



# Oxalyl chloride

## Apollo Scientific

Part Number: **OR1957**  
Version No: **2.2**  
Safety Data Sheet

Chemwatch Hazard Alert Code: **4**

Issue Date: **11/07/2023**  
Print Date: **11/07/2023**  
S.GHS.GB-NIR.EN

### SECTION 1 Identification of the substance / mixture and of the company / undertaking

#### Product Identifier

Product name	Oxalyl chloride
Chemical Name	oxalyl chloride
Synonyms	Not Available
Proper shipping name	WATER-REACTIVE LIQUID, TOXIC, N.O.S.
Chemical formula	C2Cl2O2
Other means of identification	Not Available
CAS number	79-37-8*

#### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Not Available
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#### Details of the manufacturer or supplier of the safety data sheet

Registered company name	Apollo Scientific	Apollo Scientific Ltd
Address	Whitefield Road, Bredbury SK62QR United Kingdom	Whitefield Road, Bredbury Cheshire SK6 2QR United Kingdom (NI)
Telephone	01614060505	+44(0) 161 406 0505
Fax	0161 406 0506	Not Available
Website	<a href="http://www.apolloscientific.co.uk/">http://www.apolloscientific.co.uk/</a>	<a href="http://apolloscientific.co.uk">apolloscientific.co.uk</a>
Email	sales@apolloscientific.co.uk	sales@apolloscientific.co.uk

#### Emergency telephone number

Association / Organisation	Not Available
Emergency telephone numbers	Not Available
Other emergency telephone numbers	Not Available

### SECTION 2 Hazards identification

#### Classification of the substance or mixture

Classification according to regulation (EC) No 1272/2008 [CLP] and	H260 - Substances and Mixtures which in Contact with Water Emit Flammable Gases Category 1, H311 - Acute Toxicity (Dermal) Category 3, H314 - Skin Corrosion/Irritation Category 1B, H318 - Serious Eye Damage/Eye Irritation Category 1, H331 - Acute Toxicity (Inhalation) Category 3, H224 - Flammable Liquids Category 1, H301 - Acute Toxicity (Oral) Category 3, H261 -
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**Oxalyl chloride**

<b>amendments</b> <sup>[1]</sup>	Substances and Mixtures which in Contact with Water Emit Flammable Gases Category 2
<b>Legend:</b>	1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

**Label elements**

<b>Hazard pictogram(s)</b>	
<b>Signal word</b>	<b>Danger</b>

**Hazard statement(s)**

<b>H260</b>	In contact with water releases flammable gases which may ignite spontaneously.
<b>H311</b>	Toxic in contact with skin.
<b>H314</b>	Causes severe skin burns and eye damage.
<b>H331</b>	Toxic if inhaled.
<b>H224</b>	Extremely flammable liquid and vapour.
<b>H301</b>	Toxic if swallowed.
<b>H261</b>	In contact with water releases flammable gases.

**Precautionary statement(s) Prevention**

<b>P210</b>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
<b>P231+P232</b>	Handle and store contents under inert gas. Protect from moisture.
<b>P260</b>	Do not breathe mist/vapours/spray.
<b>P264</b>	Wash all exposed external body areas thoroughly after handling.
<b>P270</b>	Do not eat, drink or smoke when using this product.
<b>P271</b>	Use only outdoors or in a well-ventilated area.
<b>P280</b>	Wear protective gloves, protective clothing, eye protection and face protection.
<b>P240</b>	Ground and bond container and receiving equipment.
<b>P241</b>	Use explosion-proof electrical/ventilating/lighting/intrinsically safe equipment.
<b>P242</b>	Use non-sparking tools.
<b>P243</b>	Take action to prevent static discharges.
<b>P223</b>	Do not allow contact with water.

**Precautionary statement(s) Response**

<b>P301+P310</b>	IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician/first aider.
<b>P301+P330+P331</b>	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
<b>P302+P335+P334</b>	IF ON SKIN: Brush off loose particles from skin. Immerse in cool water [or wrap in wet bandages].
<b>P303+P361+P353</b>	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
<b>P305+P351+P338</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>P370+P378</b>	In case of fire: Use dry agent to extinguish.
<b>P302+P352</b>	IF ON SKIN: Wash with plenty of water.
<b>P363</b>	Wash contaminated clothing before reuse.
<b>P304+P340</b>	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
<b>P361+P364</b>	Take off immediately all contaminated clothing and wash it before reuse.

