



## Material Safety Data Sheet

LA1922  
Oxalic acid

### 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Id:** LA1922

**Product Name:** Oxalic acid

**Synonyms:** Ethanedionic acid.

**Chemical Family:** Saturated aliphatic carboxylic acid / saturated aliphatic dicarboxylic acid / alkanedioic acid

**Application:** Textile cleaning, flameproofing, rust removal, and fabric dyeing; metal and equipment cleaning; anti-corrosion coating; chemical intermediate and catalyst

**Distributed By:**

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**Prepared By:** The Safety, Health and Environment Department of Univar Canada Ltd.

**Preparation date of MSDS:** 11 June 2008

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### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Percentage (W/W)	LD50s and LC50s Route & Species:
Oxalic Acid 144-62-7	100	Oral LD50 (Rat) 7500 mg/kg Oral LD50 (Rat) 475 mg/kg (male) calculated Oral LD50 (Rat) 375 mg/kg (female) calculated Dermal LD50 (Rabbit) 20000 mg/kg

**Note:** Other CAS# 6153-56-6.

### 3. HAZARDS IDENTIFICATION

**Potential Acute Health Effects:**

**Eye Contact:** Causes severe eye irritation. Can cause redness, pain and damage to the cornea. If damage is restricted to the outer layer of the eye, recovery may occur within a few days. Prolonged contact with solutions can produce irreversible eye damage.

### 3. HAZARDS IDENTIFICATION

**Skin Contact:** Solutions of 5 to 10 percent acid are irritating to the skin after prolonged exposure and can cause corrosive injury. Excessive contact may produce a delayed localized pain and discoloration of the skin with fingernails becoming brittle and blue-coloured.

**Inhalation:** May irritate mouth, nose, and throat. Coughing, chest pains, and breathing difficulty may occur. Headache, nausea and vomiting may occur.

**Ingestion:** Can cause severe poisoning or death, depending on the concentration and total amount of material ingested. Dilute solutions may cause no immediate irritation or pain, while concentrated material (such as 10% solutions or the solid) can cause burning pain in the mouth, throat and stomach, followed by profuse vomiting (sometimes bloody) (corrosive effects). Small doses of oxalate in the body may cause headache, pain and twitching in muscles and cramps. Larger doses can cause weak and irregular heartbeat, a drop in blood pressure and signs of heart failure. Large doses rapidly cause a shock-like state, convulsions, coma and possibly death. A delayed effect of ingestion is kidney damage, possibly leading to renal failure.

### 4. FIRST AID MEASURES

**Eye Contact:** Flush eyes with gently flowing water for at least 15 minutes or until the chemical is removed, while holding the eyelid(s) open. Take care not to rinse the contaminated water into the unaffected eye or face. Seek immediate medical attention. Seek immediate medical attention.

**Skin Contact:** In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

**Inhalation:** If symptoms are experienced, remove source of contamination or move victim to fresh air. If symptoms persist, get medical attention. If the affected person is not breathing, apply artificial respiration. If breathing is difficult, give oxygen. In situations where administering oxygen is appropriate, first aiders must be trained in the safe use and handling of oxygen. It is preferable to administer oxygen under a doctor's supervision or advice. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately. Immediate medical assistance is required.

**Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. If the heart has stopped, trained personnel should begin cardiopulmonary resuscitation (CPR) immediately.

**Notes to Physician:** If victim is conscious give immediately, by mouth, a fine suspension in water of a non-toxic calcium compound such as calcium lactate, chalk, plaster or milk. Large amounts of calcium are required to inactivate oxalate by precipitating it as the insoluble calcium oxalate salt.

### 5. FIRE FIGHTING MEASURES

**Flash Point:** None.

**Flash Point Method:** Not applicable.

**Autoignition Temperature:** Not Available.

**Flammable Limits in Air (%):** Not Available.

**Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Special Exposure Hazards:** Use water spray to cool fire-exposed containers and structures.

