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Item#0395-2117

Oxalic Acid**Date Prepared:** 04/10/07

SECTION 1 PRODUCT IDENTIFICATION

Product Name: Oxalic Acid, Dihydrate**Common Synonyms:** Acide oxalique, Ethanedioic acid, Ethanedionic acid, Dicarboxylic acid**Emergency Telephone Numbers:**

Humco Holding Group 800-662-3435

Chemtrec 800-424-9300

Note: Emergency telephone numbers are to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to customer service.

SECTION 2 COMPONENTS

Components	CAS No.	Percent
Oxalic Acid, Dihydrate	6153-56-6	99 - 100

Component Information/Information on Non-Hazardous Components: This product meets the criteria for a hazardous material, as defined by 29 CFR 1910.1200.

SECTION 3 HAZARDS IDENTIFICATION

Emergency Overview: Product is a colorless, solid which comes in a transparent crystalline form. Poison, may be fatal if swallowed or inhaled. Contact may cause discoloration, irritation or burns of the skin. Severe eye irritant. Can produce irreversible eye damage after repeated contact. Large doses can cause irregular heartbeat and signs of heart failure. May cause kidney damage. Oxalic acid in solution is corrosive to metals. Toxic fumes of formic acid may be formed.

Label Information: Danger! May be fatal if swallowed. Causes eye and skin irritation or burns. Causes respiratory tract irritation. May cause kidney and brain damage. Do not get in eyes or on skin. Do not breathe dusts. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Keep away from food or feed. Do not eat, drink or smoke when handling.

Oxalic Acid

HAZARD RATING SYSTEMS

HMIS Ratings

		KEY	4 = Severe
Health	3		3 = Serious
Flammability	1		2 = Moderate
Reactivity	0		1 = Slight
			0 = None

NFPA Ratings

		KEY	4 = Severe
Health	2		3 = Serious
Flammability	1		2 = Moderate
Reactivity	0		1 = Slight
Other	0		0 = None

Potential Health Effects

Inhalation: Irritating to the nose and throat. May cause inflammation of the respiratory tract. Symptoms include sore throat, coughing, headache, nausea and difficult breathing.

Ingestion: Poison – may be fatal if swallowed. Concentrated material can burn mouth, throat and stomach. Vomiting may be experienced. Small doses may cause headache, pain, twitching muscles and cramps. Larger doses can cause irregular heartbeat, blood pressure drop, heart failure, shock, convulsions, coma and possibly death.

Skin Contact: Contact causes skin irritation. Substance is corrosive. May be harmful if absorbed through the skin. Excessive contact may produce pain and discoloration of the skin. Fingernails may become brittle and blue. May cause ulcers and gangrene.

Eye Contact: Substance causes substantial eye irritation. Injury may be permanent. Symptoms include redness, pain and damage to the cornea.

SECTION 4

FIRST AID MEASURES

Ingestion: Do not induce vomiting. Have victim rinse mouth with water and dilute contents of stomach by drinking water. If vomiting occurs, make victim lean forward to reduce chance of aspiration. Seek medical advice immediately.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If heart has stopped, give CPR. Avoid mouth-to-mouth contact if possible. Seek medical attention.

Skin Contact: Avoid any direct contact with this material. If contact should occur, immediately wash skin with plenty of soap and water while removing contaminated clothing and shoes. Get medical attention. Contaminated clothing should be discarded in a manner, which limits further exposure.

Eye Contact: Hold eyelids apart and flush eyes with plenty of water for 15 minutes. Get medical attention after flushing for 15 minutes.

Notes to Physician: Treat symptomatically.

Oxalic Acid

SECTION 5**FIRE FIGHTING MEASURES**

Flash Point: None

Autoignition Temperature: Not available.

Flammability Classification: Upper – Not available Lower – Not available

General Fire Hazards: Slight fire hazard. Dust-air mixtures may ignite with sufficient ignition source.

Hazardous Combustion Products: Carbon monoxide, carbon dioxide and formic acid. Fumes may be toxic and irritating.

Extinguishing Media: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

Special Firefighting Procedures: Wear adequate personal protective equipment. Use water spray to keep fire-exposed containers cool. Isolate hazard area.

Personal Protection: Chemical goggles, impervious gloves and apron.

SECTION 6**ACCIDENTAL RELEASE MEASURES**

Containment Procedures: Stop the flow of material, if this is without risk.

Clean-up Procedures: Vacuum up the spilled material. Do not allow the spilled product to enter public drainage system or open watercourses. Put material in suitable, covered labeled containers.

Evacuation Procedures: Keep unnecessary personnel away. Close off area.

Special Instructions: Wear adequate personal protective equipment. Avoid inhalation of dusts. Ventilate the area.

SECTION 7**HANDLING & STORAGE**

Procedures for Handling: Avoid generating mist or dust. Label containers and keep them tightly closed when empty or not in use. Empty containers retain product residue and can be dangerous.

Recommended Storage Methods: Store in a cool, dry, well-ventilated area away from heat and flame. Limit quantity of material in storage and restrict access to storage area. Keep away from food and drinking water.

Oxalic Acid

SECTION 8
EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

General Product Information: The dihydrate form of oxalic acid has no exposure limits listed, however; the anhydrous form has the following exposure guidelines:

OSHA: 1 mg/m³ TWA; 2 mg/m³ STEL

ACGIH: 1 mg/m³ TWA; 2 mg/m³ STEL

Component Exposure Limits: No ACGIH, NIOSH and OSHA exposure guidelines listed for this product's components.

