# Safety Data Sheet

## 1. IDENTIFICATION

**Product Identifier:** **Oxalic Acid, Dihydrate**

**Product Code(s):** NC-0676, NC-6907, O1002

**Synonyms:** Ethanedioic Acid, Dihydrate

**Recommended Use:** For manufacturing, industrial, and laboratory use only. Use for neutralization of basic systems, as a catalyst, or as a laboratory solute.

**Uses Advised Against:** Not for food, drug, or household use.

**Supplier:** The Science Company
7625 W Hampden Ave #14 Lakewood CO 80227
Phone: (303) 777-3777 Fax: (303) 777-3331

**Emergency Phone Number:** (800) 255-3924 (CHEM-TEL)

## 2. HAZARDS IDENTIFICATION

**Hazard Classifications:**

| | |
|---|---|
| Acute Toxicity – Oral: | Category 4 |
| Skin Corrosion/Irritation: | Category 1A |
| Serious Eye Damage/Eye Irritation: | Category 1 |

**Signal Word:** DANGER

**Hazard Statements:** Harmful if swallowed.
Causes severe skin burns and serious eye damage.

**Pictograms:**

**Precautionary Statements:**

**Prevention:** Wash thoroughly after handling.
Do not eat, drink, or smoke when using this product.
Do not breathe dusts.
Wear protective gloves, protective clothing, eye protection, and face protection.

**Response:** Immediately call a poison center or doctor.
If swallowed: Rinse mouth. Do NOT induce vomiting.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Wash contaminated clothing before reuse.
If inhaled: Remove person to fresh air and keep comfortable for breathing.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Storage:** Store locked up.

**Disposal:** Dispose of contents and container in accordance with local, regional, national, and international regulations.

**Hazards Not Otherwise Classified:** Not applicable.

**Toxicity Statement:** Not applicable.

## 3. COMPOSITION AND INFORMATION ON INGREDIENTS

| Component | Common Name / Synonyms | CAS# | Chemical Formula | % by Weight |
|---|---|---|---|---|
| Oxalic Acid, Dihydrate | Ethanedioic Acid, Dihydrate | 6153-56-6 | $C_2H_2O_4 \cdot 2H_2O$ | 99.5 – 102.5 |

**Trade Secret Statement:** Not applicable.

## 4. FIRST AID MEASURES

**First Aid Procedures:**

**Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Immediately call a poison center or doctor.

**Ingestion:** Do not induce vomiting unless directed to do so by medical personnel. Rinse mouth with water. If vomiting occurs, keep head low so that vomit does not enter lungs. Never give anything by mouth to an unconscious person. Immediately call a poison center or doctor.

**Skin Contact:** Remove contaminated clothing and shoes immediately. Wash skin with plenty of water for at least 15 minutes. Wash clothing before reuse. Immediately call a poison center or doctor.

**Eye Contact:** Check for and remove contact lenses, if present and easy to do. Immediately flush eyes with gentle but large stream of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Immediately call a poison center or doctor.

**General Advice:** Poison information centers in each state can provide additional assistance for scheduled poisons. Ensure that those providing first aid and medical personnel are aware of the material(s) involved and take precautions to protect themselves.

**Symptoms and Effects:** Irritation, burning, nausea, vomiting, diarrhea, coughing, wheezing. May be harmful if swallowed or absorbed through the skin. Causes damage to the eyes. May cause irritation or burns to the skin, gastrointestinal tract, and respiratory tract. May affect the stomach and cardiovascular system. Prolonged or repeated exposure may affect kidneys; may cause reproductive effects.

**Immediate Medical Care/ Special Treatment:** Get medical attention if you feel unwell or are concerned. Treat symptomatically.

## 5. FIREFIGHTING MEASURES

**Suitable Extinguishing Media:** Water spray, dry powder, alcohol resistant foam, carbon dioxide.

**Unsuitable Extinguishing Media:** Do not use a solid (straight) water stream, as it may scatter and spread fire.

**Hazardous Combustion Products:** Carbon oxides, hydrogen.

**Specific Hazards:** Corrosive. Excessive thermal conditions may cause decomposition and yield carbon oxides. Contact with metals may yield hazardous concentrations of hydrogen gas.