**Precautionary statement(s) Storage**

<b>P403+P235</b>	Store in a well-ventilated place. Keep cool.
<b>P405</b>	Store locked up.
<b>P402+P404</b>	Store in a dry place. Store in a closed container.

**Precautionary statement(s) Disposal**

**Oxaly chloride**

**P501** Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.

**SECTION 3 Composition / information on ingredients**

**Substances**

CAS No	%[weight]	Name	Classification according to regulation (EC) No 1272/2008 [CLP] and amendments	SCL / M-Factor
79-37-8*	100	<u>Oxaly chloride</u>	Substances and Mixtures which in Contact with Water Emit Flammable Gases Category 1, Acute Toxicity (Dermal) Category 3, Skin Corrosion/Irritation Category 1B, Serious Eye Damage/Eye Irritation Category 1, Acute Toxicity (Inhalation) Category 3, Flammable Liquids Category 1, Acute Toxicity (Oral) Category 3, Substances and Mixtures which in Contact with Water Emit Flammable Gases Category 2; H260, H311, H314, H331, H224, H301, H261 [1]	Not Available

**Legend:** 1. Classified by Chemwatch; 2. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 3. Classification drawn from C&L; \* EU IOELVs available; [e] Substance identified as having endocrine disrupting properties

**Mixtures**

See section above for composition of Substances

**SECTION 4 First aid measures**

**Description of first aid measures**

<b>Eye Contact</b>	<p>If this product comes in contact with the eyes:</p> <ul style="list-style-type: none"> <li>▶ Immediately hold eyelids apart and flush the eye continuously with running water.</li> <li>▶ Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.</li> <li>▶ Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.</li> <li>▶ Transport to hospital or doctor without delay.</li> <li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li> </ul>
<b>Skin Contact</b>	<p>If skin or hair contact occurs:</p> <ul style="list-style-type: none"> <li>▶ Quickly but gently, wipe material off skin with a dry, clean cloth.</li> <li>▶ Immediately remove all contaminated clothing, including footwear.</li> <li>▶ Wash skin and hair with running water. Continue flushing with water until advised to stop by the Poisons Information Centre.</li> <li>▶ Transport to hospital, or doctor.</li> </ul>
<b>Inhalation</b>	<ul style="list-style-type: none"> <li>▶ If fumes or combustion products are inhaled remove from contaminated area.</li> <li>▶ Lay patient down. Keep warm and rested.</li> <li>▶ Prosthesis such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li> <li>▶ Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary.</li> <li>▶ Transport to hospital, or doctor, without delay.</li> </ul>
<b>Ingestion</b>	<ul style="list-style-type: none"> <li>▶ <b>IF SWALLOWED, REFER FOR MEDICAL ATTENTION, WHERE POSSIBLE, WITHOUT DELAY.</b></li> <li>▶ For advice, contact a Poisons Information Centre or a doctor.</li> <li>▶ Urgent hospital treatment is likely to be needed.</li> <li>▶ In the mean time, qualified first-aid personnel should treat the patient following observation and employing supportive measures as indicated by the patient's condition.</li> <li>▶ If the services of a medical officer or medical doctor are readily available, the patient should be placed in his/her care and a copy of the SDS should be provided. Further action will be the responsibility of the medical specialist.</li> <li>▶ If medical attention is not available on the worksite or surroundings send the patient to a hospital together with a copy of the SDS.</li> </ul> <p><b>Where medical attention is not immediately available or where the patient is more than 15 minutes from a hospital or unless instructed otherwise:</b></p> <ul style="list-style-type: none"> <li>▶ <b>INDUCE</b> vomiting with fingers down the back of the throat, <b>ONLY IF CONSCIOUS</b>. Lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration.</li> </ul> <p><b>NOTE:</b> Wear a protective glove when inducing vomiting by mechanical means.</p>

**Indication of any immediate medical attention and special treatment needed**

As in all cases of suspected poisoning, follow the ABCDEs of emergency medicine (airway, breathing, circulation, disability, exposure), then the ABCDEs of toxicology (antidotes, basics, change absorption, change distribution, change elimination).

