

## SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY

### 1.1. Product Identifier

**Product Form:** Substance

**Product Name:** Oxalyl chloride

**CAS No:** 79-37-8

**Product Code:** VOLO10035

**Standard InChI:** InChI=1S/C2Cl2O2/c3-1(5)2(4)6

### 1.2. Intended Use of the Product

**Use of the substance/mixture:** For laboratory research purposes.

### 1.3. Name, Address, and Telephone of the Responsible Party

#### Manufacturer

Volochem, Inc.

2600 Hilltop Dr.

Bldg B #C211

Richmond, CA 94806

T 510.748.0159

[www.volochem.com](http://www.volochem.com)

### 1.4. Emergency Telephone Number

**Emergency Number** : 510-748-0159 (9a-5p M-F)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture

#### Classification (GHS-US)

Acute toxicity, Oral (Category 4)

Acute toxicity, Inhalation (Category 3)

Skin corrosion (Category 1A)

Serious eye damage (Category 1)

Specific target organ toxicity, Single exposure (Category 3), Respiratory system

### 2.2. Label Elements

#### GHS-US Labeling

**Pictogram(s):** GHS06, GHS05



**Signal word:** Danger

**Hazard statement(s)**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

H331 Toxic if inhaled.

H335 May cause respiratory irritation.

**Precautionary statement(s)**

P260 Do not breathe dust/fume/gas/mist/vapor/spray.

P264 Wash skin thoroughly after handling.

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P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301+P330+P331	IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P312	Call a POISON CENTER/ doctor if you feel unwell
P303+P361+P353	IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P363	Wash contaminated clothing before reuse.
P312	Call a POISON CENTER/ doctor if you feel unwell
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P310	Immediately call a POISON CENTER.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

### 2.3. Hazards not otherwise classified (HNOC) or not covered by GHS

Reacts violently with water. Contact with water liberates toxic gas.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Name	Synonym(s)	Product Identifier
Oxalyl chloride	Ethanedioyl dichloride	VOLO10035 CAS 79-37-8

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First Aid Measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 4.2. Most important symptoms and effects, both acute and delayed

#### Symptoms/Injuries:

**Symptoms/Injuries After Inhalation:** Sore throat. Cough. Burning sensation. Dizziness. Laboured breathing. Nausea. Headache. Unconsciousness. Vomiting. Weakness. Shortness of breath. Symptoms may be delayed

**Symptoms/Injuries After Skin Contact:** Pain. Redness. Blisters. Skin burns..

**Symptoms/Injuries After Eye Contact:** Pain. Redness. Severe deep burns. Loss of vision.

**Symptoms/Injuries After Ingestion:** Burning sensation. Abdominal pain. Shock or collapse. Further see Inhalation.

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**Chronic Symptoms:** Inhalation - Causes damage to organs (liver) through prolonged or repeated exposure.

### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

Burning sensation, spasm, inflammation and edema of the larynx, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, cough, wheezing, laryngitis, shortness of breath, headache, nausea, vomiting, chest pain, and abdominal pain.

## SECTION 5: FIREFIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Dry powder

### 5.2. Special Hazards Arising From the Substance or Mixture

Carbon oxides, Hydrogen chloride gas, Phosgene gas

Carbon oxides, Hydrogen chloride gas

**Fire Hazard:** Product is combustible.

**Explosion Hazard:** Product is not explosive.

### 5.3. Advice for Firefighters

**Firefighting Instructions:** Exercise caution when fighting any chemical fire.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

Wear self-contained breathing apparatus for fire fighting if necessary.

### 5.4. NFPA Rating

<b>Health hazard:</b>	3
<b>Fire:</b>	0
<b>Reactivity Hazard:</b>	2

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

#### 6.1.1. For Non-emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Responders

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Ventilate area.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and Material for Containment and Cleaning Up

**For Containment:** Contain and collect as any solid.

**Methods for Cleaning Up:** Collect spillage. Avoid generation of dust during clean-up of spills. Clear up spills immediately and dispose of waste safely.

### 6.4. Reference to Other Sections

See heading 8, Exposure Controls and Personal Protection.

## SECTION 7: HANDLING AND STORAGE

### 7.1. Precautions for Safe Handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Never allow product to get in contact with water during storage. Handle and store under inert gas.

### 7.3. Specific End Use(s) For laboratory research purposes

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. Control Parameters

No Occupational Exposure Limits (OELs) have been established for this product or its chemical components.

#### 8.2. Exposure Controls

##### Appropriate Engineering Controls:

Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure. Avoid high dust concentration. Ensure adequate ventilation, especially in confined areas.

##### Personal Protective Equipment:

Gloves. In case of dust production: protective goggles. Insufficient ventilation: wear respiratory protection.