**Special Protective Equipment/ Precautions for Firefighters:** As in any fire, wear MSHA/NIOSH-approved (or equivalent), self-contained, positive-pressure or pressure-demand breathing apparatus and full protective gear.

## 6. ACCIDENTAL RELEASE MEASURES

**Personal Precautions and Protective Equipment:** Isolate hazard area and keep unnecessary and unprotected personnel away from the area of the leak or spill. Keep upwind. Wear appropriate personal protective equipment (see Section 8). Avoid contact with eyes, skin, and clothing.

**Emergency Procedures:** In case of chemical emergency, or if unsure how to address an accidental release, consult a professional (see Section 1).

**Methods for Containment:** Stop the flow of material, if this is without risk. Prevent entry into waterways, sewer, basements, or confined areas. Dike the spilled material, where this is possible. Product should not be released to the environment. Contain and recover solid when possible.

**Methods for Cleanup:** Sweep up and collect spill and place in a non-combustible container for reclamation or disposal. Do not flush to sewer. Clean contaminated surface thoroughly. Residues from spills can be diluted with water. Never return spills in original containers for reuse. Clean up in accordance with all applicable regulations.

## 7. HANDLING AND STORAGE

**Handling:** Wear personal protective equipment (see Section 8). Provide sufficient air exchange and/or exhaust in work rooms. Avoid contact with skin, eyes, and clothing. Limit exposure to moisture. Avoid generation of product dust. Do not ingest. When using, do not eat, drink, or smoke. Keep away from incompatible materials (see Section 10). Handle in accordance with good industrial hygiene and safety practice. Wash thoroughly after handling. Containers of this material may be hazardous when empty, as they retain product residues. Observe all warnings and precautions listed for this product. As with all acids, never add water directly to this product. Instead, add product to water to prevent violent eruption of the solution.

**Storage:** Store in a cool, dry, ventilated area. Store in a segregated and approved area away from heat and incompatible materials (see section 10). Store in original container. Do not store in metallic containers. Keep containers tightly closed and upright. Keep away from food, drink, and animal foodstuffs. Keep out of the reach of children. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of this product.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Exposure Limits:**

OSHA (PEL): 1 $mg/m^3$
ACGIH (TLV): 1 $mg/m^3$
ACGIH (STEL): 2 $mg/m^3$
NIOSH (REL): 1 $mg/m^3$

NIOSH (STEL): 2 mg/$m^3$

**Engineering Controls:** Ensure adequate ventilation. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Personal Protective Measures:**

**Eye/Face Protection:** Wear safety glasses with side shields or goggles. Maintain approved eye wash station and accessible rinse facilities in work area.

**Skin Protection:** Wear appropriate chemical resistant clothing (with long sleeves) and appropriate chemical resistant gloves.

**Respiratory Protection:** An air-purifying, NIOSH-approved respirator with appropriate cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Use a positive-pressure, air-supplied respirator if there is any potential for an uncontrolled release, if exposure levels are unknown, or if any other circumstances exist where air-purifying respirators may not provide adequate protection.

**Specific Requirements for Personal Protective Equipment:** Ensure that glove material is compatible with this product. This information is available from glove manufacturers. If respiratory protection is required, use full face protection as well.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

*Unless otherwise indicated, all properties are given at 25 °C and standard pressure.*

**Appearance:** White, translucent solid.

**Odor:** Odorless.

**Odor Threshold:** No information found.

**Formula Weight:** 126.06

**pH:** 1.0 (1 M aqueous)

**Melting/Freezing Point:** 101.5 °C

**Boiling Point/Range:** No information found.

**Decomposition Temperature:** No information found.

**Flash Point:** Not applicable.

**Auto-ignition Temperature:** Not applicable.

**Flammability:** Not flammable.

**Flammability/Explosive Limits:** Not applicable.

**Solubility:** 143 g/L aqueous; soluble in alcohol, glycerol, diethyl ether.

**Vapor Pressure:** < 0.01 mmHg at 20 °C

**Vapor Density:** 4.62 (Air = 1)

**Specific Gravity:** 1.65 (Water = 1)

**Evaporation Rate:** No information found.

**Viscosity:** No information found.

**Partition Coefficient (n-octanol/water):** - 0.81

## 10. STABILITY AND REACTIVITY

**Reactivity Data:** Corrosive. See Section 11.

**Chemical Stability:** Stable under normal conditions. Hygroscopic.

**Conditions to Avoid:** Excessive heat, moisture, incompatible materials.

**Incompatible Materials:** Strong bases, metals, acid chlorides.

**Hazardous Decomposition Products:** Carbon oxides, hydrogen.

**Possibility of Hazardous Reactions:** May react vigorously or violently with the incompatible materials listed above. Excessive thermal conditions may cause decomposition and yield carbon oxides. Contact with metals may yield hazardous concentrations of hydrogen gas.