For poisons (where specific treatment regime is absent):

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### BASIC TREATMENT

- Establish a patent airway with suction where necessary.
- Watch for signs of respiratory insufficiency and assist ventilation as necessary.
- Administer oxygen by non-rebreather mask at 10 to 15 L/min.
- Monitor and treat, where necessary, for pulmonary oedema.
- Monitor and treat, where necessary, for shock.
- Anticipate seizures.
- **DO NOT** use emetics. Where ingestion is suspected rinse mouth and give up to 200 ml water (5 ml/kg recommended) for dilution where patient is able to swallow, has a strong gag reflex and does not drool.

### ADVANCED TREATMENT

- Consider orotracheal or nasotracheal intubation for airway control in unconscious patient or where respiratory arrest has occurred.
- Positive-pressure ventilation using a bag-valve mask might be of use.
- Monitor and treat, where necessary, for arrhythmias.
- Start an IV D5W TKO. If signs of hypovolaemia are present use lactated Ringers solution. Fluid overload might create complications.
- Drug therapy should be considered for pulmonary oedema.
- Hypotension with signs of hypovolaemia requires the cautious administration of fluids. Fluid overload might create complications.
- Treat seizures with diazepam.
- Proparacaine hydrochloride should be used to assist eye irrigation.

BRONSTEIN, A.C. and CURRANCE, P.L.

EMERGENCY CARE FOR HAZARDOUS MATERIALS EXPOSURE: 2nd Ed. 1994

## SECTION 5 Firefighting measures

### Extinguishing media

**DO NOT USE WATER, CO2 OR FOAM ON SUBSTANCE ITSELF**

For **SMALL FIRES**:

- Dry chemical, soda ash or lime.

For **LARGE FIRES**:

- DRY sand, dry chemical, soda ash;
- OR withdraw and allow fire to burn itself out.

### Special hazards arising from the substrate or mixture

<b>Fire Incompatibility</b>	▸ Segregate from alcohol, water.
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### Advice for firefighters

<b>Fire Fighting</b>	<ul style="list-style-type: none"> <li>▸ Alert Fire Brigade and tell them location and nature of hazard.</li> <li>▸ May be violently or explosively reactive.</li> <li>▸ Wear full protective clothing plus breathing apparatus.</li> <li>▸ Prevent, by any means available, spillage from entering drains or water course.</li> <li>▸ Consider evacuation (or protect in place)</li> <li>▸ <b>DO NOT</b> use water on fires.</li> </ul> <p><b>CAUTION:</b> If only water available, use flooding quantities of water or withdraw personnel.</p> <ul style="list-style-type: none"> <li>▸ <b>DO NOT</b> allow water to enter containers.</li> <li>▸ <b>DO NOT</b> approach containers suspected to be hot.</li> <li>▸ Cool fire exposed containers with flooding quantities of water from a protected location until well after fire is out.</li> <li>▸ If safe to do so, remove undamaged containers from path of fire.</li> <li>▸ If fire gets out of control withdraw personnel and warn against entry.</li> <li>▸ Equipment should be thoroughly decontaminated after use.</li> <li>▸ Fight fire from a protected position or use unmanned hose holders or monitor nozzles.</li> <li>▸ Withdraw immediately in case of rising sound from venting safety devices or discolouration of tanks.</li> <li>▸ ALWAYS stay away from tank ends.</li> </ul>
<b>Fire/Explosion Hazard</b>	<ul style="list-style-type: none"> <li>▸ Produces flammable substances on contact with water.</li> <li>▸ May ignite on contact with water or moist air.</li> <li>▸ May react vigorously or explosively on contact with water.</li> <li>▸ May be ignited by heat, sparks or flame.</li> <li>▸ May <b>REIGNITE</b> after fire is extinguished.</li> <li>▸ Decomposition products may be irritating to the respiratory system, eyes and skin.</li> <li>▸ Decomposition products may be toxic.</li> <li>▸ Containers may explode on heating.</li> <li>▸ Runoff may create multiple fire or explosion hazard.</li> </ul>

