

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	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 Dioxide, 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
	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
	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 2.4%	
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	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 dust, fume, gas, mists, vapors, spray. Wash hands and face thoroughly after handling. Use only outdoors or in a well ventilated area.
Response	Immediately call a POISON CENTER or doctor/physician. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. IF ON SKIN (OR HAIR): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Specific treatment (see Section 4 of the SDS)
Storage	Store in a well-ventilated place. Keep container tightly closed. 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)	No OSHA defined hazard classes. 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.
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	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. Immediately 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 or fatal 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 or fatal 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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

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.
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	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 chlorite

None

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.

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.
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	No specific data
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	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/cm³

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.

Eye contact Causes serious eye damage/irritation.

Ingestion Harmful if swallowed.

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 or fatal 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 discoloration 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		
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	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.
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)

Product	Species	Test	Test Results
Sodium chlorite Chronic	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	Sodium chlorite: LogPow <-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	When discarded in its purchased, undiluted form, this product meets the pH criteria of corrosivity, and should be managed as a hazardous waste (EPA Hazardous Waste Number D002). (40 CFR 261.20-24) 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

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN3266	Corrosive liquid, basic, inorganic, n.o.s. (SODIUM CHLORITE, SODIUM HYDROXIDE)	8	II	 	Marine Pollutant Marine Pollutant 386, B2, IB2, T11, TP2, TP27
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

RQ: 41667 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 Substances (40 CFR 302.4)

Sodium hydroxide (CAS 1310-73-2), RQ: 1000 lbs. (454 kg).

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	25-40
Sodium hydroxide	1310-73-2	MA - S, NJ - HS, PA - RTK HS	≤5
Water	7732-18-5		50-75

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

Listed on the TSCA Inventory.

16. Other Information

Issue date	8/9/2021
Revision #	4
Revision Indicator	Company logo updated.
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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