

SAFETY DATA SHEET

Preparation Date: 5/11/2015

Revision Date: 05/11/2015

Revision Number: G1

1. IDENTIFICATION

Product identifier

Product code: O1025
Product Name: OXALIC ACID, DIHYDRATE, CRYSTAL, REAGENT, ACS

Other means of identification

Synonyms: Ethanedioic Acid, dihydrate
CAS #: 6153-56-6
RTECS # K11600000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier: Spectrum Chemical Mfg. Corp
 14422 South San Pedro St.
 Gardena, CA 90248
 (310) 516-8000.

Order Online At: <https://www.spectrumchemical.com>

Emergency telephone number Chemtrec 1-800-424-9300

Contact Person: Martin LaBenz (West Coast)

Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous according to the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3
Specific target organ toxicity (repeated exposure)	Category 2

Label elements

Danger

Hazard statements

Harmful if swallowed
 Causes severe skin burns and eye damage
 May cause respiratory irritation. May cause drowsiness or dizziness
 May cause damage to organs through prolonged or repeated exposure

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Hazards not otherwise classified (HNOC)

Not Applicable

Other hazards

Not available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
 Do not eat, drink or smoke when using this product
 Do not breathe dust/fume/gas/mist/vapors/spray
 Wear protective gloves/protective clothing/eye protection/face protection
 Use only outdoors or in a well-ventilated area

Precautionary Statements - Response

*Immediately call a POISON CENTER or doctor/physician
 Specific treatment (see . ? on this label)*

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Immediately call a POISON CENTER or doctor/physician.

IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower

Wash contaminated clothing before reuse

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician. Call a POISON CENTER or doctor/physician if you feel unwell.

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

Do NOT induce vomiting

Precautionary Statements - Storage

Store locked up

Store in a well-ventilated place. Keep container tightly closed

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %
Oxalic Acid, Dihydrate	6153-56-6	100

4. FIRST AID MEASURES

First aid measures

General Advice:

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call

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1-800-222-1222.

Skin Contact: Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.

Eye Contact: Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

Most important symptoms and effects, both acute and delayed

Symptoms Severe skin and eye irritation or burns. Causes digestive (gastrointestinal) tract irritation. May cause gastrointestinal (digestive) tract burns. May cause corneal injury. May affect the cardiovascular system. May cause hypermotility, diarrhea. Abdominal pain. bloody stool. Burning pain in the mouth, throat, esophagus, stomach. Ulceration/burning of the mouth, throat, esophagus, stomach. May cause purging. Central nervous system effects. May affect the liver. It may affect the kidneys. It may affect the thyroid.

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically.

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide (CO2). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon oxides

Hazardous Combustion Products: No information available.

Specific hazards: May be combustible at high temperatures

Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

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6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Remove all sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

Safe Handling Advice

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Do not ingest. Do not breathe vapors/dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:

Alkalis
Bases
Metals
Oxidizing agents
Chlorites, hypochlorites, silver, silver compounds, furfuryl alcohol

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	CAS-No.	OSHA	NIOSH	ACGIH	AIHA WHEEL
Oxalic Acid, Dihydrate	6153-56-6	1 mg/m ³ TWA (for Oxalic acid, anhydrous)	2 mg/m ³ STEL 1 mg/m ³ TWA (for Oxalic acid, anhydrous)	2 mg/m ³ STEL 1 mg/m ³ TWA	None

Canada

Components	CAS-No.	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Oxalic Acid, Dihydrate	6153-56-6	None	2 mg/m ³ STEL 1 mg/m ³ TWA (for Oxalic acid, anhydrous)	2 mg/m ³ STEL 1 mg/m ³ TWA (for Oxalic acid, anhydrous)	None

Australia and Mexico

Components	CAS-No.	Australia	Mexico
Oxalic Acid, Dihydrate	6153-56-6	None	None

Appropriate engineering controls

Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

- Eye protection:** Goggles Safety glasses with side-shields
- Skin and body protection:** Chemical resistant apron. Gloves. Long sleeved clothing.
- Respiratory protection:** Effective dust mask. Wear respirator with dust filter.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state: Solid	Appearance: Crystalline. Crystals. Crystalline powder.	Color: Colorless. White.
Odor: Odorless.	Taste No information available.	Formula: (COOH) ₂ •2H ₂ O
Molecular/Formula weight: 126.07	Flammability: No information available	Flashpoint (°C/°F): No information available.
Flash Point Tested according to: Not available	Autoignition Temperature (°C/°F): No information available	Lower Explosion Limit (%): No information available
Upper Explosion Limit (%): No information available	Melting point/range(°C/°F): 101.5°C/214.7°F	Decomposition temperature(°C/°F): No information available
Boiling point/range(°C/°F): No information available	Bulk density: No information available	Density (g/cm³): 1.653 @ 18.5°C
Specific gravity:		