## SECTION 6 Accidental release measures

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**Personal precautions, protective equipment and emergency procedures**

See section 8

**Environmental precautions**

See section 12

**Methods and material for containment and cleaning up**

<b>Minor Spills</b>	<ul style="list-style-type: none"><li>▶ Material from spill may be contaminated with water resulting in generation of gas which subsequently may pressure closed containers.</li><li>▶ Hold spill material in vented containers only and plan for prompt disposal</li><li>▶ Eliminate all ignition sources.</li><li>▶ Cover with <b>DRY</b> earth, sand or other non-combustible material.</li><li>▶ Then cover with plastic sheet to minimise spreading and to prevent exposure to rain or other sources of water.</li><li>▶ Use clean, non-sparking tools to collect absorbed material and place into loosely-covered metal or plastic containers ready for disposal.</li><li>▶ Wear gloves and safety glasses as appropriate.</li></ul>
<b>Major Spills</b>	<ul style="list-style-type: none"><li>▶ Clear area of personnel and move upwind.</li><li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li><li>▶ Wear full protective clothing and breathing apparatus.</li><li>▶ Prevent, by any means available, spillage from entering drains or water courses.</li><li>▶ No smoking, naked lights or ignition sources.</li><li>▶ Increase ventilation.</li><li>▶ Stop leak if safe to do so.</li><li>▶ <b>DO NOT USE WATER OR NEUTRALISING AGENTS INDISCRIMINATELY ON LARGE SPILLS.</b></li><li>▶ Absorb or cover spill with sand, earth, inert material or vermiculite and cover with white mineral oil.</li><li>▶ Collect recoverable product into labelled containers for recycling.</li><li>▶ Collect residues and seal in labelled drums for disposal.</li><li>▶ Wash spill area with detergent and water.</li><li>▶ After clean up operations, decontaminate and launder all protective clothing and equipment before storing and re-using.</li><li>▶ If contamination of drains or waterways occurs as a result of the above actions, advise emergency services.</li></ul>

Personal Protective Equipment advice is contained in Section 8 of the SDS.

**SECTION 7 Handling and storage**

**Precautions for safe handling**

<b>Safe handling</b>	<ul style="list-style-type: none"><li>▶ Avoid all personal contact, including inhalation.</li><li>▶ Wear protective clothing when risk of overexposure occurs.</li><li>▶ Use in a well-ventilated area.</li><li>▶ Avoid contact with moisture.</li><li>▶ Avoid smoking, naked lights or ignition sources.</li><li>▶ Avoid contact with incompatible materials.</li><li>▶ <b>When handling, DO NOT eat, drink or smoke.</b></li><li>▶ Keep containers securely sealed when not in use.</li><li>▶ Avoid physical damage to containers.</li><li>▶ Always wash hands with soap and water after handling.</li><li>▶ Work clothes should be laundered separately and before re-use</li><li>▶ Use good occupational work practice.</li><li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li><li>▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li></ul>
<b>Other information</b>	<p><b>FOR TANKS:</b></p> <ul style="list-style-type: none"><li>▶ The tanks must be pressure vessels designed to an approved standard.</li><li>▶ The liquid inlet and outlet openings on the tanks must be provided with remote shut-off valves which close automatically in the event of fire.</li><li>▶ Precaution has been taken in the design and operation of the tanks to prevent the entry of moisture into the tanks.</li><li>▶ If two or more tanks are located in the same spill compound, the compound must be constructed so that any spillage is drained to a catchment located at a sufficient distance from all tanks to ensure that the tanks will not be affected by a fire in the catchment area.</li><li>▶ The tanks and spill collection compounds should be at least 30 metres from tanks containing other dangerous goods where dangerous goods are stored or processed.</li></ul>

