SAFETY DATA SHEET

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

1. Identification

Product identifier	**Anthium™ Dioxcide**
Other means of identification	Material Number: 57747435 EPA Registration Number: 9150-2
Recommended use	For potable water treatment or municipal waste treatment only
Recommended restrictions	None known

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	International Dioxcide, Inc.
Address	40 Whitecap Drive North Kingstown, RI 02852 United States of America
Telephone	Information #: (800) 477-6071
Website	https://idiclo2.com
E-mail	idiclo2@ercoworldwide.com
Emergency phone number	Canada & U.S.A.: (800) 424 9300 (CHEMTREC) International: (703) 527 3887
Supplier	Refer to Manufacturer

2. Hazard(s) Identification

Physical hazards None

Health hazards

Acute toxicity, oral	Category 4
Skin irritation	Category 2
Eye irritation	Category 2B
Specific target organ toxicity, repeated exposure (blood, kidneys, liver, spleen)	Category 2

Environmental hazards Not currently regulated by OSHA, refer to Section 12 for additional information.

OSHA defined hazards This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Label elements

Signal word Warning

Hazard statement

Harmful if swallowed.
Causes serious eye irritation.
Causes skin irritation.
May cause damage to organs through prolonged or repeated exposure (blood, kidneys, liver, spleen).

Precautionary statement

Prevention

Wear protective gloves and eye/face protection. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.

Response

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.
IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs: Get medical attention.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention.
IF exposed or concerned: Call a POISON CENTER or doctor.

Storage

Not applicable.

Disposal

Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazard(s) not otherwise classified (HNOC)

If Sodium Chlorite dries on some types of fire-retardant clothing it is known to cause an exothermic reaction. The reaction has been known to cause burns to skin. Nomex appears to be the only material not to experience this reaction.

Supplemental information

Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink.

3. Composition/Information on Ingredients

Chemical name	Common name and synonyms	CAS number	Conc. % By Weight
Sodium chlorite	None	7758-19-2	≤10 w/w%

Chemical name of impurities, stabilizing solvents and/or additives: None.
Any concentration shown as a range is to protect confidentiality or is due to batch variation.
There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health and hence require reporting in this section.

4. First-Aid Measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention following exposure or if feeling unwell. If unconscious, place

	in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. If not breathing, if breathing is irregular or respiratory arrest occurs, provide artificial respiration, or oxygen by a trained professional, using a pocket type respirator.
Skin Contact	Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Clean shoes thoroughly before reuse. In case of contact, flush skin with plenty of water for at least 20 minutes.
Eye Contact	Check for and remove any contact lenses. Get medical attention. In case of contact, flush eyes with plenty of water for at least 20 minutes. Use fingers to ensure that eyelids are separated and that the eye is being irrigated.
Ingestion	Wash out mouth with water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
Most important symptoms/effects, acute and delayed	Causes serious eye irritation. Adverse symptoms may include watering, redness, reddening, tearing, stinging, and swelling. Causes skin irritation with symptoms of reddening, itching, and swelling. Harmful if swallowed. Irritating to mouth, throat and stomach. Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea. May cause damage to organs through prolonged or repeated exposure.
Indication of immediate medical attention and special treatment needed	Not available.
General information	Treat symptomatically. No specific treatment.

5. Fire-Fighting Measures

Suitable extinguishing media	Use an extinguishing agent suitable for the surrounding fire. In case of fire, use water spray (fog), foam or dry chemical.
Unsuitable extinguishing media	None known.

Specific hazards arising from the chemical	In a fire or if heated, a pressure increase will occur and the container may burst.
Special protective equipment and precautions for firefighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. If Sodium Chlorite dries on some types of fire-retardant clothing it is known to cause an exothermic reaction. The reaction has been known to cause burns to skin. Nomex appears to be the only material not to experience this reaction.
Firefighting equipment /instructions	Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	May intensify fire; oxidizer when dry.
Hazardous combustion products	Decomposition products may include the following materials: halogenated compounds, metal oxide/oxides.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures	No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
Methods and materials for containment and cleaning up	Stop leak if without risk. Move containers from spill area. Approach release from upwind. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal. Prevent entry into sewers, water courses, basements or confined areas.
Environmental precautions	Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

7. Handling and Storage

Precautions for safe handling

Do not breathe vapor or mist. Do not ingest. Avoid contact with eyes, skin and clothing. Use only with adequate ventilation. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.
Remove contaminated clothing and protective equipment before entering eating areas. Workers should wash hands and face before eating, drinking and smoking. Put on appropriate personal protection equipment. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed.

Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Empty containers retain product residue and can be hazardous. Do not reuse container.

8. Exposure Controls/Personal Protection

Occupational Exposure Limits

No exposure limits noted for ingredient(s).

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures, such as personal protective equipment

Eye/face protection

Chemical splash goggles.

Skin protection

Hand protection

Permeation resistant gloves.

Other

Permeation resistant clothing and foot protection.
If Sodium Chlorite dries on some types of fire-retardant clothing it is known to cause an exothermic reaction. The reaction has been known to cause burns to skin. Nomex appears to be the only material not to experience this reaction.

Respiratory protection

Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator. A NIOSH approved air purifying respirator with

organic vapor cartridges and particulate prefilter can be used to minimize exposure.

Thermal Hazards — If Sodium Chlorite dries on some types of fire-retardant clothing it is known to cause an exothermic reaction. The reaction has been known to cause burns to skin. Nomex appears to be the only material not to experience this reaction.

General hygiene considerations — Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

9. Physical and Chemical Properties

Appearance	
Physical state	Liquid
Form	Liquid
Color	Light yellow
Odor	Chlorine [Slight]
Odor threshold	Not available
Molecular formula	Not available
Molecular weight	Not available
pH	9 to 9.2
Melting point/Freezing Point	Not available
Initial boiling point and boiling range	105 °C (1013 hPa)
Flash point	Closed cup: >100°C (>212°F)
Evaporation rate	Not available
Flammability (solid, gas)	Not available
Upper/lower flammability or explosive limits	
Flammability limit – lower (%)	Not available
Flammability limit – upper (%)	Not available
Explosive limit – lower (%)	Not available
Explosive limit – upper (%)	Not available
Vapor pressure	19.87 hPa (20°C)
Vapor density	Not available
Relative density	Not available
Solubility (ies)	
Solubility (water)	Easily soluble in the following materials: cold water
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Dynamic: 3.26 mPa·s
Other information	
Density	1.065 to 1.095 g/cm³
Flammability	Not available

Specific gravity	Not available
Surface tension	Not available

10.Stability and Reactivity

Reactivity	No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to Avoid	No specific data.
Incompatible materials	No specific data.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11.Toxicological Information

Information on likely routes of exposure

Inhalation	No known significant effects or critical hazards.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Harmful if swallowed. Irritating to mouth, throat and stomach.

Delayed and immediate effects and chronic effects from short-term and long-term exposure

Effects of short-term (acute) exposure	Causes serious eye irritation. Adverse symptoms may include watering, redness, reddening, tearing, stinging, and swelling. Causes skin irritation with symptoms of reddening, itching, and swelling. Harmful if swallowed. Irritating to mouth, throat and stomach. Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea.
Effects of long-term (chronic) exposure	May cause damage to organs through prolonged or repeated exposure.

Information on toxicological effects

Acute toxicity

Product	**Species**	**Test Results**
Anthium™ Dioxcide		
Acute		
LD50 Oral	Rat	1075 mg/kg (Test results for a product at higher concentration)

LD50 Dermal	Rat	>2000 mg/kg (Test results for a product at higher concentration)
LD50 Inhalation (dusts and mists)	Rat	>6.53 mg/l over a 4 hour exposure (Test results for a product at higher concentration)

* Estimates for product may be based on additional component data not shown.

Skin corrosion/irritation	Moderate irritant (Test results for a product at higher concentration)
Serious eye damage/eye irritation	Mild irritant (Test results for a product at higher concentration)
Respiratory or skin sensitization	
Respiratory sensitization	Not sensitizing.
Skin sensitizer	Not sensitizing.
Germ cell mutagenicity	Not mutagenic in a standard battery of genetic toxicological tests. Did not show carcinogenic or mutagenic effects in animal experiments.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
IARC Monographs. Overall Evaluation of Carcinogenicity	Sodium Chlorite (CAS 7758-19-2) Not classifiable as to carcinogenicity to humans.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	Not listed.
Reproductive toxicity	Not classified as a reproductive toxin.
Specific target organ toxicity - single exposure	Not classified as a specific target organ toxicity -single exposure.
Specific target organ toxicity - repeated exposure	Specific Target Organ Toxicity (STOT), Repeated Exposure: blood, kidneys, liver, spleen.
Aspiration toxicity	Not expected to be an aspiration hazard.
Chronic effects	Chronic skin contact with low concentrations may cause dermatitis. Prolonged or repeated overexposure may cause blood, liver, spleen and kidney effects.

