



THATCHER COMPANY MATERIAL SAFETY DATA SHEET
PRODUCT: OXALIC ACID
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MSDS Date: September 2, 2011
Emergency Contact: 1-800-424-9300

SECTION I

PRODUCT NAME: Oxalic Acid
FORMULA: $C_2H_2O_4 \cdot H_2O$

DOT SHIPPING INFORMATION: UN2811, Toxic solid, organic, n.o.s. (oxalic acid), 6.1, PGIII

SECTION II - HAZARDOUS INGREDIENTS

This material contains no ingredients which are known by Thatcher Company to be hazardous unless listed below.

HAZARDOUS MATERIAL	CAS NUMBER	w/w %	EXPOSURE LIMITS IN AIR
Thiourea	6153-56-6	100	1 mg/m ³ TWA

The specific identity of some ingredients may be withheld for confidential business purposes. However, all known potential health effects from exposure to these ingredients are being addressed.

SECTION III - HEALTH HAZARD DATA

NEPA HAZARD RATING

Health = 4
Flammability = 1
Reactivity = 1

Carcinogenic Listing:

NTP: not listed
IARC MONOGRAPHS: not listed
OSHA 29 CFR 1910: not listed

ENTRY ROUTES & EFFECTS OF OVEREXPOSURE:

Contact	Skin Contact: Can cause severe irritation, possible skin burns. May be absorbed through the skin. Eye Contact: Oxalic acid is an eye irritant. It may produce corrosive effects.
Inhalation	Harmful if inhaled. Can cause severe irritation and burns of nose, throat, and respiratory tract.
Ingestion	Toxic! May cause burns, nausea, severe gastroenteritis and vomiting, shock and convulsions. May cause renal damage, as evidenced by bloody urine. Estimate fatal dose is 5 to 15 grams.



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STATEMENT OF PRACTICAL TREATMENT:

Contact	Skin Contact: In case of contact, wipe off excess from skin then immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Call a physician immediately. Eye Contact: Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Call a physician immediately.
Inhalation	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician immediately
Ingestion	DO NOT INDUCE VOMITING! Give large quantities of limewater or milk to drink. Never give anything by mouth to an unconscious person. Call a physician immediately.

SECTION IV - FIRE AND EXPLOSION DATA

FLASH POINT:

Oxalic Acid is a combustible solid below 101C (215F)

EXPLOSION:

Reacts explosively with strong oxidizing materials and some silver compounds.

FLAMMABLE LIMITS:

UEL: N/A

LEL: N/A

EXTINGUISHING MEDIA:

Water spray, dry chemical, alcohol foam, or carbon dioxide. Foam or water on molten oxalic acid may cause frothing. Water spray may be used to keep fire exposed containers cool.

SPECIAL FIRE-FIGHTING PROCEDURES:

None.

SECTION V - SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION:

If the exposure limit is exceeded, a half-face respirator with an organic vapor cartridge and dust/mist filter may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece respirator with an organic vapor cartridge and dust/mist filter may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

VENTILATION:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.



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EYE PROTECTION:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.

SKIN PROTECTION:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

OTHER PROTECTIVE EQUIPMENT:

none

SECTION VI - SPECIAL PRECAUTIONS

HANDLING AND STORAGE PRECAUTIONS:

Keep in a tightly closed container. Protect from physical damage. Store in a cool, dry, ventilated area away from sources of heat, moisture and incompatibilities. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

SECTION VII - PHYSICAL DATA

MELTING POINT C (F):	216°F sublimes	BOILING POINT C (F):	N/A
DENSITY:	1.65	VAPOR PRESSURE (mmHg):	negligible
pH:	1.3 (0.1M sol'n)	EVAPORATION RATE:	N/A
APPEARANCE AND ODOR:	Solid white crystal with no odor.		

SECTION VIII - REACTIVITY DATA

STABILITY:

Stable under ordinary conditions of use and storage. Heat will contribute to instability.

HAZARDOUS POLYMERIZATION:

Will not occur.

CONDITIONS OR MATERIALS TO AVOID:

Heat, ignition sources and incompatibilites.

HAZARDOUS DECOMPOSITION PRODUCTS:

Carbon dioxide and carbon monoxide may form when heated to decomposition. May also form formic acid.

SECTION IX - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL SPILLS OR LEAKS:

Remove all sources of ignition. Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8.



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Spills: Clean up spills in a manner that does not disperse dust into the air. Use non-sparking tools and equipment. Pick up spill for recovery or disposal and place in a closed container. Remove unnecessary people. If material comes in contact with water, neutralize liquid with alkaline material (soda ash, lime), then absorb with an inert material (e.g. vermiculite, dry sand, earth) and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer.

WASTE DISPOSAL METHOD:

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste facility. Although not a listed RCRA hazardous waste, this material may exhibit one or more characteristics of a hazardous waste and require appropriate analysis to determine specific disposal requirements. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

SECTION X – REGULATORY INFORMATION

CHEMICAL INVENTORY STATUS:

Ingredient		TSCA	EC	Japan	Australia	Korea	Canada		Phil.
							DSL	NDSL	
Oxalic Acid	6153-56-6	yes	yes	yes	yes	yes	yes	no	yes

FEDERAL, STATE AND INTERNATIONAL REGULATIONS

Ingredient		SARA 302		SARA 313		CERCLA	RCRA	TSCA
		RQ	TPQ	List	Chemical Catalog		261.33	8(d)
Oxalic Acid	6153-56-6	no	no	no	no	no	no	no

ACGIH = American Conference of Governmental Industrial Hygienists

CL = Ceiling Level

IARC = International Agency for Research on Cancer: Monographs

OSHA = Occupational Safety and Health Administration

N/D = Not Determined

N/A = Not Applicable

NTP = National Toxicology Program: Annual Report on Carcinogens

PEL = Permissible Exposure Level (OSHA)

TLV = Threshold Limit Value (ACGIH)

TWA = Time Weighted Average over 8 Hours

This information is, to the best of our knowledge, accurate but may not be complete. THATCHER COMPANY furnishes this information in good faith, but without warranty, representation or guarantee of its accuracy, completeness, or reliability.