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No information available

pH:
No information available

Vapor pressure @ 20°C (kPa):
No information available

Evaporation rate:
No information available

Vapor density:
4.4

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

**Partition coefficient
(n-octanol/water):**
No information available

Viscosity:
No information available

Miscibility:
No information available

Solubility:
Easily soluble in hot water.
Soluble in cold water.
Partially soluble in diethyl ether.
Solubility in cold water: 1g/7 ml.
Solubility in hot water: 1g/2 ml.
Solubility in Alcohol: 1g/2.5 ml.
Solubility in Boiling Alcohol: 1g/1.8 ml.
Solubility in Ether: 1g/100 ml.
Solubility in Glycerol: 1g/5.5 ml

10. STABILITY AND REACTIVITY

Reactivity

Reactive with metals
Reactive with oxidizing agents
Reacts with strong bases
Reactive with alkalis

Chemical stability

Stability: Stable under recommended storage conditions.

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Avoid dust formation. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Incompatible materials.

Incompatible Materials: Alkalis
Bases
Metals
Oxidizing agents
Chlorites, hypochlorites, silver, silver compounds, furfuryl alcohol

Hazardous decomposition products: No information available.

Other Information

Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

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Principal Routes of Exposure:

Ingestion. Inhalation. Skin.

Acute Toxicity**Component Information**

Oxalic Acid, Dihydrate	
CAS-No.	6153-56-6

LD50/oral/rat = 375 mg/kg Oral LD50 Rat
LD50/oral/mouse = No information available
LD50/dermal/rabbit = No information available
LD50/dermal/rat = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No information available
Other LD50 or LC50 information = No information available

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = 375 mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available
VALUE - Dust/Mist = No information available

Symptoms

Skin Contact: Causes severe irritation and burns. Harmful if absorbed through skin.

Eye Contact: Causes severe eye irritation and possible burns. May cause conjunctivitis. May cause corneal damage.

Inhalation May cause respiratory tract irritation. Inhalation of oxalic acid may also cause digestive disturbances such as nausea and vomiting as well as affecting the nerves and urinary system and causing headache, muscular irritability, weakness, and albuminuria.

Ingestion Harmful if swallowed. Causes severe digestive tract irritation and possible burns. It may affect the cardiovascular system, and urinary system. Symptoms may include vomiting (often bloody or with coffee-ground appearance), diarrhea, bloody stool, hypermotility, abdominal pain, intense burning pain in the throat, esophagus,

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stomach, ulceration/burning of the mouth, esophagus, and stomach, severe purging, weak pulse, hypotension, cardiac irregularities, cardiovascular collapse. Other symptoms may include convulsions, headache, twitching, tetany, stupor, coma, tingling of fingers and toes, muscular irritability. Renal damage, as evidenced by oliguria, albuminuria, hematuria, may occur because Oxalic acid can bind calcium to form calcium oxalate which is insoluble at physiological pH. The calcium oxalate formed might precipitate in the kidney tubules. Hypocalcemia may also occur, which is what may affect the function of the heart and nerves and cause the above cardiovascular and nervous system effects.

Aspiration hazard No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Skin: Prolonged or repeated exposure may cause localized pain and cyanosis of the fingers, and even gangrenous changes. This has occurred on the hands of people working with oxalic acid solutions without rubber gloves. Prolonged or repeated contact with oxalic acid can also cause a skin rash, pain, redness, blisters, and slow healing ulcers.
Ingestion and Inhalation: Repeated or prolonged ingestion and inhalation may affect metabolism/appetite resulting in weight loss. Inhalation of dust over a long period of time may result in respiratory tract inflammation. Ingestion of oxalic acid over a long period of time may cause depressed thyroid function, and kidney damage. It may also affect the liver and blood.

Sensitization: No information available.

Mutagenic Effects: No information available

Carcinogenic effects: Not considered carcinogenic.

