SAFETY DATA SHEET

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

1. Identification

Product identifier	**Endimal™ DW**
Other means of identification	None.
Recommended use	Water treatment chemicals. Odor Neutralizing agent. Oxidizing agent.
Recommended restrictions	None known.

Manufacturer/Importer/Supplier/Distributor information

Manufacturer

Company name	International Dioxcide, Inc. an ERCO Worldwide Company
Address	ERCO Worldwide 5050 Satellite Drive Mississauga ON, L4W 0G1 Canada
Telephone	(416) 239-7111 (M- F: 8:00 am – 5:00pm EST)
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
	Acute toxicity, inhalation	Category 3
	Serious eye damage	Category 1
	Specific target organ toxicity, repeated exposure (blood, kidneys, liver, spleen)	Category 2
	Skin corrosive	Category 1B

Environmental hazards Not currently regulated by the Canadian Hazardous Products Regulation (WHMIS 2015), refer to Section 12 for additional information.

Label elements

Signal word	Danger
Hazard statement	Harmful if swallowed. Toxic if inhaled. Causes serious eye damage. May cause damage to organs through prolonged or repeated exposure (blood, kidneys, liver, spleen). Causes severe skin burns and eye damage.
Precautionary statement	
Prevention	Wear protective gloves, protective clothing, eye protection, face protection. Do not eat, drink or smoke when using this product. Do not breathe gas, mists, vapours, spray. Wash hands and face thoroughly after handling. Use only outdoors or in a well-ventilated area.
Response	**IF SWALLOWED:** Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. Do not induce vomiting. **IF ON SKIN (or hair):** Take off immediately all contaminated clothing Rinse skin with water or shower. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical attention. **IF INHALED:** Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor. **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 in a well-ventilated place. Keep container tightly closed. Store locked up.
Disposal	Dispose of contents and containers in accordance with local/regional/national/international regulations.
Hazard(s) not otherwise classified (HNOC)	Other hazards which do not result in classification: Contact with some metals will generate flammable hydrogen gas. Chronic skin contact with low concentrations may cause dermatitis. Contact with acids or reducing agents will generate toxic chlorine dioxide gas. 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].
Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2.4%.

3. Composition/Information on Ingredients

Chemical name	Common name and synonyms	CAS number	Conc. % By Weight
Sodium chlorite	None	7758-19-2	25 – 40% w/w
Sodium hydroxide	None	1310-73-2	≤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 person to fresh air and keep comfortable for breathing. If breathing is difficult, trained personnel should give oxygen. If breathing stops, provide artificial respiration. Call a POISON CENTER or doctor/physician.

Skin Contact

Take off immediately all contaminated clothing. Immediately flush skin with running water for at least 20 minutes. Wash contaminated clothing promptly. Leather and shoes that have been contaminated with the solution may need to be destroyed. Immediately call a POISON CENTER or doctor/physician.

Eye Contact

Immediately flush eyes with plenty of water for at least 20 minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a POISON CENTER or doctor/physician.

Ingestion

Rinse mouth. Do NOT induce vomiting. Never give anything by mouth to a victim who is unconscious or is having convulsions. Call a POISON CENTER or doctor/physician if you feel unwell.

Most important symptoms/effects, acute and delayed

Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May be harmful if swallowed. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects. Can cause severe skin burns. Symptoms may include redness, edema, drying, defatting and cracking of the skin. Prolonged exposure may cause chronic effects. Material is irritating to mucus membranes and upper respiratory tract. Symptoms may include bloody nose and sneezing. High concentrations may cause lung damage.

Indication of immediate medical attention and special treatment needed	Immediate medical attention is required. Causes chemical burns. May be harmful if swallowed. Symptoms may be delayed.
General information	Notes to physician: Treat symptomatically. No specific treatment. Protection of first aiders: If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. No special measures required.

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. Toxic and irritating gases/fumes may be given off during burning or thermal decomposition. Water runoff from firefighting may be corrosive.
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	No specific data
General fire hazards	No specific data
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. Do not breathe 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 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 get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. 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. Separate from acids. 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 hydroxide

ACGIH TLV (United States, 3/2016).

C: 2 mg/m³

OSHA PEL (United States, 6/2016).
TWA: 2 mg/m³ 8 hours.

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

Appropriate engineering controls Use only with adequate ventilation. 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.

Recommended monitoring procedures If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Individual protection measures, such as personal protective equipment:

Eye/face protection Chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. If contact with product is possible, wear safety glasses with side shields.

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
Colour	Yellow (light)
Odor	Chlorine (slight)
Odor threshold	Not available
Molecular formula	Not available
Molecular weight	Not available
pH	>12
Melting point/Freezing point	Not available
Initial boiling point and boiling range	106 °C (1013 hPa)
Flash point	Closed cup: Not applicable.
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	20.67 hPa (20°C)
Vapor density	Not available
Relative density	Not available
Solubility (ies)	
Solubility (water)	Not available
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Other information	
Density	1.23 to 1.28 g/cm^3
Flammability	Not available
Specific gravity	1.23 to 1.28
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	Reactive or incompatible with the following materials: acids
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	Toxic if inhaled.
Skin contact	Causes severe skin burns.
Ingestion	Harmful if swallowed.
Eye contact	Causes serious eye damage/irritation.

