

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™ L
Other means of identification	Material number: 57956511
Recommended use	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 3
	Serious eye damage	Category 1
	Specific target organ toxicity, single exposure (respiratory tract irritation)	Category 3
	Specific target organ toxicity, repeated exposure (spleen)	Category 2
	Percentage of the mixture consisting of ingredient(s) of unknown toxicity: 8.1%	
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	Toxic if swallowed. Causes serious eye damage. May cause respiratory irritation. May cause damage to organs through prolonged or repeated exposure (spleen).
Precautionary statement	
Prevention	Wear eye/face protection. Use only in a well-ventilated area. Do not breathe vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling.
Response	Get medical attention if you feel unwell. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. IF SWALLOWED: Rinse mouth. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention immediately.
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.
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 hydroxide	None	1310-73-2	≤5% w/w
Sodium chlorite	None	7758-19-2	≤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	Get medical attention immediately. Remove victim to fresh air and keep at rest in a position comfortable for breathing. 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	In case of contact, flush skin with plenty of water for at least 30 minutes. Get medical attention immediately. Immediately remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Wash clothing before reuse. Clean shoes thoroughly before reuse.
Eye Contact	Get medical attention immediately. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. In case of contact with eyes, flush eyes with plenty of water for at least 30 minutes. Chemical burns must be treated promptly by a physician.
Ingestion	Get medical attention immediately. 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. Chemical burns must be treated promptly by a physician. 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 damage. Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage. May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose. Corrosive to the skin with symptoms of reddening, itching, swelling, burning and possible permanent damage. Toxic if swallowed. Severely corrosive to the digestive tract. Causes severe burns. May cause burns to mouth, throat and stomach. Corrosive with symptoms of coughing, burning, ulceration, and pain. Abdominal pain, nausea, vomiting, diarrhea. In extreme case it may cause serious damage to health. May cause damage to organs through prolonged or repeated exposure.
Indication of immediate medical attention and special treatment needed	Not available

**General
information**

Note 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
General fire hazards
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. 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, 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 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. 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
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	None
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	Pale yellow
Odor	Not available
Odor threshold	Not available
Molecular formula	Not available
Molecular weight	Not available
pH	Not available
Melting point/Freezing Point	-12°C (10.4°F)
Initial boiling point and boiling range	104 °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	22.67 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	1.06 to 1.11 g/cm ³
Flammability	Not available
Specific gravity	1.06 to 1.11
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 cause respiratory irritation.
Skin contact	No known significant effects or critical hazards.
Eye contact	Causes serious eye damage.
Ingestion	Toxic if swallowed. Severely corrosive to the digestive tract. Causes severe burns. May cause burns 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	Corrosive with symptoms of reddening, tearing, swelling, burning and possible permanent damage. May cause respiratory tract irritation with symptoms of coughing, sore throat and runny nose. Corrosive with symptoms of coughing, burning, ulceration, and pain. May cause pulmonary edema with symptoms of breathing difficulty and tightness of chest. Corrosive with symptoms of reddening, itching, swelling, burning and possible permanent damage. Corrosive with symptoms of coughing, burning, ulceration, and pain. Abdominal pain, nausea, vomiting, diarrhea. In extreme case it may cause serious damage to health. May cause damage to organs through prolonged or repeated exposure.
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Effects of long-term (chronic) exposure Not available.

Information on toxicological effects

Acute toxicity

Product	Species	Test Results
Endimal™ L		
Acute		
LD50 Oral	Rat	284 mg/kg * Test results for a product at higher concentration
LD50 Dermal	Rat	>2000 mg/kg * Test results for a product at higher concentration

Components	Species	Test Results
Sodium chlorite		
Acute		
LC50 Inhalation, Dusts and Mists	Rat	230 mg/m ³ over 4 hours

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

Skin corrosion/irritation Non-irritating
* Test results for a product at higher concentration

Serious eye damage/eye irritation Severe irritant
*Test results for a product at higher concentration

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 This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Reproductive toxicity No known significant effects or critical hazards.

Specific target organ toxicity - single exposure	Respiratory tract irritation
Specific target organ toxicity - repeated exposure	Spleen
Aspiration toxicity	Not expected to be an aspiration hazard.
Chronic effects	Not available

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	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 form, this product meets the 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		386, B2, IB2, T11, TP2, TP27
IMDG Class	UN3266	CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (SODIUM CHLORITE, SODIUM HYDROXIDE)	8	II		Emergency Schedules (EmS) F-A, S-B
IATA-DGR Class	UN3266	Corrosive liquid, basic, inorganic, n.o.s. (SODIUM CHLORITE, SODIUM HYDROXIDE)	8	II		Passenger aircraft 851: 1 L Cargo aircraft 855: 30 L

*PG: Packing Group

RQ: 25000 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	≤5
Sodium hydroxide	1310-73-2	MA - S, NJ - HS, PA - RTK HS	≤5
Water	7732-18-5		75 - 90
α-Cyclodextrin	10016-20-3		≤5

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 #	5
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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