**Conditions for safe storage, including any incompatibilities**

<b>Suitable container</b>	For low viscosity materials and solids:
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	<p>Drums and jerricans must be of the non-removable head type.</p> <p>Where a can is to be used as an inner package, the can must have a screwed enclosure.</p> <p>For materials with a viscosity of at least 2680 cSt. (23 deg. C):</p> <ul style="list-style-type: none"> <li>▸ Removable head packaging and</li> <li>▸ cans with friction closures may be used.</li> </ul> <p>-</p> <p>Where combination packages are used, there must be sufficient inert absorbent material to absorb completely any leakage that may occur, unless the outer packaging is a close fitting moulded plastic box and the substances are not incompatible with the plastic.</p> <p>All combination packages for Packing group I and II must contain cushioning material.</p>
<b>Storage incompatibility</b>	<ul style="list-style-type: none"> <li>▸ Segregate from alcohol, water.</li> <li>▸ Store at 2-8°C</li> <li>▸ Lachrymatory</li> <li>▸ Moisture sensitive</li> <li>▸ Store under argon</li> </ul>

## SECTION 8 Exposure controls / personal protection

## Control parameters

## Occupational Exposure Limits (OEL)

## INGREDIENT DATA

Not Available

## Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
Oxalyl chloride	0.77 ppm	8.5 ppm	51 ppm

Ingredient	Original IDLH	Revised IDLH
Oxalyl chloride	Not Available	Not Available

## Occupational Exposure Banding

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
Oxalyl chloride	E	≤ 0.1 ppm

**Notes:**

*Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.*

## Exposure controls

<b>Appropriate engineering controls</b>	<p>Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure.</p> <p>Local exhaust ventilation usually required. If risk of overexposure exists, wear approved respirator. Correct fit is essential to obtain adequate protection. Supplied-air type respirator may be required in special circumstances. Correct fit is essential to ensure adequate protection.</p> <p>An approved self contained breathing apparatus (SCBA) may be required in some situations.</p> <p>Provide adequate ventilation in warehouse or closed storage area. Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.</p>								
	<table border="1"> <thead> <tr> <th>Type of Contaminant:</th> <th>Air Speed:</th> </tr> </thead> <tbody> <tr> <td>solvent, vapours, degreasing etc., evaporating from tank (in still air).</td> <td>0.25-0.5 m/s (50-100 f/min.)</td> </tr> <tr> <td>aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)</td> <td>0.5-1 m/s (100-200 f/min.)</td> </tr> <tr> <td>direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)</td> <td>1-2.5 m/s (200-500 f/min.)</td> </tr> </tbody> </table>	Type of Contaminant:	Air Speed:	solvent, vapours, degreasing etc., evaporating from tank (in still air).	0.25-0.5 m/s (50-100 f/min.)	aerosols, fumes from pouring operations, intermittent container filling, low speed conveyer transfers, welding, spray drift, plating acid fumes, pickling (released at low velocity into zone of active generation)	0.5-1 m/s (100-200 f/min.)	direct spray, spray painting in shallow booths, drum filling, conveyer loading, crusher dusts, gas discharge (active generation into zone of rapid air motion)	1-2.5 m/s (200-500 f/min.)
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grinding, abrasive blasting, tumbling, high speed wheel generated dusts (released at high initial velocity into zone of very high rapid air motion).

2.5-10 m/s  
(500-2000 f/min.)

Within each range the appropriate value depends on:

Lower end of the range	Upper end of the range
1: Room air currents minimal or favourable to capture	1: Disturbing room air currents
2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity
3: Intermittent, low production.	3: High production, heavy use
4: Large hood or large air mass in motion	4: Small hood-local control only

Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

The basic types of engineering controls are:

Process controls which involve changing the way a job activity or process is done to reduce the risk.

Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use.

Employers may need to use multiple types of controls to prevent employee overexposure.

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**Individual protection measures, such as personal protective equipment**



**Eye and face protection**

- Safety glasses with side shields
- Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

**Skin protection**

See Hand protection below

**Hands/feet protection**

- Wear chemical protective gloves, e.g. PVC.
- Wear safety footwear or safety gumboots, e.g. Rubber

**Body protection**

See Other protection below

**Other protection**

- Overalls.
- Eyewash unit.
- Barrier cream.
- Skin cleansing cream.
- Some plastic personal protective equipment (PPE) (e.g. gloves, aprons, overshoes) are not recommended as they may produce static electricity.
- For large scale or continuous use wear tight-weave non-static clothing (no metallic fasteners, cuffs or pockets).
- Non sparking safety or conductive footwear should be considered. Conductive footwear describes a boot or shoe with a sole made from a conductive compound chemically bound to the bottom components, for permanent control to electrically ground the foot and shall dissipate static electricity from the body to reduce the possibility of ignition of volatile compounds. Electrical resistance must range between 0 to 500,000 ohms. Conductive shoes should be stored in lockers close to the room in which

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they are worn. Personnel who have been issued conductive footwear should not wear them from their place of work to their homes and return.