**Hazardous Decomposition/Combustion Materials (under fire conditions):** Oxides of carbon.

**Special Protective Equipment:** Fire fighters should wear full protective clothing, including self-contained breathing equipment.

**NFPA RATINGS FOR THIS PRODUCT ARE:** HEALTH 3, FLAMMABILITY 1, INSTABILITY 0

**HMIS RATINGS FOR THIS PRODUCT ARE:** HEALTH 3, FLAMMABILITY 1, REACTIVITY 0

### 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautionary Measures:** Wear appropriate protective equipment.

**Environmental Precautionary Measures:** Prevent entry into sewers or streams, dike if needed. Consult local authorities.

**Procedure for Clean Up:** Ventilate area. Isolate hazard area and restrict access. Scoop up or vacuum up and place in an appropriate closed container. Flush area with water to remove trace residue.

## 7. HANDLING AND STORAGE

**Handling:** Avoid dust generation and provide for room ventilation during handling. Avoid breathing in dust. Avoid contact with eyes, skin and clothing. Keep away from heat, sparks and flame. Ensure all containers are labeled. Empty containers may contain hazardous product residues. Keep the containers closed when not in use. Wash thoroughly after handling.

**Storage:** Store in a cool, dry, well ventilated area, away from heat and ignition sources. Avoid storage with incompatible materials.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Engineering Controls:

If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

**Respiratory Protection:** NIOSH RECOMMENDATIONS FOR OXALIC ACID CONCENTRATIONS IN AIR :

UP TO 25 mg/m<sup>3</sup>: Powered air-purifying respirator with dust and mist filter(s); or SAR operated in a continuous-flow mode.

UP TO 50 mg/m<sup>3</sup>: Full-facepiece respirator with high-efficiency particulate filter(s); or full-facepiece SCBA; or full-facepiece SAR.

UP TO 500 mg/m<sup>3</sup>: Positive pressure, full-facepiece SAR.

### Gloves:

Butyl rubber gloves. Neoprene gloves. Nitrile gloves. Polyvinylchloride (PVC) gloves.

**Skin Protection:** Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance.

**Eyes:** Chemical goggles; also wear a face shield if splashing hazard exists.

**Other Personal Protection Data:** Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Oxalic Acid	2 mg/m <sup>3</sup> STEL 1 mg/m <sup>3</sup> TLV-TWA	1 mg/m <sup>3</sup> TWA 2 mg/m <sup>3</sup> STEL	500 mg/m <sup>3</sup>

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Physical State:** Solid Crystals or Powder.

**Colour:** Colourless Transparent.

**Odour:** Odourless

**pH** 1.3 (0.1 M solution in water)

**Specific Gravity:** Not Available.

**Boiling Point:** Not Available.

**Freezing/Melting Point:** Not Available.

**Vapour Pressure:** <0.001 mm Hg @ 20 deg C

**Vapour Density:** Not Available.

**% Volatile by Volume:** Not Available.

**Evaporation Rate:** Not Available.

**Solubility:** Soluble in water.

**VOCs:** Not Available.

**Viscosity:** Not Available.

**Molecular Weight:** 90.04 (anhydrous) , 126.07 (dihydrate)

**Other:** Not Available.

## 10. STABILITY AND REACTIVITY

**Chemical Stability:** Stable. If heated to melting point, sublimation and decomposition occurs.

**Hazardous Polymerization:** Will not occur.

**Conditions to Avoid:** Avoid excessive heat, open flames and all ignition sources. Moisture. Incompatible materials.

**Materials to Avoid:** Alkalis. Alkali metals. Oxidizing agents. Silver. Iron. Acid chlorides.

**Hazardous Decomposition Products:** Oxides of carbon.

## 10. STABILITY AND REACTIVITY

### Additional Information:

No additional remark.