**Hazardous Polymerization:** Will not occur.

## 11. TOXICOLOGICAL INFORMATION

**Routes of Exposure:** Inhalation, ingestion, skin contact, eye contact.

**Acute Effects:** Corrosive. May be harmful if swallowed or absorbed through the skin. Causes damage to the eyes. May cause irritation or burns to the skin, gastrointestinal tract, and respiratory tract. May affect the stomach and cardiovascular system.

**Chronic Effects:** Prolonged or repeated exposure may affect kidneys; may cause reproductive effects.

**Toxicological Data:** $LD_{50}$ Oral, Rat: 1080 mg/kg (estimated)
Corrosive to skin and eyes based on animal data.

**Symptoms of Exposure:** Irritation, burning, nausea, vomiting, diarrhea, coughing, wheezing.

**Carcinogenic Effects:** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicological Data:** $LC_{50}$, Bluegill (Lepomis macrochirus): 24 mg/L 96 h
$EC_{50}$, Water Flea (Daphnia magna): 137 mg/L 48 h

**Persistence and Degradability:** Readily biodegradable and unlikely to bioaccumulate.

**Environmental Effects:** Harmful to aquatic organisms. May adversely affect pH of aquatic ecosystems. Avoid exposure to the environment.

## 13. DISPOSAL INFORMATION

**Disposal Instructions:** All wastes must be handled in accordance with local, state, and federal regulations. Minimize exposure to product waste (see Section 8). Do not dispose unused waste down drains or into sewers.

**Contaminated Packaging:** Because emptied containers may retain product residue, follow label warnings even after container is emptied. Offer rinsed packaging material to local recycling facilities.

**Waste Codes:** No information found.

## 14. TRANSPORT INFORMATION

**DOT:**

**UN Number:** UN3261

**Proper Shipping Name:** Corrosive solid, acidic, organic, n.o.s. (Oxalic acid, dihydrate)

**Hazard Class:** 8

**Packing Group:** III

**ERG Number:** 154

**Environmental Hazard Regulations:** No information found.

**Other Transport Precautions:** No information found.

## 15. REGULATORY INFORMATION

**U.S. Federal Regulations**:

**OSHA:** This product is considered a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

**TSCA Inventory:** All components of this product are on the U.S. TSCA Inventory.

**U.S. EPCRA (SARA Title III):**

**Section 302:** No information found.

**Sections 311/312:**

| Hazard Category | List (Yes/No) |
|---|---|
| Section 311 – Hazardous Chemical | Yes |
| Immediate Hazard | Yes |
| Delayed Hazard | No |
| Fire Hazard | No |
| Pressure Hazard | No |
| Reactivity Hazard | No |

**Section 313:** No information found.

**CERCLA Reportable Quantities:** No information found.

**International Inventories:**

| Country or Region | Inventory Name | On Inventory (Yes/No)* |
|---|---|---|
| Australia | Australian Inventory of Chemical Substances (AICS) | Yes |
| Canada | Domestic Substances List (DSL) | Yes |
| Canada | Non-Domestic Substances List (NDSL) | No |
| China | Inventory of Existing Chemical Substances in China (IECSC) | Yes |
| Europe | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes |
| Europe | European List of Notified Chemical Substances (ELINCS) | No |
| Japan | Inventory of Existing and New Chemical Substances (ENCS) | Yes |
| Korea | Existing Chemicals List (ECL) | Yes |
| New Zealand | New Zealand Inventory | Yes |
| Philippines | Philippine Inventory of Chemicals and Chemical Substances (PICCS) | Yes |

*A "Yes" indicates that the listed component(s) of this product comply with the inventory requirements administered by the governing country(s).

## 16. OTHER INFORMATION

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