ESSENTIAL CHEMISTRY. INNOVATIVE SOLUTIONS.

SAFETY DATA SHEET

Print Date: March 21, 2023

Section 1: Product & Company Information

Product Identifier: Oxalic Acid, Dihydrate

Other Means of Identification
Product Number: No data available.

Recommended Use and Restrictions on Use
Recommended Use: No data available.
Restrictions on Use: No data available.

Manufacturer / Importer / Supplier / Distributor Information
Company Name: CORECHEM Inc.
Address: 4320 Greenway Drive
Knoxville, TN 37918
USA

Information Telephone Number: 1-865-524-4239
Fax Number: 1-865-524-3375
Website: www.corecheminc.com
Contact Person: Regulatory Manager
E-mail: regulatory@corecheminc.com

Emergency Phone Number: Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 *(monitored 24 hours/day)*

Section 2: Hazards Identification

GHS Hazard Classification(s)
In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

Physical Hazard(s)
Not classified.

Health Hazard(s)
Acute Toxicity, Oral - 4
Acute Toxicity, Dermal - 4
(Corrosion)Damage/Irritation, Eye - 1

Environmental Hazard(s)
Not classified.

Label Elements
Signal Word
DANGER

Hazard Symbol(s)

Hazard Statement(s)
H302+H312: Harmful if swallowed or in contact with skin.
H318: Causes serious eye damage.

Precautionary Statements
General
Not applicable.

Prevention
P264: Wash face, hands and any exposed skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P280: Wear protective gloves/protective clothing/eye protection/face protection.

Response
P301 + P312: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352: IF ON SKIN: Wash with plenty of soap and water.
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.
P312: Call a POISON CENTER or doctor/physician if you feel unwell.
P322: Specific measures (see supplemental first aid instructions on this label).
P330: Rinse mouth.
P363: Wash contaminated clothing before reuse.

Storage

Not applicable.

Disposal

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Hazard(s) not otherwise classified (HNOC)

None known.

Section 3: Composition/Information on Ingredients

Substance

Chemical Identity [2]	Common Name/Synonym(s)	CAS # [3]	Weight %	Impurity or Stabilizing Additive
Oxalic Acid	Ethanedioic acid dihydrate	6153-56-6	100%	No

1. Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
2. Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
3. "—"Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

Section 4: First-Aid Measures

General Information

Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves. In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). Wash contaminated clothing before reuse.

Inhalation

Move source of dust or move person to fresh air and rest.

Skin Contact

Carefully and gently brush the contaminated body surfaces in order to remove all traces of product for at least 15 minutes. Wash affected area immediately with plenty of water. Remove contaminated clothing. If necessary, seek medical advice.

Eye Contact

Immediately flush with large amounts of cool running water for at least 15 minutes, occasionally lifting the upper and lower lids. Seek medical attention.

Ingestion

Clean mouth with water and drink afterwards plenty of water. Do NOT induce vomiting. Obtain medical attention.

Most important symptoms/effects, acute and delayed

Symptoms

Prolonged or repeated skin contact may cause dermatitis. If inhaled can cause a burning sensation of nose and throat, coughing, shortness of breath, sore throat, symptoms of immediate effects.

Indication of immediate medical attention and special treatment needed

Hazards

No data available.

Treatment

Treat symptomatically and supportively.

Section 5: Fire-Fighting Measures

General Fire Hazards

Avoid open flame. Avoid contact with oxidizing materials

Suitable (and Unsuitable) Extinguishing Media

Suitable Extinguishing Media

Use Water spray, powder, foam or carbon dioxide as extinguishing media. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable Extinguishing Media

Do not use water jet as an extinguisher, as this will spread the fire.

Specific Hazards Arising from the Chemical

Keep away from sources of ignition. In case of fire toxic fumes may form CO, CO2.

Special Protective Equipment and Precautions for Firefighters

Special Fire-Fighting Equipment Procedures

The firefighting equipment must use individual breathing equipment. In case of fire keep cool by spraying with water. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Special Protective Equipment for Fire-Fighters

Because fire may produce toxic thermal decomposition products, wear a self-contained breathing apparatus (SCBA) with a full facepiece operated in pressure demand or positive pressure mode.

Section 6: Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Do not touch or walk into spilled material.

Methods and Materials for Containment and Clean-Up

Wear protective clothing as described in Section 8 of this safety data sheet. Clear up spills immediately and dispose of waste safely. Provide adequate ventilation. Collect spillage with a shovel and broom, or similar and reuse, if possible. Collect and place in suitable waste disposal containers and seal securely. Flush contaminated area with plenty of water. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

Notification Procedures

Follow all applicable OSHA requirements. (29 CFR 1910.120)

Environmental Precautions

Avoid discharge into drains or watercourses or onto the ground. Avoid discharge to the aquatic environment.

