



Safety Data Sheet

Classified According to OSHA Hazard Communication Standard (HCS 2024)

SECTION 1: Identification

1.1. Product Identifier

Trade Name or Designation Sulkowitch Reagent, for Qualitative Detection of Calcium in Urine

Product Number 8360

Other Identifying Product Numbers 8360-16

1.2. Recommended Use and Restrictions on Use

General Laboratory Reagent

1.3. Details of the Supplier of the Safety Data Sheet

Company Ricca Chemical Company

Address 412 West Fork Drive

Arlington, TX 76012 USA

Telephone 888-467-4222

1.4. Emergency Telephone Number (24 hours)

CHEMTREC (USA) 800-424-9300

CHEMTREC (International) 1+ 703-527-3887

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SECTION 2: Hazard(s) Identification

2.1. Classification of the Substance or Mixture

Hazard Class	Category	Hazard Statements	Precautionary Statements
Skin Corrosion / Irritation	Category 2	H315	P264,P280,P302+P352,P321, P332+P313,P362+P364
Serious Eye Damage / Eye Irritation	Category 1	H318	P280,P305+P351+P338,P310

2.2. GHS Label Elements

Pictograms:



Signal Word: Danger

Hazard Statements:

NOTE: Hazard statements may be combined on labels to improve clarity and readability.

Hazard Number	Hazard Statement
H315	Causes skin irritation
H318	Causes serious eye damage

Precautionary Statements:

NOTE: Precautionary statements may be combined or consolidated on labels to improve clarity and readability.

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Prevention

Precautionary Number	Precautionary Statement
P264	Wash hands, arms, and face thoroughly after handling.
P280	Wear protective gloves and eye protection.

Response

Precautionary Number	Precautionary Statement
P302+P352	IF ON SKIN: Wash with plenty of 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.
P332+P313	If skin irritation occurs: Get medical advice or attention.
P362+P364	Take off contaminated clothing and wash it before reuse.

2.3. Hazards not Otherwise Classified

No other hazards identified.

2.4. Ingredients of Unknown Acute Toxicity

1.7 percent of this mixture consists of ingredient(s) of unknown acute oral toxicity. 5.2 percent of this mixture consists of ingredient(s) of unknown acute dermal toxicity. 3.4 percent of this mixture consists of ingredient(s) of unknown acute inhalation toxicity.

SECTION 3: Composition / Information on Ingredients

3.1. Components of Mixture

Chemical Name (IUPAC)	Common Name and Synonyms	CAS Number	Weight%
water	Water	7732-18-5	93.12
acetic acid	Acetic Acid; Ethanoic acid	64-19-7	3.53
azane oxalic acid hydrate	Ammonium Oxalate; Ethanedioic acid, diammonium salt, monohydrate	6009-70-7	1.68
oxalic acid dihydrate	Oxalic Acid Dihydrate; Ethanedioic acid, dihydrate	6153-56-6	1.68

SECTION 4: First-Aid Measures

4.1. Description of Necessary Measures

Eye Contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. May cause irritation, redness, pain, and tearing.

Ingestion: Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

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Inhalation: Not expected to require first aid. If necessary, remove to fresh air.

Skin Contact: IF ON SKIN: Wash with plenty of water. May cause irritation, redness, and pain.

4.2. Most Important Symptoms and Effects, Acute and Delayed

Causes skin irritation CAUTION! May be harmful if swallowed. Avoid ingestion or contact with skin, eyes, or clothing. Do not pipet by mouth. If ingested, do not induce vomiting. Dilute with water or milk and call a physician. Wash areas of contact with plenty of water for 15 minutes. For eyes, get medical attention. EYE CONTACT: May cause irritation, redness, pain, and tearing. SKIN CONTACT: May cause irritation, redness, and pain. CHRONIC EFFECTS / CARCINOGENICITY: Chronic ingestion of small amounts may cause hypocalcemic tetany (calcium deficiency in blood), urinary calculi (hardening of mineral salts around organic material found in the urinary tract).

4.3. Immediate Medical Attention or Special Treatment Needed

Immediately call a poison center or doctor. Irrigate immediately with large quantity of water for at least 15 minutes. Call a physician if irritation develops. Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen. Flush with plenty of water for at least 15 minutes. Call a physician if irritation develops. Dilute with water or milk. Do not induce vomiting. Call a physician if necessary.