12. Ecological Information

Ecotoxicity

Product		Species	Test Results
Sodium Chlorite (CAS 7758-19-2)			
Aquatic			
Acute			
Algae	EC_{50}	Green algae (Selenastrum capricornutum)	1.2 mg/l
Crustacea	EC_{50}	Water flea (Daphnia)	0.025 mg/l
Fish	LC_{50}	Sheepshead minnow (Cyprinodon variegatus)	110 mg/l
Chronic			
Algae	EC_{50}	Green algae (Selenastrum capricornutum)	1 mg/l

Persistence and degradability Biodegradation is not applicable to inorganic substances.

Bioaccumulative potential The product itself has not been tested

Mobility in soil In soil, will degrade to sodium chloride but may form chlorine dioxide in contact with acidic soils. Chlorate is an intermediate product of decomposition; it will slowly degrade to chloride.

Other adverse effects No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal Considerations

Disposal instructions The generation of waste should be avoided or minimized wherever possible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Waste disposal should be in accordance with existing federal state, provincial and or local environmental controls laws.

Local disposal regulations Dispose in accordance with all applicable regulations.

Hazardous waste code If discarded in its purchased form, this product would not be a hazardous waste either by listing or by characteristic. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal, whether a material containing the product or derived from the product should be classified as a hazardous waste. (40 CFR 261.20-24)

Waste from residues / unused products Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14.Transport Information

DOT	Not regulated.
IATA	Not regulated.
IMDG	Not regulated.
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.
General information	RQ: 0 lbs.

15.Regulatory Information

SARA 311/312	Immediate (acute) health hazard
SARA Title III Section 302 Extremely Hazardous Substances	None
SARA Title III Section 313 Toxic Chemicals	None
US EPA CERCLA Hazardous Subtances (40 CFR 302.4)	None

State regulations

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections on the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

Ingredient Name	CAS Number	State Code	Concentration (%)
Sodium chlorite	7758-19-2	MA - S, NJ - HS, PA - RTK HS	≤10
Water	7732-18-5		≥90

Massachusetts Substances: MA - S
Massachusetts Extraordinary Hazardous Substances: MA - Extra HS
New Jersey Hazardous Substances: NJ - HS
Pennsylvania RTK Hazardous Substances: PA - RTK HS
Pennsylvania Special Hazardous Substances: PA - Special HS

California Prop. 65

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

U.S Toxic Substances Control Act	This product is excluded from TSCA Regulation under FIFRA Section 3 (2)(B)(ii) when used as a pesticide.
EPA Registration Number	9150-2 Signal word: CAUTION Hazard statements: Causes moderate eye irritation. Harmful if swallowed or absorbed through skin.

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of 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.

16. Other Information

Issue date	4/1/2022
Revision #	6
Revision Indicator	Clarified precautionary statements, added FR clothing precaution.
List of abbreviations	ACGIH: American Conference of Governmental Industrial Hygienists CAS: Chemical Abstract Services CERCLA: Comprehensive Environmental Response, Compensation and Liability Act of 1980 CFR: Code of Federal Regulations DOT: Department of Transportation EPA: Environmental Protection Agency EPCRA: Emergency Planning and Community Right-to-Know Act ERG: Emergency Response Guidebook HSDB® - Hazardous Substances Data Bank IARC: International Agency for Research on Cancer IATA: International Air Transport Association IBC: Intermediate Bulk Container IDLH: immediately dangerous to life or health IMDG: International Maritime Dangerous Goods LC: Lethal Concentration LD: Lethal Dose NIOSH: National Institute of Occupational Safety and Health NOEC: No observable effect concentration NTP: National Toxicology Program OECD: Organization for Economic Cooperation and Development OEL: National occupational exposure limits OSHA: Occupational Safety and Health Administration PEL: Permissible exposure limit RCRA: Resource Conservation and Recovery Act RQ: Reportable Quantity RTECS: Registry of Toxic Effects of Chemical Substances SAR: supplied-air respirator

SCBA: self-contained breathing apparatus
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TWA: Time Weighted Average
UN: United Nations

References None.

Disclaimer

Information presented in this SDS is furnished in accordance with OSHA's Hazard Communication Standard (HCS) 2012.

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