Section 7: Handling and Storage

Precautions for Safe Handling

Usage precautions:

Read and follow manufacturer's recommendations. Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from food, drink and animal feeding stuffs. Keep container tightly sealed when not in use. Do not handle until all safety precautions have been read and understood. Do not handle broken packages without protective equipment. Do not reuse empty containers.

Advice on general occupational hygiene:

Wash promptly if skin becomes contaminated. Take off contaminated clothing and wash before reuse. Wash contaminated clothing before reuse

Conditions for Safe Storage, including any Incompatibilities

Store away from incompatible materials (see Section 10). Keep only in the original container. Store in tightly closed, original container in a dry, cool and well-ventilated place. Keep containers upright. Protect containers from damage.

Section 8: Exposure Controls/Personal Protection

Control Parameters

Occupational Exposure Limits

Chemical Identity	Type	Value	Source
Oxalic Acid	Long-term exposure limit (8-hour TWA)	1 mg/m^3	US. ACGIH Threshold Limit Values
Oxalic Acid	Short-term exposure limit (15-minute)	2 mg/m^3	US. ACGIH Threshold Limit Values
Oxalic Acid	ACGIH	1 mg/m^3	US OSHA Table Z-1
Oxalic Acid	PEL	1 mg/m^3	US OSHA Table Z-1

Biological Limit Values

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

Appropriate Engineering Controls

Provide adequate ventilation. Observe any occupational exposure limits for the product or ingredients.

Individual protection measures, such as personal protective equipment (PPE)

General Information

Eye wash facilities and emergency shower must be available when handling this product.

Eye/Face Protection

Do not wear contact lenses. Tight fitting goggles with side shields, or wide vision full goggles.

Skin Protection

Hand Protection

Wear appropriate chemical resistant gloves.

Other

Wear appropriate chemical resistant clothing.

Respiratory Protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information

Hygiene Measures

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

Section 9: Physical and Chemical Properties

Appearance:
- Physical State: Solid, Powder
- Color: White

Odor: Odorless
Odor Threshold: Not applicable.
pH: 1.3 at 9 g/l
Melting Point/Freezing Point: 216 °F Sublimes
Initial Boiling Point and Boiling Range: 315 °F
Flash Point: No data available.
Evaporation Rate (butyl acetate=1)**:** No data available.
Flammability (solid, gas): No data available.
Upper/Lower Limit on Flammability or Explosive Limits
- Flammability Limit – Upper: Non-flammable
- Flammability Limit – Lower: No data available.
- Explosive Limit – Upper: Non-explosive
- Explosive Limit – Lower: Not applicable.

Specific Gravity: 1.90
Vapor Pressure: 0.0312 Pa at 25°C
Vapor Density (air =1)**:** 4.2
Relative Density (water=1)**:** (H_2O =1, at 4°C) 1.65
Solubility(ies):
- Solubility in water: 138 gm/L 20 °C
- Solubility (other): No data available.

Partition coefficient (n-octanol/water): n-octanol/water log POW -1.7
Auto-Ignition Temperature: No data available.
Decomposition Temperature: > 160 °C
Viscosity: No data available.

Other Information:
- Molecular Weight: 126.04
- Formula: C2H2O4.2H2O

Section 10: Stability and Reactivity

Reactivity

On contact with hot surfaces or flames this substance decomposes forming formic acid, carbon monoxide and carbon dioxide. The solution in water is a medium strong acid.

Chemical Stability

Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.

Possibility of Hazardous Reactions

Reacts violently with strong oxidants causing fire and explosion hazard. Reacts with some silver compounds to form explosive silver oxalate. Attacks some forms of plastic.

Conditions to Avoid

Minimize exposure to air and moisture to avoid degradation.

Incompatible Materials

Alkaline solutions. Ammonia. Halogenates. Oxidizing agents. Metals. Water. / Heat.

Hazardous Decomposition Products

Formic acid. Carbon dioxide. Carbon monoxide.

Section 11: Toxicological Information

Information on routes of exposure

Ingestion: Harmful if swallowed. Causes severe digestive tract irritation and possible burns.
Inhalation: Inhalation of dust will produce irritation to gastro-intestinal or respiratory tract, characterized by burning, sneezing and coughing.
Skin Contact: Skin contact can produce inflammation and blistering. Skin inflammation is characterized by itching, scaling, reddening, or, occasionally, blistering.
Eye Contact: Eye contact can result in corneal damage or blindness. Inflammation of the eye is characterized by redness, watering, and itching.