##### Hand Protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands

##### Eye Protection:

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

##### Respiratory Protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

##### Skin and body protection:

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

##### Hygiene measures:

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product

This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1. Information on Basic Physical and Chemical Properties

Physical State:	Liquid
Appearance:	Clear, colorless
Odor:	No data available
Odor Threshold:	No data available
pH:	No data available
Relative Evaporation Rate (butylacetate=1):	No data available
Melting Point:	Melting point/range: -10 - -8 °C (14 - 18 °F)
Boiling Point:	62 - 65 °C (144 - 149 °F)
Flash Point:	No data available
Auto-ignition Temperature:	No data available
Decomposition Temperature:	No data available
Flammability (solid, gas):	No data available

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<b>Vapor Pressure:</b>	200 hPa (150 mmHg) at 20 °C (68 °F)
<b>Relative Vapor Density at 20 °C:</b>	4.38 - (Air = 1.0)
<b>Relative Density:</b>	1.5 g/mL at 20 °C (68 °F)
<b>Specific Gravity:</b>	No data available
<b>Solubility:</b>	No data available
<b>Log Pow:</b>	No data available
<b>Log Kow:</b>	No data available
<b>Viscosity, Kinematic:</b>	No data available
<b>Viscosity, Dynamic:</b>	No data available
<b>Explosive Properties:</b>	No data available
<b>Oxidizing Properties:</b>	No data available
<b>Explosive Limits:</b>	No data available
<b>9.2. Other Information</b>	No additional information available

## SECTION 10: STABILITY AND REACTIVITY

<b>10.1. Reactivity:</b>	No data available.
<b>10.2. Chemical Stability:</b>	Product is stable under recommended storage conditions.
<b>10.3. Possibility of Hazardous Reactions:</b>	Reacts violently with water.
<b>10.4. Conditions to Avoid:</b>	Exposure to moisture.
<b>10.5. Incompatible Materials:</b>	Bases, oxidizing agents, alcohols
<b>10.6. Hazardous Decomposition Products:</b>	No data available

## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1. Information on Toxicological Effects

<b>Acute Toxicity:</b>	<b>ORAL LD50</b> No data available
	<b>Inhalation LC50</b> LC50 Inhalation - rat – 1 h - > 1840 ppm
	<b>Dermal LD50</b> No data available
	<b>Other information on acute toxicity</b> No data available
<b>Skin Corrosion/Irritation:</b>	Severe irritant
<b>Serious Eye Damage/Irritation:</b>	Causes corneal damage in inhalation lethal-concentration studies in rat
<b>Respiratory or Skin Sensitization:</b>	Severe irritant
<b>Germ Cell Mutagenicity:</b>	No data available
<b>Carcinogenicity:</b>	Not classified
<b>Reproductive Toxicity:</b>	No data available
<b>Specific Target Organ Toxicity (Single Exposure):</b>	No data available
<b>Specific Target Organ Toxicity (Repeated Exposure):</b>	No data available
<b>Aspiration Hazard:</b>	Causes dyspnea in inhalation lethal-concentration studies in rat. Toxic pneumonitis.
<b>Potential Health Effects</b>	

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### SECTION 12: ECOLOGICAL INFORMATION

#### 12.1. Toxicity

No data available

#### 12.2. Persistence and Degradability

No data available

#### 12.3. Bioaccumulative Potential

No data available

#### 12.4. Mobility in Soil

No data available

#### 12.5. Other Adverse Effects

No data available

### SECTION 13: DISPOSAL CONSIDERATIONS

#### 13.1. Waste treatment methods

**Waste Disposal Recommendations:** Contact a licensed professional waste disposal service to dispose of this material. Dispose of waste material in accordance with all local, regional, national, and international regulations.

### SECTION 14: TRANSPORT INFORMATION

In Accordance With ICAO/IATA/IMDG/DOT

14.1.	UN Number	2922
14.2.	UN Proper Shipping Name	Corrosive liquids, toxic, n.o.s. (Oxalyl chloride)
14.3.	Transport hazard class(es)	8 (6.1)
14.4.	Packing group	I
14.5.1.	Marine Pollutant	No
14.5.2.	Reportable Quantity	2270 kg
14.6.1.	Toxic Inhalation Hazard	No
14.6.2.	Mode specific comments	
14.6.3.	Ground transportation - DOT (US)	
14.6.4.	Marine transportation - IMDG	EMS-No: F-A, S-B
14.6.5.	Air transportation - IATA/ICAO	

### SECTION 15: REGULATORY INFORMATION

#### 15.1. US Federal Regulations

##### EPA TSCA Inventory

Listed

##### SARA 302 Components

The following minor components are subject to reporting levels established by SARA Title III, Section 302:

Phosgene	CAS-No. 75-44-5
Trichloroacetyl chloride	CAS-No. 76-02-8

##### SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.

##### SARA 311/312 Components

Acute Health Hazard

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### 15.2. US State Regulations

#### California Proposition 65 List 2014

Not listed

#### Maine Chemicals of High Concern List 2012

Not listed

#### Massachusetts Right to Know Hazardous Substance List 2014

Not listed

#### New Jersey Right to Know Hazardous Substance List 2010

Not listed

#### Pennsylvania Right to Know Hazardous Substance List 2010

Not listed

## SECTION 16: OTHER INFORMATION

### 16.1. Other Classifications

#### HMIS

Health Hazard: 3

Flammability: 0

Physical hazards: 0

Revision date : 1/3/2015

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

*Volochem chemicals are for research purposes only and are NOT intended for use as drugs, food additives, household goods, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we cannot guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective goggles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.*

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