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## OXALIC ACID DIHYDRATE

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### Company Information

**Company's Name:** REAGENTS

**Company's Address:** P.O. Box 240746, Charlotte, NC 28224; USA

**Company's Info Ph #:** 704/554-7474, 800/732-8484

**Emergencies, call CHEMTREC:** 800-424-9300

**Date MSDS Prepared/Revised/Reviewed:** 17 April 2011

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### 1. Product Identification

**Synonyms:** Ethanedioic acid, dihydrate; oxalic acid dihydrate

**CAS No.:** 6153-56-6 (Dihydrate); 144-62-7 (Anhydrous)

**Chemical Formula:** C<sub>2</sub>H<sub>2</sub>O<sub>4</sub>·2H<sub>2</sub>O

**Molecular Weight:** 126.07

**Product Codes:** 1-11050, 2-11050

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### 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	EC No.	Index Number
Oxalic Acid Dihydrate	6153-56-6	100%	205-634-3	607-006-00-8

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### 3. Hazards Identification

**Emergency Overview:** May be fatal if swallowed. Corrosive. Causes severe irritation and burns to skin, eyes and respiratory tract. Harmful if inhaled or absorbed through skin. May cause kidney damage.

**OSHA Hazard:** Irritant, Target Organ Effect, Teratogen

**Target Organs:** Kidneys, Blood, Eyes, Nerves

**HMIS Classification**

**Health Hazard:** 2

**Chronic Health Hazard:** \*

**Flammability:** 0

**Physical hazards:** 0

**NFPA Rating**

**Health Hazard:** 2

**Fire:** 0

**Reactivity Hazard:** 0

**Lab Protective Equip:** Goggles, Gloves, Dust Mask/Respirator **Storage Color Code:** Blue (health)

**Potential Health Effects:** Oxalic acid is corrosive to tissue. When ingested, oxalic acid removes calcium from the blood. Kidney damage can be expected as the calcium is removed from the blood in the form of calcium oxalate. The calcium oxalate then obstructs the kidney tubules.

**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.

**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.

**Chronic Exposure:** May cause inflammation of the upper respiratory tract. Prolonged skin contact can cause dermatitis, cyanosis of the fingers and possible ulceration. May affect kidneys.

**Aggravation of Pre-existing Conditions:** Persons with pre-existing skin disorders or eye problems, or impaired kidney or respiratory function may be more susceptible to the effects of the substance.

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### 4. First Aid Measures

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:** Give water if conscious but do not induce vomiting. Get medical attention.

**Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately

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## 5. Fire Fighting Measures

**Fire:** Not considered to be a fire hazard.

**Explosion:** Reacts explosively with strong oxidizing materials and some silver compounds.

**Fire Extinguishing Media:** Use any means suitable for surrounding fire.

**Special Information:** In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full-facepiece operated in the pressure demand or other positive pressure mode.

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## 6. Accidental Release Measures

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

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## 7. Handling and Storage

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.

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## 8. Exposure Controls/Personal Protection

**Airborne Exposure Limits:** -ACGIH Threshold Limit Value (TLV) : 1 mg/m<sup>3</sup> (TWA), 2 mg/m<sup>3</sup> (STEL)

-OSHA Permissible Exposure Limit (PEL): 1 mg/m<sup>3</sup>

**Ventilation System:** A system of local and/or general exhaust is recommended to keep employee exposures below limits.

**Personal Respirators (NIOSH-Approved):** Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

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

**Eye Protection:** Use chemical safety goggles and/or a full-face shield where dusting/splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

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## 9. Physical and Chemical Properties

**Appearance:** Transparent, colorless crystals.

**Solubility:** ca. 1g/7mL of water.

**pH:** No information found.

**Boiling Point:** 149 - 160C (300 - 320F) Sublimes.

**Vapor Density (Air=1):** 4.4

**Evaporation Rate (BuAc=1):** No information found

**Odor:** Odorless.

**Specific Gravity:** 1.65 @ 18.5C/4C

**% Volatiles by volume @ 21C (70F):** 0

**Melting Point:** 101.5C (216F)

**Vapor Pressure (mm Hg):** < 0.001 @ 20C (68F)

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## 10. Stability and Reactivity

**Stability:** Stable under ordinary conditions of use and storage. Heat can create instability.

**Hazardous Decomposition Products:** Carbon oxides, formic acid.

**Hazardous Polymerization:** Will not occur.

**Incompatibilities:** Alkalis, chlorites, hypochlorites, oxidizing agents, furfuryl alcohol and silver compounds.

**Conditions to Avoid:** Heat, ignition sources and incompatibles.

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## 11. Toxicological Information

Oral rat LD<sub>50</sub>: 7500 mg/kg; irritation skin rabbit: 500 mg/24H mild; eye rabbit 250 ug/24H severe; investigated as a reproductive effector. Risk of congenital malformation in the fetus. 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, OSHA, ACGIH or IARC.

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## 12. Ecological Information

**Environmental Fate:** No information found.

**Environmental Toxicity:** LC<sub>50</sub> *Leuciscus idus* (golden orfe): 160 mg/L/48 hr; EC<sub>50</sub> *Daphnia magna* (Water flea): 137 mg/L/ 48 hr.

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## 13. Disposal Considerations

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.

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## 14. Transport Information

**Proper Shipping Name:** CORROSIVE SOLID, ACIDIC, ORGANIC N.O.S. (OXALIC ACID)

**Hazard Class:** 8

**UN/NA:** UN3261

**Packing Group:** III

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## 15. Regulatory Information

**TSCA:** Listed (as the anhydrous form, CAS No. 144-62-7).

**SARA 302 Components:** None.

**SARA 313 Components:** None.

**SARA 311/312 Hazards:** Acute Health Hazard, Chronic Health Hazard

**CERCLA Hazardous Substance:** None

**Clean Air Act:** This material does not contain any hazardous air pollutants. This material does not contain any Class 1 or Class 2 Ozone depleters.

**Clean Water Act:** This material does not contain any Priority Pollutants.

**Massachusetts Right To Know Components:** Oxalic acid dihydrate, CAS-No.6153-56-6.

**Pennsylvania Right To Know Components:** Oxalic acid dihydrate, CAS-No.6153-56-6.

**New Jersey Right To Know Components:** Oxalic acid dihydrate, CAS-No.6153-56-6.

**California Prop. 65 Components:** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**DSL Status:** This material is on the Canadian DSL list as the anhydrous form (CAS-No. 144-62-7).

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## 16. Other Information

**Product Use:** Laboratory Reagent.

**Disclaimer:**

**Reagents, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.**

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