Information on Toxicological Effects

Acute Toxicity (List all possible routes of exposure)

Oral

Oxalic Acid: LD50 (Rat): 1,080 mg/kg

Dermal

Oxalic Acid: LD50 (Rabbit): 20,000 mg/kg

Inhalation

No data available.

Repeated Dose Toxicity
No data available.

Skin Corrosion/Irritation
Causes mild skin irritation.

Serious Eye Damage/Eye Irritation
Causes serious eye damage.

Respiratory/Skin Sensitization
No data available.

Carcinogenicity
IARC Monographs on the Evaluation of Carcinogenic Risks to Humans
No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
US. National Toxicology Program (NTP) Report on Carcinogens
No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)
No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Germ Cell Mutagenicity
In Vitro
No data available.
In Vivo
No data available.

Reproductive Toxicity
Oxalic acid is not toxic to reproduction (experimental result, mouse).

Specific Target Organ Toxicity – Single Exposure
No data available.

Specific Target Organ Toxicity – Repeated Exposure
No data available.

Aspiration Hazard
Not classified.

Other Effects
No data available.

Section 12: Ecological Information

Ecotoxicity
Acute Hazards to the Aquatic Environment
Fish
Oxalic Acid: LC50 (Shore Crab) 240 mg/L/ 48h
Oxalic Acid: LC50 (Leuciscus idus melanotus) 160 mg/l – 48h

Aquatic Invertebrates
Oxalic Acid: EC50 (Daphnia) 162.2 mg/l – 48h

Toxicity to Aquatic Plants
Oxalic Acid: Toxicity threshold (freshwater algae) 80.0 mg/l – 8 days

Chronic Hazards to the Aquatic Environment
Fish
No data available.

Aquatic Invertebrates
No data available.

Toxicity to Aquatic Plants
Chronic plant toxicity=100 ppm

Persistence and Degradability
Biodegradation
Readily biodegradable.
BOD/COD Ratio
No data available.

Bioaccumulative Potential
Bioconcentration Factor (BCF)
No data available on bioaccumulation.
Partition Coefficient n-octanol / water (log Kow)
No data available.

Mobility in Soil

Transport through the medium is rate-limiting. Degradation after 30 days at 20°C is up to 73% (based on CO2 evolution). Oxalic acid is easily biodegradable in soil.

Other Adverse Effects

No data available.

Section 13: Disposal Considerations

Disposal Instructions

Do not empty into drains. Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labeled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

General Information

The generation of waste should be minimized or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Section 14: Transportation Information

US Department of Transportation (DOT)

This material is not regulated as a hazardous material for transport by the U.S. Department of Transportation in accordance with 49 CFR 172.101.

Section 15: Regulatory Information

US Federal Regulations

Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

No chemical(s) in this material are subject to the reporting requirements of CERCLA.

Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

Emergency Planning and Community Right-To-Know Act (EPCRA)

EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard:	No
Sudden Release of Pressure:	No
Reactive:	No
Acute (Immediate) Health Hazard:	Yes
Chronic (Delayed) Health Hazard:	Yes

EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

This material does not contain any chemical(s) with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

US State Regulations

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.

Section 16: Other Information

Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 3
Chronic Health Hazard: *
Flammability: 1
Physical Hazard: 0

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

National Fire Protection Association (NFPA 704) Rating

Health Hazard: 3
Fire Hazard: 1
Reactivity Hazard: 0
Special: N/A

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Key to Abbreviations and Acronyms

ATE - Acute Toxicity Estimate
BCF - Bioconcentration Factor
EC50 - Effective concentration, 50%
IDHL – Immediately Dangerous to Life and Health
Kg – Kilogram
l – Liter
lb – Pound
LC50 - Lethal Concentration, 50%
LD50 - Lethal Dose, 50%
mg - milligram
ml – milliliter
N/A – Not Applicable
N/D – Not Determined
PEL – Permissible Exposure Limit
REL – Recommended Exposure Limit
STEL – Short-term Exposure Limit
TWA - Time weighted average
ACGIH - American Conference of Industrial Hygienists
AIHA – American Industrial Hygiene Association
BEI - Biological Exposure Indices
CAS – Chemical Abstracts Service
DOT – US Department of Transportation
EPA – US Environmental Protection Agency
GHS - Globally Harmonized System of Classification and Labelling of Chemicals
IARC - International Agency for Research on Cancer
IATA - International Air Transport Association
IBC - Intermediate Bulk Container
IMDG - International Maritime Dangerous Goods
NIOSH – National Institute for Occupational Safety and Health
NTP – National Toxicology Program
OSHA – US Occupational Health and Safety Administration
SARA – US EPA Superfund Amendments and Reauthorization Act
TSCA – US EPA Toxic Substances Control Act
UN - United Nations

References

HSDB® - Hazardous Substances Data Bank

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