## SECTION 9 Physical and chemical properties

## Information on basic physical and chemical properties

<b>Appearance</b>	Not Available		
<b>Physical state</b>	Liquid	<b>Relative density (Water = 1)</b>	Not Available
<b>Odour</b>	Not Available	<b>Partition coefficient n-octanol / water</b>	Not Available
<b>Odour threshold</b>	Not Available	<b>Auto-ignition temperature (°C)</b>	Not Available
<b>pH (as supplied)</b>	Not Available	<b>Decomposition temperature (°C)</b>	Not Available
<b>Melting point / freezing point (°C)</b>	-12	<b>Viscosity (cSt)</b>	Not Available
<b>Initial boiling point and boiling range (°C)</b>	63-64	<b>Molecular weight (g/mol)</b>	Not Available
<b>Flash point (°C)</b>	Not Available	<b>Taste</b>	Not Available
<b>Evaporation rate</b>	Not Available	<b>Explosive properties</b>	Not Available
<b>Flammability</b>	Not Available	<b>Oxidising properties</b>	Not Available
<b>Upper Explosive Limit (%)</b>	Not Available	<b>Surface Tension (dyn/cm or mN/m)</b>	Not Available
<b>Lower Explosive Limit (%)</b>	Not Available	<b>Volatile Component (%vol)</b>	Not Available
<b>Vapour pressure (kPa)</b>	Not Available	<b>Gas group</b>	Not Available
<b>Solubility in water</b>	Not Available	<b>pH as a solution (1%)</b>	Not Available
<b>Vapour density (Air = 1)</b>	Not Available	<b>VOC g/L</b>	Not Available

## SECTION 10 Stability and reactivity

<b>Reactivity</b>	See section 7
<b>Chemical stability</b>	<ul style="list-style-type: none"> <li>▸ May heat spontaneously</li> <li>▸ Identify and remove sources of ignition and heating.</li> <li>▸ Incompatible material, especially oxidisers, and/or other sources of oxygen may produce unstable product(s).</li> <li>▸ Avoid sources of water contamination (e.g. rain water, moisture, high humidity).</li> <li>▸ Avoid contact with oxygenated solvents/ reagents such as alcohols.</li> </ul>
<b>Possibility of hazardous reactions</b>	See section 7
<b>Conditions to avoid</b>	See section 7
<b>Incompatible materials</b>	See section 7
<b>Hazardous decomposition products</b>	See section 5

## SECTION 11 Toxicological information

## Information on toxicological effects

<b>Inhaled</b>	Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects.
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**Oxalyl chloride**

	The material is not thought to produce respiratory irritation (as classified by EC Directives using animal models). Nevertheless inhalation of vapours, fumes or aerosols, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.
<b>Ingestion</b>	<b>Toxic effects</b> may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual.
<b>Skin Contact</b>	Skin contact with the material may produce toxic effects; systemic effects may result following absorption. The material is not thought to be a skin irritant (as classified by EC Directives using animal models). Temporary discomfort, however, may result from prolonged dermal exposures. Open cuts, abraded or irritated skin should not be exposed to this material. Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.
<b>Eye</b>	Although the liquid is not thought to be an irritant (as classified by EC Directives), direct contact with the eye may produce transient discomfort characterised by tearing or conjunctival redness (as with windburn).
<b>Chronic</b>	Long-term exposure to the product is not thought to produce chronic effects adverse to the health (as classified by EC Directives using animal models); nevertheless exposure by all routes should be minimised as a matter of course.
<b>Legend:</b>	1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances

<b>Acute Toxicity</b>	✓	<b>Carcinogenicity</b>	✗
<b>Skin Irritation/Corrosion</b>	✓	<b>Reproductivity</b>	✗
<b>Serious Eye Damage/Irritation</b>	✓	<b>STOT - Single Exposure</b>	✗
<b>Respiratory or Skin sensitisation</b>	✗	<b>STOT - Repeated Exposure</b>	✗
<b>Mutagenicity</b>	✗	<b>Aspiration Hazard</b>	✗

**Legend:** ✗ – Data either not available or does not fill the criteria for classification  
✓ – Data available to make classification

**SECTION 12 Ecological information**

**Toxicity**

<b>Legend:</b>	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data
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**DO NOT** discharge into sewer or waterways.