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

Effects of short-term (acute) exposure:

Causes serious eye damage, may cause severe irritation and possibly burns. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Causes severe skin burns. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Acute ingestion of large quantities may also cause anemia due to the oxidizing effects of the chemical.

Material is irritating to mucous membranes and upper respiratory tract. Symptoms may include coughing, bloody nose and sneezing. High concentrations can cause lung damage.

May be harmful if swallowed. Symptoms may include pain, headache, nausea, vomiting, dizziness, drowsiness and other central nervous system effects.

Effects of long-term (chronic) exposure:

Prolonged exposure may cause chronic effects. Dermatitis is likely to occur from repeated or prolonged contact. Other symptoms may include methemoglobinemia (causes bluish discolouration of the skin and mucous membranes). Will irritate and may cause corrosion of the gastrointestinal tract.

Information on toxicological effects

Acute toxicity

Product	**Species**	**Test Results**
Sodium Chlorite Solution 40%		
Acute		
Inhalation		
LC_{50}	Rat	0.58 mg/L (Calculated ATE at 40%)

Oral		
LD_{50}	Rat	413 mg/kg (Calculated ATE at 40%)

Product	Test	Test Results
Sodium Chlorite Solution 37%		
Dermal	OECD Guideline 435, "In Vitro Membrane Barrier Test Method for Skin Corrosion"	17 min (Average breakthrough time calculated at 37%)

Components	Species	Test Results
Sodium Chlorite (CAS 7758-19-2)		
Acute		
Inhalation		
LC_{50}	Rat	0.23 mg/L (Mist)
Oral		
LD_{50}	Rat	165 mg/kg

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

Skin corrosion/irritation Can cause severe skin burns.

Serious eye damage/eye irritation Can cause serious eye damage/irritation.

Respiratory or skin sensitization

Respiratory sensitization Not expected to be a respiratory sensitizer.

Skin sensitizer Not sensitizing.

Germ cell mutagenicity Not expected to be mutagenic.

Carcinogenicity

IARC Monographs. Overall Evaluation of Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

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**	**Test Results**
Sodium chlorite			
Acute			
EC50	Algae – Scenedesmus capricornutum	N/A	1 mg/l Fresh water (over 96 hours)
EC50	Crustaceans - Mysidopsis bahia	N/A	0.65 mg/l Marine water (over 96 hours)
EC50	Daphnia - Daphnia magna	OECD 202 Daphnia sp. Acute Immobilization Test	<1 mg/l Fresh water (over 48 hours)
LC50	Fish - Oncorhynchus mykiss	N/A	106 mg/l Fresh water (over 96 hours)
Chronic			
NOEC	Algae - Scenedesmus capricornutum	N/A	0.62 mg/l Fresh water (over 96 hours)

Product	**Species**	**Test**	**Test Results**
Sodium hydroxide			
Acute			
EC50	Daphnia - Daphnia Magna	N/A	>100 mg/l over 48 hours
LC50	Fish - Trout	N/A	45.4 mg/l over 96 hours

Persistence and degradability	Not available
Bioaccumulative potential	Not available
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	Not available
Waste from residues / unused products	Not available
Contaminated packaging	Not available

14.Transport Information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
TDG Classification	UN3266	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (SODIUM CHLORITE, SODIUM HYDROXIDE)	8	II		**Marine Pollutant** Marine pollutant **Explosive Limit and Limited Quantity Index** 1 **Passenger Carrying Road or Rail Index** 1 **Special Provisions** 16
IMDG Class	UN3266	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (SODIUM CHLORITE, SODIUM HYDROXIDE)	8	II		**Marine Pollutant** Marine pollutant **Emergency Schedules (EmS)** F-A, S-B
IATA-DGR Class	UN3266	Corrosive liquid, basic, inorganic, n.o.s. (SODIUM CHLORITE, SODIUM HYDROXIDE)	8	II		**Marine Pollutant** Marine pollutant **Passenger aircraft** 851: 1 L **Cargo aircraft** 855: 30 L

PG* : Packing Group

15. Regulatory Information

CEPA Status All components of this product are on the Canadian DSL list.

US Toxic Substances Control Act Listed on the TSCA Inventory

16. Other Information

Issue date 3/31/2022

Revision # 6

Revision Indicator	Clarified precautionary statements, added FR clothing precaution and updated address.
List of abbreviations	ACGIH: American Conference of Governmental Industrial Hygienists CAS: Chemical Abstract Services CFR: Code of Federal Regulations DSL: Domestic Substance List EINECS: European Inventory of Existing Commercial chemical Substances EPA: Environmental Protection Agency HSDB® - Hazardous Substances Data Bank IARC: International Agency for Research on Cancer IATA: International Air Transport Association IBC: Intermediate Bulk Container IMDG: International Maritime Dangerous Goods LC: Lethal Concentration LD: Lethal Dose NIOSH: National Institute of Occupational Safety and Health NTP: National Toxicology Program OECD: Organization for Economic Cooperation and Development OSHA: Occupational Safety and Health Administration PPE: Personal Protective Equipment RTECS: Registry of Toxic Effects of Chemical Substances SDS: Safety Data Sheet TWA: Time Weighted Average WHMIS: Workplace Hazardous Materials Information System
References	None.

Disclaimer

Information presented in this SDS is furnished in accordance with the Workplace Hazardous Materials Information System (WHMIS).

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