



## Material Safety Data Sheet

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Oxalic Acid solution, 4% W/V

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### 1. Product Identification

**Synonyms:** CA-6 Analyzer Silica Reagent #2

**CAS No.:** Not applicable to mixtures.

**Molecular Weight:** Not applicable to mixtures.

**Chemical Formula:** Not applicable to mixtures.

**Product Codes:**

ECD P/N 2010012-1

**Manufacture By:**

Electro-Chemical Devices, Inc.

1681 Kettering

Irvine, CA 92614

**Phone:** (800) 729-1333

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### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Oxalic Acid, dihydrate	6153-56-6	4%	No
Water	7732-18-5	to 100%	No

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### 3. Hazards Identification

**Emergency Overview**

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**Caution!**

Corrosive, Causes eye



Dilute concentrations produce epithelial damage with prompt recovery. Higher concentrations cause corrosive corneal damage.

**Skin Contact:**

Corrosive action can lead to ulceration, pain, burning, soreness, blue discoloration, gangrene.

**Ingestion:**

5 grams has been fatal, 15-30g considered lethal. Irritation, corrosion or mouth, throat or stomach pain, vomiting followed by muscular tremors, convulsions and weak pulse. Collapse and death can occur; after apparent recovery, acute kidney failure may occur (renal tubules blocked by calcium oxalate formation).

**Inhalation:**

Mucous membrane irritation, acute exposure can lead to pulmonary edema.

**Chronic Exposure:**

May cause conjunctivitis. Poisoning symptoms include chronic upper respiratory tract inflammation, epistaxis, and kidney impairment. Skin may be discolored blue, fingernail color change, gangrene can occur.

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## 4. First Aid Measures

**Eyes:**

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids until no evidence of chemical remains. Get medical aid at once.

**Skin:**

Get medical aid. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Remove contaminated clothing and shoes.

**Ingestion:**

Do NOT induce vomiting. Get medical aid at once. Give conscious non-convulsive victim a dilute solution of calcium USP or calcium gluconate USP, or milk.

**Inhalation:**

Give artificial respiration if necessary. Get medical aid. Keep victim warm, at rest. Move victim to fresh air.



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## 5. Fire Fighting Measures

### General Information:

Move container if possible and avoid breathing vapors or dust. Avoid breathing fumes or dusts. Forms explosive salts with silver compounds, reacts explosively with chlorites, hypochlorites.

### Extinguishing Media:

For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.

### Auto ignition Temperature:

No information found.

### Flash Point:

No information found.

### NFPA Rating:

CAS# 7732-18-5: Not published.

CAS# 6153-56-6: Not published.

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## 6. Accidental Release Measures

### General Information:

Use proper personal protective equipment as indicated in Section 8.

### Spills/Leaks:

Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Label "CORROSIVE-\*POISON\*", hold for later disposal.

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## 7. Handling and Storage

**Handling:** Wash thoroughly after handling. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Use with adequate ventilation.

**Storage:** Store in labeled non-reactive containers (glass, plastic) protected from heat and incompatible substances.

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## 8. Exposure Controls/Personal Protection

**Engineering Controls:** Provide local exhaust or general dilution ventilation.



## Exposure Limits

### Chemical Name:

**ACGIH Water** None of the components are on this list.

**Oxalic acid, dihydrate** None of the components are on this list.

**NIOSH Water** None of the components are on this list.

**Oxalic acid, dihydrate** None of the components are on this list.

**OSHA Water** None of the components are on this list.

**Oxalic acid, dihydrate** None of the components are on this list.

### OSHA Vacated PELs

## Personal Protective Equipment

### Eyes:

Do not wear contact lenses when working with chemicals. An eye wash fountain should be available in the immediate work area. Wear splash-proof safety goggles.

### Skin:

Wear neoprene, natural Nitrile rubber, or PVC gloves.

### Clothing:

Wear appropriate protective clothing to prevent skin exposure.

### Respirators:

Not required for normal use. Self contained breathing apparatus with full face piece. Exposure limit to 50mg/m<sup>3</sup>-supplied air respirator with full face piece, helmet, or hood. Above 50ppm operate equipment in positive pressure, pressure demand, or continuous flow mode.

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## 9. Physical and Chemical Properties

### Appearance:

Clear, colorless liquid.

### Odor:

Odorless.

### Solubility:

Complete (100%)

### Specific Gravity:

No information found.

### pH:

Acidic, pH < 1

### % Volatiles by volume @ 21C (70F):

ca. 99

### Boiling Point:

No information found.

### Melting Point:

No information found.

### Vapor Density (Air=1):



Not applicable.

**Vapor Pressure (mm Hg):**

Not applicable.

**Evaporation Rate (BuAc=1):**

No information found.

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## 10. Stability and Reactivity

**Chemical Stability:**

Stable under normal temperatures and pressures.

**Conditions to Avoid:**

Incompatible materials.

**Incompatibilities with Other Materials**

Strong oxidizing agents, bases, silver compounds (forms silver ozolates), chlorites, hypochlorites.

**Hazardous Decomposition Products**

Carbon monoxide, formic acid, dry crystals decompose at sublimation point (149-160F).

**Hazardous Polymerization**

Has not been reported

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## 11. Toxicological Information

**RTECS:**

CAS# 7732-18-5: ZC0110000.

CAS# 6153-56-6 unlisted.

**LD50/LC50:**

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.

CAS# 6153-56-6:

No information found.

**Carcinogenicity:**

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.



CAS# 6153-56-6: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

#### **Epidemiology:**

Oxalic acid is a severe eye, mucous membrane, skin irritant. It is a convulsant neurotoxin, nephrotoxic. Increased risk to persons with kidney, respiratory, skin disease and convulsive disorders.

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## **12. Ecological Information**

#### **Environmental Fate:**

No information found.

#### **Environmental Toxicity:**

No information found.

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## **13. Disposal Considerations**

Dilute with water and flush to sewer if local ordinances allow, otherwise, whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility.

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.

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## **14. Transport Information**

#### **US DOT**

**Shipping Name: Corrosive Liquid Acidic, Organic, n.o.s. (Oxalic Acid)**

**Hazard Class: 8**

**UN Number: UN 3265,**

**Packing Group: PG III**

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## **15. Regulatory Information**

#### **US Federal**

#### **TSCA**

CAS# 7732-18-5 is listed on the TSCA Inventory.



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CAS# 6153-56-6 is not on the TSCA Inventory, however, its anhydrous form is on the inventory and so this hydrate is exempt from TSCA Inventory requirements (40CFR270.3(u)(2)).

### SARA Reportable Quantities (RQ)

None of the components are on this list.

### CERCLA/SARA Section 313

None of the components are on this list.

### OSHA - Highly Hazardous

None of the components are on this list.

### US State

#### State Right to Know

Oxalic acid, dihydrate can be found on the following state Right-to-Know lists: Pennsylvania.

#### California Regulations

#### European/International Regulations

#### Canadian DSL/NDSL

CAS# 7732-18-5 is listed on Canada's DSL List.

#### Canada Ingredient Disclosure List

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

CAS# 6153-56-6 is not listed on Canada's Ingredient Disclosure List.

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## 16. Other Information

**NFPA Ratings:** Health: **3** Flammability: **0** Reactivity: **0**

#### Label Hazard Warning:

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

#### Label Precautions:

None.

#### Label First Aid:

Not applicable.

#### Product Use:

Laboratory Reagent.

#### Revision Information:

MSDS-2010012-1 rev.B Feb. 2013

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