**Persistence and degradability**

Ingredient	Persistence: Water/Soil	Persistence: Air
Oxalyl chloride	HIGH	HIGH

**Bioaccumulative potential**

Ingredient	Bioaccumulation
Oxalyl chloride	LOW (LogKOW = -1.8106)

**Mobility in soil**

Ingredient	Mobility
Oxalyl chloride	HIGH (KOC = 1)

**SECTION 13 Disposal considerations**


**Waste treatment methods**

**Oxalyl chloride**

<b>Product / Packaging disposal</b>	<ul style="list-style-type: none"> <li>▸ Containers may still present a chemical hazard/ danger when empty.</li> <li>▸ Return to supplier for reuse/ recycling if possible.</li> </ul> <p>Otherwise:</p> <ul style="list-style-type: none"> <li>▸ If container can not be cleaned sufficiently well to ensure that residuals do not remain or if the container cannot be used to store the same product, then puncture containers, to prevent re-use, and bury at an authorised landfill.</li> <li>▸ Where possible retain label warnings and SDS and observe all notices pertaining to the product.</li> <li>▸ Recycle where possible.</li> <li>▸ Consult State Land Waste Management Authority for disposal.</li> <li>▸ Bury residue and dispose of containers/ packaging in authorised landfill.</li> </ul>
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**SECTION 14 Transport information**

**Labels Required**

	 
<b>Marine Pollutant</b>	NO

**Land transport (ADR-RID)**

<b>UN number or ID number</b>	3130	
<b>UN proper shipping name</b>	WATER-REACTIVE LIQUID, TOXIC, N.O.S.	
<b>Transport hazard class(es)</b>	Class	4.3
	Subsidiary risk	6.1
<b>Packing group</b>	I	
<b>Environmental hazard</b>	Not Applicable	
<b>Special precautions for user</b>	Hazard identification (Kemler)	X362
	Classification code	WT1
	Hazard Label	4.3 +6.1
	Special provisions	274
	Limited quantity	0
	Tunnel Restriction Code	0 (B/E)

**Air transport (ICAO-IATA / DGR)**

<b>UN number</b>	3130	
<b>UN proper shipping name</b>	Water-reactive liquid, toxic, n.o.s. *	
<b>Transport hazard class(es)</b>	ICAO/IATA Class	4.3
	ICAO / IATA Subrisk	6.1
	ERG Code	4PW
<b>Packing group</b>	I	
<b>Environmental hazard</b>	Not Applicable	
<b>Special precautions for user</b>	Special provisions	A3 A803
	Cargo Only Packing Instructions	480
	Cargo Only Maximum Qty / Pack	1 L
	Passenger and Cargo Packing Instructions	Forbidden
	Passenger and Cargo Maximum Qty / Pack	Forbidden
	Passenger and Cargo Limited Quantity Packing Instructions	Forbidden
	Passenger and Cargo Limited Maximum Qty / Pack	Forbidden

**Sea transport (IMDG-Code / GGVSee)**

<b>UN number</b>	3130
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## Oxalyl chloride

<b>UN proper shipping name</b>	WATER-REACTIVE LIQUID, TOXIC, N.O.S.	
<b>Transport hazard class(es)</b>	IMDG Class	4.3
	IMDG Subrisk	6.1
<b>Packing group</b>	I	
<b>Environmental hazard</b>	Not Applicable	
<b>Special precautions for user</b>	EMS Number	F-G, S-N
	Special provisions	274
	Limited Quantities	0

## Inland waterways transport (ADN)

<b>UN number</b>	3130	
<b>UN proper shipping name</b>	WATER-REACTIVE LIQUID, TOXIC, N.O.S.	
<b>Transport hazard class(es)</b>	4.3	6.1
<b>Packing group</b>	I	
<b>Environmental hazard</b>	Not Applicable	
<b>Special precautions for user</b>	Classification code	WT1
	Special provisions	274; 802
	Limited quantity	0
	Equipment required	PP, EP, EX, TOX, A
	Fire cones number	2

## Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

## Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
Oxalyl chloride	Not Available

## Transport in bulk in accordance with the IGC Code

Product name	Ship Type
Oxalyl chloride	Not Available

## SECTION 15 Regulatory information

## Safety, health and environmental regulations / legislation specific for the substance or mixture

Oxalyl chloride is found on the following regulatory lists

Europe EC Inventory

European Union - European Inventory of Existing Commercial Chemical Substances (EINECS)

## National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSL	No (Oxalyl chloride)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	Yes
Korea - KECI	Yes

## Oxalyl chloride

National Inventory	Status
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	Yes
Taiwan - TCSI	Yes
Mexico - INSQ	No (Oxalyl chloride)
Vietnam - NCI	Yes
Russia - FBEPH	Yes

**Legend:**  
*Yes = All CAS declared ingredients are on the inventory*  
*No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.*

## SECTION 16 Other information

Revision Date	11/07/2023
Initial Date	11/07/2023

## SDS Version Summary

Version	Date of Update	Sections Updated
1.2	11/07/2023	Toxicological information - Acute Health (inhaled), Toxicological information - Acute Health (skin), Toxicological information - Acute Health (swallowed), Physical and chemical properties - Appearance, CAS Number, Hazards identification - Classification, Disposal considerations - Disposal, Exposure controls / personal protection - Engineering Control, First Aid measures - First Aid (eye), First Aid measures - First Aid (inhaled), First Aid measures - First Aid (skin), First Aid measures - First Aid (swallowed), Composition / information on ingredients - Ingredients, Korean MSDS Number, Handling and storage - Storage (storage requirement), Identification of the substance / mixture and of the company / undertaking - Supplier Information, Identification of the substance / mixture and of the company / undertaking - Synonyms, Transport Information

## Other information

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

For detailed advice on Personal Protective Equipment, refer to the following EU CEN Standards:

- EN 166 Personal eye-protection
- EN 340 Protective clothing
- EN 374 Protective gloves against chemicals and micro-organisms
- EN 13832 Footwear protecting against chemicals
- EN 133 Respiratory protective devices

## Definitions and abbreviations

- PC - TWA: Permissible Concentration-Time Weighted Average
- PC - STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit,
- IDLH: Immediately Dangerous to Life or Health Concentrations
- ES: Exposure Standard
- OSF: Odour Safety Factor
- NOAEL :No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index
- AIIC: Australian Inventory of Industrial Chemicals
- DSL: Domestic Substances List
- NDSL: Non-Domestic Substances List
- IECSC: Inventory of Existing Chemical Substance in China
- EINECS: European INventory of Existing Commercial chemical Substances

**Oxalyl chloride**

ELINCS: European List of Notified Chemical Substances  
NLP: No-Longer Polymers  
ENCS: Existing and New Chemical Substances Inventory  
KECI: Korea Existing Chemicals Inventory  
NZIoC: New Zealand Inventory of Chemicals  
PICCS: Philippine Inventory of Chemicals and Chemical Substances  
TSCA: Toxic Substances Control Act  
TCSI: Taiwan Chemical Substance Inventory  
INSQ: Inventario Nacional de Sustancias Químicas  
NCI: National Chemical Inventory  
FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

**Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]**

<b>Classification according to regulation (EC) No 1272/2008 [CLP] and amendments</b>	<b>Classification Procedure</b>
Substances and Mixtures which in Contact with Water Emit Flammable Gases Category 1, H260	On basis of test data
Acute Toxicity (Dermal) Category 3, H311	On basis of test data
Skin Corrosion/Irritation Category 1B, H314	Expert judgement
Serious Eye Damage/Eye Irritation Category 1, H318	Expert judgement
Acute Toxicity (Inhalation) Category 3, H331	On basis of test data
Flammable Liquids Category 1, H224	Calculation method
Acute Toxicity (Oral) Category 3, H301	On basis of test data
Substances and Mixtures which in Contact with Water Emit Flammable Gases Category 2, H261	On basis of test data