SECTION 5: Fire-Fighting Measures

5.1. Extinguishing Media

Use any means suitable for extinguishing surrounding fire.

5.2. Specific Hazards Arising from the Substance or Mixture in a Fire

Not considered to be a fire or explosion hazard.

5.3. Special Protective Equipment and Precautions for Firefighters

Use protective clothing and breathing equipment appropriate for the surrounding fire.

SECTION 6: Accidental Release Measures

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

Wear protective gloves and eye protection.

6.2. Cleanup and Containment Methods and Materials

Cover the spill with Sodium Carbonate or a soda ash-slaked lime mixture (50:50). Scoop up, mix and add water, then neutralize if necessary. Pour the resulting liquid down the drain with excess water. Treat the solid residue as normal refuse. Always dispose of in accordance with local regulations.

SECTION 7: Handling and Storage

7.1. Precautions for Safe Handling and Storage Conditions

As with all chemicals, wash hands thoroughly after handling. Avoid contact with eyes and skin. Protect from freezing and physical damage. Store at controlled room temperature, 15 - 30oC.

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SECTION 8: Exposure Controls / Personal Protection

8.1. Exposure Limits

U.S. OSHA - Permissible Exposure Limits (PEL) - Time Weighted Averages (TWA)

Chemical Name	CAS Number	Exposure Limit
Oxalic Acid Dihydrate	6153-56-6	"1 mg/m ³ TWA" As Oxalic acid [144-62-7]
Acetic Acid	64-19-7	10 ppm TWA; 25 mg/m ³ TWA

U.S. OSHA - Permissible Exposure Limits (PEL) - Ceiling Limits

No limits found.

U.S. OSHA - Permissible Exposure Limits (PEL) - Short Term Exposure Limits (STEL)

No limits found.

U.S. OSHA - Specifically Regulated Chemicals

No limits found.

ACGIH - Threshold Limit Values - Ceilings (TLV-C)

No limits found.

ACGIH - Threshold Limit Values - Short Term Exposure Limits (TLV-STEL)

Chemical Name	CAS Number	Exposure Limit
Oxalic Acid Dihydrate	6153-56-6	2 mg/m ³ STEL
Acetic Acid	64-19-7	15 ppm STEL

ACGIH - Threshold Limit Values - Time Weighted Averages (TLV-TWA)

Chemical Name	CAS Number	Exposure Limit
Oxalic Acid Dihydrate	6153-56-6	1 mg/m ³ TWA
Acetic Acid	64-19-7	10 ppm TWA

8.2. Engineering Controls

No specific controls are needed. Normal room ventilation is adequate.

8.3. Individual Protective Measures and Personal Protective Equipment

Respiratory Protection: Normal room ventilation is adequate.

Skin Protection: Chemical resistant gloves.

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Eye Protection: Safety glasses or goggles.

SECTION 9: Physical and Chemical Properties

9.1. Basic Physical and Chemical Properties

Physical State:	liquid
Color:	Colorless
Odor:	Data not available.
Odor Threshold:	Data not available.
Melting/Freezing Point:	Approximately 0°C
Boiling Point/Range:	Approximately 100°C
Flammability:	Data not available.
Flammability/Explosive Limits:	Data not available.
Flash Point:	Not flammable
Auto-Ignition Temperature:	Data not available.
Decomposition Temperature:	Data not available.
pH:	Data not available.
Kinematic Viscosity:	Data not available.
Solubility:	miscible
Vapor Pressure:	Data not available.
Evaporation Rate:	Data not available.
Relative Density:	1.03
Relative Vapor Density:	Data not available.
Particle Characteristics:	Data not available.
Partition Coefficient n-octanol/water, log	Data not available.

SECTION 10: Stability and Reactivity

10.1. Reactivity and Chemical Stability

Stable under normal conditions of use and storage.

10.2. Possibility of Hazardous Reactions

Data not available.

10.3. Conditions to Avoid and Incompatible Materials

Strong bases, strong Oxidizers, Silver, Silver compounds, Chromic Acid.

10.4. Hazardous Decomposition Products

Will not occur.

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SECTION 11: Toxicological Information

11.1. Information on Toxicological Effects

Acute Toxicity - Oral Exposure:

Not acutely toxic.