Components	CAS-No.	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Oxalic Acid, Dihydrate	6153-56-6	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

ACGIH (American Conference of Governmental Industrial Hygienists)

IARC (International Agency for Research on Cancer)

NTP (National Toxicology Program)

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

Reproductive toxicity No data is available

Reproductive Effects: May cause adverse reproductive effects based on animal data
There is limited evidence that Oxalic acid may damage the male reproductive system (including decreasing the sperm count) in animals

Developmental Effects: No information on reproductive toxicity effects on humans was found
May cause adverse developmental effects based on animal data
There is limited evidence that Oxalic acid may damage the developing fetus in animals

Teratogenic Effects: No information on developmental toxicity effects on humans was found
No information available

Specific Target Organ Toxicity

STOT - single exposure No information available.
STOT - repeated exposure May cause damage to organs through prolonged or repeated exposure.
Target Organs: Eyes. Kidneys. Nervous system. Skin. Respiratory system.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: No data available.

Persistence and degradability: No information available

Bioaccumulative potential: No information available.

Mobility: No information available.

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
 Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
 Empty containers should be taken for local recycling, recovery or waste disposal

Components	CAS-No.	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Oxalic Acid, Dihydrate	6153-56-6	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No: Not Regulated
Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s. (Oxalic Acid, dihydrate)
Hazard Class: 8
Subsidiary Class No information available
Packing group: No information available
Emergency Response Guide Number No information available
Marine Pollutant No data available
DOT RQ (lbs): No information available
Special Provisions No Information available
Symbol(s): [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.

Description: UN3261, Corrosive solid, acidic, organic, n.o.s. ,8,PG III

TDG (Canada)

UN-No: UN3261
Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s.
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III

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Marine Pollutant Description: No Information available
UN3261,CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S.,8,PG III

ADR

UN-No: UN3261
Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s.
Hazard Class: 8
Packing Group: III
Subsidiary Risk: No information available
Description: UN3261 Corrosive solid, acidic, organic, n.o.s.,8,III

IMO / IMDG

UN-No: UN3261
Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s.
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Marine Pollutant EMS: No information available
F-A

RID

UN-No: UN3261
Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s.
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: UN3261 Corrosive solid, acidic, organic, n.o.s.,8,III

ICAO

UN-No: UN3261
Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s.
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
Description: UN3261,Corrosive solid, acidic, organic, n.o.s.,8,PG III

IATA

UN-No: UN3261
Proper Shipping Name: Corrosive solid, acidic, organic, n.o.s.
Hazard Class: 8
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 8L
Special Provisions: No information available
Description: UN3261,Corrosive solid, acidic, organic, n.o.s.,8,PG III

15. REGULATORY INFORMATION

International Inventories

Components	CAS-No.	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Oxalic Acid, Dihydrate	6153-56-6	Not Listed	Not present	Present	Present (2)-844	Present	Present	Not present

U.S. Regulations

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Oxalic Acid, Dihydrate
Pennsylvania RTK: Present

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	CAS-No.	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Oxalic Acid, Dihydrate	6153-56-6	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CAS-No.	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Oxalic Acid, Dihydrate	6153-56-6	None	None	None	None	None

U.S. TSCA

Components	CAS-No.	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Oxalic Acid, Dihydrate	6153-56-6	Not Applicable	Not Applicable

Canada

WHMIS hazard class:

E Corrosive material

Components

Oxalic Acid, Dihydrate

WHIMHAZ

E

Canada Controlled Products Regulation:

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Inventory

Components	CAS-No.	Canada (DSL)	Canada (NDSL)
Oxalic Acid, Dihydrate	6153-56-6	Not Listed	Not Listed

Components	CAS-No.	CEPA Schedule I - Toxic Substances
Oxalic Acid, Dihydrate	6153-56-6	Not listed
Components	CAS-No.	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Oxalic Acid, Dihydrate	6153-56-6	Not listed

EU Classification

R-phrase(s)

R21/22 - Harmful in contact with skin and if swallowed.

S -phrase(s)

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S24/25 - Avoid contact with skin and eyes.

Components	CAS-No.	Classification	Concentration Limits:	Safety Phrases
Oxalic Acid, Dihydrate	6153-56-6		No information	

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:

Xn - Harmful.

Xn



16. OTHER INFORMATION

Preparation Date: 5/11/2015
Revision Date: 05/11/2015
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet