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™ C-20**
Other means of identification	Material Number: 57951275 EPA Registration Number: 9150-11
Recommended use	Biocide
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	Skin irritation	Category 2
	Eye irritation	Category 2A
	Specific target organ toxicity, repeated exposure (brain, nervous system, 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

Causes serious eye irritation.
Causes skin irritation.
May cause damage to organs through prolonged or repeated exposure (brain, nervous system, spleen).

Precautionary statement

Prevention

Wear protective gloves and eye/face protection. Do not breathe vapor. Wash hands thoroughly after handling.

Response

IF ON SKIN: Wash with plenty of water. Take off contaminated clothing. Wash contaminated clothing 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

Store locked up

Disposal

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

Hazard(s) not otherwise classified (HNOC)

Causes severe digestive tract burns. Causes respiratory tract burns.
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

Do not taste or swallow. Wash thoroughly after handling. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials and food and drink. Corrosive to digestive tract [severe].

3. Composition/Information on Ingredients

Chemical name	Common name and synonyms	CAS number	Conc. % By Weight
Sodium chlorite	None	7758-19-2	≤1.5% w/w
Alcohols, C12-15, ethoxylated	None	68131-39-5	≤1.4% w/w
Isopropanol	None	67-63-0	≤5% 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 ad 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 following exposure or if feeling unwell. 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 include reddening, tearing, stinging, and swelling. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Corrosive with symptoms of coughing, burning, ulceration, and pain. May cause pulmonary edema with symptoms of breathing difficulty and tightness of chest. Causes skin irritation. Adverse symptoms include reddening, itching, and swelling. Severely corrosive to the digestive tract. Causes severe burns. Irritating to mouth, throat and stomach. Corrosive with symptoms of coughing, burning, ulceration, and pain. May cause irritation; Symptoms 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	Notes to physician: 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	Not available
Hazardous combustion products	Decomposition products may include the following materials: carbon dioxide, carbon monoxide, 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

Sodium chlorite	None
Alcohols, C12-15, ethoxylated	None
Isopropanol	ACGIH TLV (United States, 3/2016). TWA: 200 ppm 8 hours. STEL: 400 ppm 15 minutes. OSHA PEL (United States, 6/2016). TWA: 400 ppm 8 hours. TWA: 980 mg/m³ 8 hours.

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	Clear
Odor	Alcohol-like
Odor threshold	Not available
Molecular formula	Not available
Molecular weight	Not available
pH	9
Melting point/Freezing Point	Not available
Initial boiling point and boiling range	93 °C (1013 hPa)
Flash point	Not available
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	Not available
Vapor density	
Relative density	Not available
Solubility (ies)	Not available
Solubility (water)	Miscible in water.
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Density	1 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	May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye irritation.
Ingestion	Severely corrosive to the digestive tract. Causes severe burns. 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 irritation with symptoms of reddening, tearing, stinging, and swelling. Corrosive with symptoms of coughing, burning, ulceration, and pain. May cause pulmonary edema with symptoms of breathing difficulty and tightness of chest. Causes irritation with symptoms of reddening, itching, and swelling. May cause irritation; Symptoms 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
Sodium Chlorite			
	Acute		
	LD50 Dermal	Rabbit - Male, Female	134 mg/kg (Test: OPP 81-2 Acute Dermal Toxicity)
	LC50 Inhalation Dusts and mists	Rat	230 mg/m³ over 4 hours

Product		Species	Test Results
Alcohols, C12-15, ethoxylated			
	LD50 Dermal	Rat - Male, Female	>2000 mg/kg (Test: 402 Acute Dermal Toxicity)
	LC50 Inhalation Vapor	Rat - Male, Female	>1.6 mg/l over 4 hours (Test: OECD 403 Acute Inhalation Toxicity) *Test results on an analogous product

Product		Species	Test Results
Isopropanol			
	LD50 Dermal	Rabbit	13400 mg/kg
	LD50 Dermal	Rat	12800 mg/kg
	LC50 Inhalation Vapor	Rat	30 mg/l over 4 hours

Product		Species	Test Results
Anthium™ C-20			
	LD50 Oral	Rat	>5000 mg/kg

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

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye irritation.

Respiratory or skin sensitization	
Respiratory sensitization	Not sensitizing
Skin sensitizer	Not sensitizing
Germ cell mutagenicity	No known significant effects or critical hazards
Carcinogenicity	No known significant effects or critical hazards
IARC Monographs. Overall Evaluation of Carcinogenicity	Not classifiable as to carcinogenic to humans.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	
Reproductive toxicity	No known significant effects or critical hazards.
Specific target organ toxicity - single exposure	Isopropanol: Category 3, respiratory tract irritation and narcotic effects.
Specific target organ toxicity - repeated exposure	Sodium chlorite: Category 2, spleen Isopropanol: Category 2, brain and nervous system
Aspiration toxicity	No known significant effects or critical hazards.
Chronic effects	Not available

12.Ecological Information

Ecotoxicity

Product		Species	Test	Test Results
Sodium chlorite				
	Acute EC50	Algae - Scenedesmus Capricornutum	-	1 mg/l Fresh water over 96 hours
	Acute EC50	Crustaceans - Mysidopsis bahia	-	0.65 mg/l Marine water over 96 hours
	Acute EC50	Daphnia - Daphnia magna	OECD 202 Daphnia sp. Acute Immobilization Test	<1 mg/l Fresh water over 48 hours
	Acute LC50	Fish - Oncorhynchus Mykiss	-	106 mg/l Fresh water over 96 hours

Chronic NOEC	Algae - Scenedesmus Capricornutum	-	0.62 mg/l Fresh water over 96 hours

Product	Species	Test	Test Results
Alcohols, C12-15, ethoxylated			
Acute EC50	Algae - Pseudokirchneriella Subcapitata	-	0.75 mg/l (growth rate) over 72 hours
Acute EC50	Daphnia - Daphnia Magna	-	0.14 mg/l Mortality over 48 hours
Acute LC50	Fish - Oncorhynchus Mykiss	-	1.3 to 1.7 mg/l over 96 hours
Chronic EC20	Daphnia - Daphnia Magna	QSAR WoE	0.514 mg/l over 21 days
Chronic EC20	Fish	QSAR WoE	0.9 mg/l Mortality over 30 days

Product	Species	Test	Test Results
Isopropanol			
Acute EC50	Daphnia - Daphnia magna	-	>100 mg/l over 48 hours
Acute LC50	Daphnia - Leuciscus idus	-	>100 mg/l over 96 hours

Persistence and degradability Alcohols, C12-15, ethoxylated: biodegrade readily
Isopropanol: biodegrade readily

Bioaccumulative potential Sodium chlorite: $LogP_{ow}$ <-2.7, potential: low

Mobility in soil Not available

Other adverse effects No known significant effects or critical hazards.

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	Not available
Contaminated packaging	Not available

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 Delayed (chronic) 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	≤1.5
Isopropanol	67-63-0	MA - S, NJ - HS, PA - RTK HS	≤5
Water	7732-18-5		≥90
Alcohols, C12-15, ethoxylated	68131-39-5		≤1.4

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.

FIFRA
EPA Registration Number 9150-11
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.

Signal word WARNING
Hazard statements Causes substantial, but temporary eye damage and skin irritation.

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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