Chemical Name	CAS Number	Toxicity
Oxalic Acid Dihydrate	6153-56-6	Oral LD50 Rat 375 mg/kg (Source: NZ_CCID)
Acetic Acid	64-19-7	Oral LD50 Rat 3530 mg/kg (Source: Canada_HSA)

Acute Toxicity - Dermal Exposure:

No information found.

Chemical Name	CAS Number	Toxicity
Oxalic Acid Dihydrate	6153-56-6	Dermal LD50 >2000 mg/kg (Source: ECHA)

Acute Toxicity - Inhalation Exposure:

Inhalation acute toxicity estimate (ATE, vapor): 240.7932 mg/L, 4 h(calculated)

Chemical Name	CAS Number	Toxicity
Acetic Acid	64-19-7	Inhalation LC50 Rat > 8.5 mg/L 4 h (Source: Canada_HSA)

11.2 Carcinogenicity:

International Agency for Research on Cancer (IARC)

Chemical Name	CAS Number	Classification
No data found.		

National Toxicology Program (NTP)

Chemical Name	CAS Number	Classification
No data found.		

U.S. OSHA specifically regulated carcinogens

Chemical Name	CAS Number	Classification
No data found.		



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11.3 Additional Toxicology Information:

Causes skin irritation. Causes serious eye damage.

SECTION 12: Ecological Information

12.1. Ecotoxicity

Chemical Name	CAS Number	Species	Exposure	Toxicity
Acetic Acid	64-19-7	Freshwater Fish	Acute	LC50 96 h Pimephales promelas 79 mg/L [static] (EPA); LC50 96 h Lepomis macrochirus 75 mg/L [static] (EPA)
Oxalic Acid Dihydrate	6153-56-6	Water Flea	Acute	"EC50 48 h Daphnia magna 125 - 150 mg/L [Static] (EPA)" As Oxalic acid [144-62-7]
Acetic Acid	64-19-7	Water Flea	Acute	EC50 48 h Daphnia magna 65 mg/L [Static] (EPA)

12.2. Persistence and Degradability

Data not available.

12.3. Bioaccumulative Potential

Data not available.

12.4. Mobility in soil

Data not available.

12.5. Other Adverse Ecological Effects

Data not available.

SECTION 13: Disposal Considerations

13.1. Waste Treatment Methods

Data not available.

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SECTION 14: Transportation Information

14.1 Transportation by Land - Department of Transportation (DOT, United States of America)

Not regulated according to DOT regulations.

14.2 Transportation by Air - International Air Transport Association (IATA)

Not regulated according to IATA Dangerous Goods Regulations.

14.3 Transportation of Dangerous Goods (TDG, Canada)

Not regulated according to TDG regulations.

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SECTION 15: Regulatory Information

15.01. Occupational Safety and Health Administration (OSHA) Hazards

Chemical Name	CAS Number	Regulatory Information
No data found.		

15.02. Superfund Amendments and Reauthorization Act (SARA) 302 Extremely Hazardous Substances

Chemical Name	CAS Number	RQ
No data found.		

15.03. Superfund Amendments and Reauthorization Act (SARA) 311/312 Hazardous Chemicals

Chemical Name	CAS Number	Regulatory Information
Ammonium Oxalate	6009-70-7	5000 lb final RQ (listed under Ammonium oxalate); 2270 kg final RQ (listed under Ammonium oxalate)
Acetic Acid	64-19-7	5000 lb final RQ; 2270 kg final RQ

15.04. Superfund Amendments and Reauthorization Act (SARA) 313 Toxics Release Inventory (TRI)

Chemical Name	CAS Number	List
No data found.		

15.05. Massachusetts Right-to-Know Substance List

Chemical Name	CAS Number	Regulatory Information
Ammonium Oxalate	6009-70-7	Present
Oxalic Acid Dihydrate	6153-56-6	"Present" As Oxalic acid [144-62-7]
Acetic Acid	64-19-7	Present (including glacial)

15.06. Pennsylvania Right-to-Know Hazardous Substances

Chemical Name	CAS Number	Regulatory Information
Ammonium Oxalate	6009-70-7	Environmental hazard
Oxalic Acid Dihydrate	6153-56-6	Present
Acetic Acid	64-19-7	Environmental hazard; Environmental hazard (water solutions)

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15.07. New Jersey Worker and Community Right-to-Know Components

Chemical Name	CAS Number	Regulatory Information
Ammonium Oxalate	6009-70-7	"sn 0108" As Ammonium oxalate [1113-38-8]
Oxalic Acid Dihydrate	6153-56-6	"sn 1445" As Oxalic acid [144-62-7]
Acetic Acid	64-19-7	sn 0004

15.08. California Proposition 65

Chemical Name	CAS Number	Regulatory Information
No data found.		