Engineering Controls: Use local exhaust and process enclosure to control airborne dusts. Use a corrosion-resistant ventilation system and exhaust directly to the outside. Supply ample replacement air to make up for loss.

Personal Protective Equipment

Eye/Face: Chemical safety goggles and/or face shield.

Skin: Wear impervious gloves, boots and coveralls. Recommended gloves include natural rubber, neoprene and nitrile.

Respiratory: Up to 25 mg/m³ wear a powered air-purifying respirator with dust and mist filters or a supplied air respirator. Up to 50 mg/m³ wear a full face-piece respirator with filters. Up to 500 mg/m³ wear a positive pressure full face-piece supplied air respirator.

General: Do not eat, drink or smoke in work areas.

SECTION 9
PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Colorless, transparent.

Odor: Odorless

Physical State: Solid

pH: 1.3

Solubility: Soluble – 100 g/l of water

Specific Gravity: 1.65 (Water = 1)

Viscosity: Not available

% Volatiles: Not available

Boiling Point: 300 - 320°F (149 - 160°C)

Melting Point: 101.5°C (215°F)

Vapor Density (Air=1): NA

Evaporation Rate: Low

Vapor Pressure: < .001 mmHg @ 20°C

Freezing Point: Not available

Oxalic Acid

Softening Point: Not determined

Particle Size: Not available

Bulk Density: Not available.

Molecular Weight: 126.7

Additional Properties: The data provided in this section is to be used for product safety handling purposes. Please refer to Product Data Sheets, Certificates of Conformity or Certificates of Analysis for chemical and physical data for determinations of quality and for formulation purposes.

SECTION 10

STABILITY & REACTIVITY

Stability: Normally stable.

Conditions to Avoid: Avoid heating to melting point.

Incompatibles:

- Bases – vigorous reaction with heat and pressure produced.
- Oxidizing agents – may react violently or explosively
- Silver – may form explosive silver oxalate
- Alkali metals – may react violently and produce flammable hydrogen gas
- Iron & iron compounds – may react to form ferric oxalate
- Acid chlorides – may react vigorously and product toxic fumes.

Hazardous Decomposition Products: None reported.

Hazardous Polymerization: Will not occur.

SECTION 11

TOXICOLOGICAL INFORMATION

Acute Toxicity/Target Organ Information

General Product/Component Information: This product can cause kidney damage which can lead to kidney failure due to the deposition of calcium oxalate crystals.

Component LD50/LC50

Epidemiology: No information available

Carcinogenicity

General Product/Component Information: No information available.

Component Carcinogenicity Listings: None of this product's components are listed by ACGIH, IARC, NIOSH, NTP or OSHA.

Teratogenicity/Reproductive Effects: No information found.

Oxalic Acid

Neurotoxicity: Prolonged or repeated exposure may results in deposits of calcium oxalate in the kidney tubules and the brain, with effects on the cardiac and nervous tissues.

Mutagenicity: No information found.

Other Information: None

SECTION 12 **ECOLOGICAL INFORMATION**

Environmental Fate: No data available for this product.

Ecotoxicity: No data available for this product.

SECTION 13 **DISPOSAL CONSIDERATIONS**

US EPA Waste Number & Description

General Product Information: As shipped, not regulated as a hazardous waste.

Component Waste Numbers: No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions: Incinerate the material under controlled conditions in an approved incinerator. All wastes must be handled in accordance with local, state and federal regulations.

SECTION 14 **TRANSPORTATION DATA & ADDITIONAL INFORMATION**

DOT Information

Proper Shipping Name: Corrosive, solid, acidic, organic, NOS (Oxalic Acid)

Hazard Class: 8

Labels: Corrosive

UN/NA: UN3261

Packaging Group: III

Additional Shipping Information: NOTE: Current proper shipping name: Oxalates water soluble (Oxalic Acid), 6.1, UN2449, Valid until Oct. 1, 1995

International

IMO: Corrosive Solids, Acidic, Organic, NOS (Oxalic Acid, Dihydrate), 8, UN3261, III. Note: The data in this section (Section 14) is meant as a guide to the overall classification of the product. However, transportation classifications may be subject to change with changes in package size. Consult shipper requirements under IMO, ICAO (IATA) and 49 CFR to assure regulator compliance.

Oxalic Acid

SECTION 15
REGULATORY INFORMATION

US Federal Regulations

General Product Information: This product is listed on the US EPA TSCA Inventory

Component Information: None of this product's components are listed under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) or CERCLA (40 CFR 302.4)

State Regulations

General Product Information: No components require labeling under California Proposition 65.

Component Information: The following components appear on one or more of the following state hazardous substance lists:

Ingredient	CA	FL	MA	MN	NJ	PA
Oxalic Acid, Dihydrate (6153-56-6)	No	No	No	No	No	Yes

Other Regulations

General Product Information: No other information.

Component Information: None of this product's components are listed on the Canadian Controlled Product Ingredient Disclosure List.

SECTION 16
OTHER INFORMATION

Other Information: Reasonable care has been taken in preparation of this information, but Humco Holding Group, Inc. make no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. Humco Holding Group, Inc. makes no representations and assumes no liability for any direct, incidental, or consequential damages resulting from its use.