause burns.

INHALATION: None anticipated under normal conditions of use.
SKIN CONTACT: None anticipated under normal conditions of use.
EYE CONTACT: None anticipated under normal conditions of use; however, eye contact with dry ingredients may cause irreversible eye damage.
INGESTION: None anticipated under normal conditions of use.

DERMAL SENSITIZATION: A dermal sensitization test [in accordance with EPA Health Effects Test Guidelines, OPPTS 870.2600 (2003)] was conducted with guinea pigs to determine if the activated product would produce sensitization after repeated topical applications. Based on the results of the study, the activated solution is not considered to be a contact sensitizer.

ACUTE INHALATION: LC₅₀ >2.07mg/L (male and female rats): single exposure acute inhalation of the activated aqueous solution of chlorine dioxide.

SECTION 11 • TOXICOLOGY INFORMATION (cont.)

CARCINOGEN STATUS:

OSHA: Not Listed. NTP: Not Listed. IARC: Not Listed.

TARGET ORGANS: Skin, eyes, respiratory tract, mucous membranes.

ADDITIONAL DATA: None.

HEALTH EFFECTS FROM EXPOSURE TO ACTIVATED PRODUCT: None anticipated under normal conditions of use.

POTENTIAL HEALTH EFFECTS FROM EXPOSURE TO CHLORINE DIOXIDE GAS:

INHALATION: Chlorine dioxide gas is a strong respiratory irritant. High exposure may cause bronchospasm and pulmonary edema, which may be delayed in onset. May also cause severe headache. All symptoms may be delayed and long lasting. Prolonged exposure may cause bronchitis.

SKIN CONTACT: Skin irritant. Gas phase may be absorbed, causing tissue and blood cell damage.

EYE CONTACT: Eye irritant. Exposure may cause visual disturbance such as seeing haloes around lights.

INGESTION: Liquid solutions of chlorine dioxide gas can be irritating and in high concentrations cause chemical burns. Not anticipated from this product.

ADDITIONAL DATA: May have increased effects with exposure to chlorine, other chlorine oxides, and chlorine-fluorine compounds.

SECTION 12 • ECOLOGICAL INFORMATION

ACUTE AQUATIC TOXICITY: Not applicable.

DEGRADABILITY: Decomposes in water.

BIOCONCENTRATION FACTOR (BCF): Not applicable.

OCTANOL/WATER PARTITION COEFFICIENT: Not applicable.

SECTION 13 • DISPOSAL INFORMATION

Unactivated product should be disposed in accordance with all federal, state and local regulations. Used/activated product sachets are considered inert; consult with appropriate agencies to determine appropriate disposal methods.

SECTION 14 • TRANSPORTATION INFORMATION

D.O.T. Classification: 5.1, packing group II Oxidizer; **D.O.T. Identification Number:** UN1496; **Conforms to 49 CFR 173.4** for road and rail transfer. **IATA:** Dangerous goods in excepted quantities.

SECTION 15 • REGULATORY INFORMATION

US FEDERAL REGULATIONS:

Clean Air Act: Not applicable.

CERCLA SECTION 103 (40 C.F.R. § 302.4): Not applicable.

SARA SECTION 302 (40 C.F.R. § 355.30): Not applicable.

SARA SECTION 304 (40 C.F.R. § 355.40): Not applicable.

SARA (EPCRA) SECTION 313 (40 C.F.R. § 372.65): Chlorine dioxide produced from activated product is listed under SARA 313, with a 25,000-pound threshold for manufactured product.

OSHA PROCESS SAFETY (29 C.F.R. § 1910.119): Not regulated.

SARA HAZARD CATEGORIES, SARA SECTIONS 311/312 (40 C.F.R. § 370.21):

10,000 lb threshold.

ACUTE HAZARD: Irritant.

CHRONIC HAZARD: None known.

FIRE HAZARD: Oxidizer.

REACTIVITY HAZARD: Oxidizer.

SUDDEN RELEASE HAZARD: Not applicable.

STATE REPORTING REQUIREMENTS:

California Proposition 65: Not regulated.

New Jersey: See Section II.

SECTION 16 • OTHER

DISCLAIMER OF WARRANTY

Information given herein is offered in good faith as accurate, but without guarantee. Conditions of use and suitability of the product for particular uses are beyond our control; all risks of use of the product are therefore assumed by the user, and WE EXPRESSLY DISCLAIM ALL WARRANTIES OF EVERY KIND AND NATURE, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. Nothing is intended as a recommendation for uses that infringe valid patents or as extending license under valid patents. Appropriate warnings and safe-handling procedures should be provided to handlers and users. Alteration of this document is strictly prohibited. Except to the extent required by law, republication or transmission of this document, in whole or in part, is not permitted. Selective Micro Technologies, LLC assumes no responsibility for accuracy of information unless the document is the most current available from an official Selective Micro Technologies, LLC distribution system. Selective Micro Technologies, LLC neither represents nor warrants that the format, content or product formulas contained in this document comply with the laws of any other country except in the United States of America.