15.09. Canada Domestic Substances List / Non-Domestic Substances List (DSL/NDSL)

Chemical Name	CAS Number	List	Status
Ammonium Oxalate	6009-70-7	DSL	"Present" As Ethanedioic acid, diammonium salt [1113-38-8]
Oxalic Acid Dihydrate	6153-56-6	DSL	"Present" As Oxalic acid [144-62-7]
Acetic Acid	64-19-7	DSL	Present
Acetic Acid	64-19-7	NDSL	"Present" As Carboxylic acids, C1-5 [68937-68-8]
Water	7732-18-5	DSL	Present

15.10. United States of America Toxic Substances Control Act (TSCA) List

Chemical Name	CAS Number	Status
Ammonium Oxalate	6009-70-7	"Present (ACTIVE)" As Ethanedioic acid, ammonium salt (1:2) [1113-38-8]
Oxalic Acid Dihydrate	6153-56-6	"Present (ACTIVE)" As Ethanedioic acid [144-62-7]
Acetic Acid	64-19-7	Present (ACTIVE)
Water	7732-18-5	Present [XU] (ACTIVE)

15.11. European Inventory of Existing Commercial Chemical Substances (EINECS), European List of Notified Chemical Substances (ELINCS), and No Longer Polymers (NLP)

Chemical Name	CAS Number	List	Number
Ammonium Oxalate	6009-70-7	EINECS	"214-202-3" As Diammonium oxalate [1113-38-8]
Oxalic Acid Dihydrate	6153-56-6	EINECS	"205-634-3" As Oxalic acid [144-62-7]
Acetic Acid	64-19-7	EINECS	200-580-7
Water	7732-18-5	EINECS	231-791-2

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15.12. China - Inventory of Existing chemical Substances (IECSC)

Chemical Name	CAS Number	Status
Ammonium Oxalate	6009-70-7	Present [38008]
Oxalic Acid Dihydrate	6153-56-6	Present [11068]
Acetic Acid	64-19-7	Present [39068]
Water	7732-18-5	Present [32224]

15.13. Korea - Existing Chemicals Inventory (KECI/KECL)

Chemical Name	CAS Number	List	Status
Ammonium Oxalate	6009-70-7	Annex 1	"Present [KE-13156]" As Ethanedioic acid, diammonium salt [1113-38-8]
Oxalic Acid Dihydrate	6153-56-6	Annex 1	"Present [KE-13152]" As Oxalic acid [144-62-7]
Acetic Acid	64-19-7	Annex 1	Present [KE-00013]
Water	7732-18-5	Annex 1	Present [KE-35400]

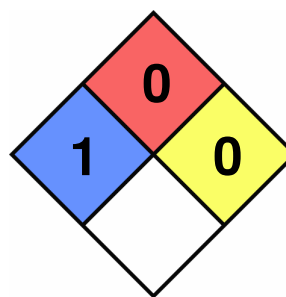
15.14. Japan - Existing and New Chemical Substances Inventory (ENCS)

Chemical Name	CAS Number	MITI No.
Ammonium Oxalate	6009-70-7	(1)-391, (2)-844 (not considered as a new chemical substance)
Oxalic Acid Dihydrate	6153-56-6	(2)-844
Acetic Acid	64-19-7	(2)-688
Water	7732-18-5	- (listed on Japanese Pharmacopoeia 8th Edition)

SECTION 16: Other Information

16.1 National Fire Protection Associate (NFPA) Rating

Health: 1
Flammability: 0
Reactivity: 0
Special Hazard:





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16.2 Document Revision

Last Revision Date:

2026-05-23

DISCLAIMER

When handled properly by qualified personnel, the product described herein does not present a significant health or safety hazard. Alteration of its characteristics by concentration, evaporation, addition of other substances, or other means may present hazards not specifically addressed herein and which must be evaluated by the user. The information furnished herein is believed to be accurate and represents the best data currently available to us. No warranty, expressed or implied, is made and RICCA CHEMICAL COMPANY assumes no legal responsibility or liability whatsoever resulting from its use.