## 11. TOXICOLOGICAL INFORMATION

### Principle Routes of Exposure

**Ingestion:** Can cause severe poisoning or death, depending on the concentration and total amount of material ingested. Dilute solutions may cause no immediate irritation or pain, while concentrated material (such as 10% solutions or the solid) can cause burning pain in the mouth, throat and stomach, followed by profuse vomiting (sometimes bloody) (corrosive effects). Small doses of oxalate in the body may cause headache, pain and twitching in muscles and cramps. Larger doses can cause weak and irregular heartbeat, a drop in blood pressure and signs of heart failure. Large doses rapidly cause a shock-like state, convulsions, coma and possibly death. A delayed effect of ingestion is kidney damage, possibly leading to renal failure.

**Skin Contact:** Solutions of 5 to 10 percent acid are irritating to the skin after prolonged exposure and can cause corrosive injury. Excessive contact may produce a delayed localized pain and discolouration of the skin with fingernails becoming brittle and blue-coloured.

**Inhalation:** May irritate mouth, nose, and throat. Coughing, chest pains, and breathing difficulty may occur. Headache, nausea and vomiting may occur.

**Eye Contact:** Causes severe eye irritation. Can cause redness, pain and damage to the cornea. If damage is restricted to the outer layer of the eye, recovery may occur within a few days. Prolonged contact with solutions can produce irreversible eye damage.

**Additional Information:** Long term exposure to oxalic acid solutions, by ingestion, skin absorption and inhalation, is linked to stone formation (calculi) in the kidney and urinary tract (urolithiasis) of workers. Painful abdominal spasms (during the passing of the stone) as well as painful and difficult urination during exposure). Oxalic acid solutions can cause localized pain, discolouration of the fingers and nails and possibly ulcers and gangrene. Weight loss, chronic inflammation of the upper respiratory tract, irritation of the nose and throat and painful urination were symptoms of long term chronic exposure by inhalation.

### Acute Test of Product:

**Acute Oral LD50:** Not Available.

**Acute Dermal LD50:** Not Available.

**Acute Inhalation LC50:** Not Available.

### Carcinogenicity:

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Oxalic Acid	Not listed.	Not listed.

**Carcinogenicity Comment:** No additional information available.

**Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity:** Not Available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicological Information:

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Oxalic Acid	LC50 (Lepomis macrochirus) 4000 mg/L	Not Available.	Not Available.

### Other Information:

No additional remark.

### 13. DISPOSAL CONSIDERATIONS

**Disposal of Waste Method:** Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

**Contaminated Packaging:** Empty containers should be recycled or disposed of through an approved waste management facility.

### 14. TRANSPORT INFORMATION

**DOT (U.S.):**

**DOT Shipping Name:** Not Regulated.

**DOT Hazardous Class** Not Applicable.

**DOT UN Number:** Not Applicable.

**DOT Packing Group:** Not Applicable.

**DOT Reportable Quantity (lbs):** Not Available.

**Note:** No additional remark.

**Marine Pollutant:** No.

**TDG (Canada):**

**TDG Proper Shipping Name:** Not Regulated.

**Hazard Class:** Not Applicable.

**UN Number:** Not Applicable.

**Packing Group:** Not Applicable.

**Note:** No additional remark.

**Marine Pollutant:** No.

### 15. REGULATORY INFORMATION

**U.S. TSCA Inventory Status:** All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

**Canadian DSL Inventory Status:** All components of this product are either on the Domestic Substances List (DSL), the Non-Domestic Substances List (NDSL) or exempt.

**Note:** Not available.

#### U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Oxalic Acid	Not Listed.	Not Listed.	Not Listed.

**California Proposition 65:** Not Listed.

**MA Right to Know List:** Listed.

**New Jersey Right-to-Know List:** Listed.

**Pennsylvania Right to Know List:** Listed.

**WHMIS Hazardous Class:**

D1B TOXIC MATERIALS

E CORROSIVE MATERIAL



## 16. OTHER INFORMATION

**Additional Information:**

This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

**Disclaimer:**

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**\*\*\*END OF MSDS\*\*\***