SAFETY DATA SHEET LIQUINOX COMPANY

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Identifier: **LIQUINOX Iron & Zinc**
Product Use: All Purpose Liquid Fertilizer
Manufacturer: **Liquinox Company**
Address: 221 West Meats Avenue, Orange, CA 92865 USA
Business Phone: 714-637-6300
Contact Person: Brannon Garner **Emergency Phone:** 714-325-8387
Website: http://liquinox.com/
Email: liquinox1@aol.com
Emergency Phone: 800-424-9300 / US: Chemtrec 24-hour Emergency Response
Emergency Phone: 800-222-1222 / National Poisons Emergency

SECTION 2: HAZARDS IDENTIFICATION

Physical Hazards: Not Classified.
Health Hazards: Skin Corrosion/Irritation. Category 1
Serious Eye Damage/Eye Irritation. Category 1
Environmental Hazards: Not Classified.
OSHA Defined Hazards: Not Classified.
Label Elements: (*insert 2 pictograms*)



Signal Word: Danger
Hazard Statement: Causes Skin Irritation. Causes Eye Irritation.

Precautionary Statement
Prevention: Wash thoroughly after handling. Wear protective gloves, protective clothing, eye protection, face protection. Do NOT breathe fume.

Response:
SWALLOWED: Rinse mouth with water. Do NOT induce vomiting. Call physician.
SKIN/HAIR CONTACT: Rinse well with water. Remove contaminated clothing and wash before reuse. Call physician or poison center.
EYE CONTACT: Rinse well with water for several minutes. Remove contact lenses, if present and easy to do. Continue to rinse with water. Call physician or poison center.
INHALED: Remove person to fresh air and keep comfortable for breathing.

Storage: Store locked up.

Hazards not otherwise Classified (HNOC): None known.
Supplemental Information: None.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	%
Iron Aqueous Solution	1336-21-6	0.1 2%
Derived from dissodium or diammonium iron, Ethylenediaminetetraacetic acid		
Zinc Aqueous solution	1336-21-6	0.1 2%
Derived from disodium diammonium zinc, Ethylenediaminetetraacetic acid		
Water	None	86%
Aqueous Yucca Extract Solution	None	10%

**Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.*

SECTION 4: FIRST AID MEASURES

INHALATION: Move to fresh air. Call a physician if symptoms develop or persist.
SKIN CONTACT: Rinse skin immediately with plenty of water/shower.
Remove all contaminated clothing immediately and wash before reuse.
Call a physician or poison control center immediately. Chemical burns must be treated by a physician.
EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes.
Remove contact lenses, if present and easy to do. Continue rinsing with water.
Call physician or poison control center immediately.
INGESTION: Rinse mouth with water. Do NOT induce vomiting. Call physician or poison control center immediately.
If vomiting does occur, keep head low so that stomach content doesn't get into lungs.

Most Important Symptoms, Effects, Acute and Delayed:
Symptoms may include burning pain, stinging, tearing, redness, swelling, and blurred vision. Rinse skin thoroughly.

Indication of Immediate Medical Attention, and Special Treatment Needed:
Provide general supportive measures and treat symptomatically. Chemical Burns: Flush with water immediately.
While flushing, remove clothes which do not adhere to affected area. Call an ambulance.
Continue flushing during transport to hospital. Keep victim under observation. Symptoms may be delayed.

General Information:
Ensure that medical personnel are aware of the materials involved, and take precautions to protect themselves.

SECTION 5: FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Water fog. Foam. Dry Chemical Powder. Carbon Dioxide (CO2).
Unsuitable Extinguishing Media: Do NOT use water jet as an extinguisher, as this will spread the fire.
Specific Hazards Arising from Chemical: During fire, gases hazardous to health may be formed.
Special Protective Equipment And Precautions for Fire Fighters:
Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire Fighting Equipment/Instructions: Move containers from fire area if you can do so without risk.
Specific Methods: Use standard firefighting procedures and consider the hazards of other involved materials.
General Fire Hazards: No unusual fire or explosion hazards noted.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment and Emergency Procedures:
Keep unnecessary personnel away. Keep people away from and upwind of spill/leak.
Wear appropriate protective equipment and clothing during clean-up. Do NOT breathe mist or vapor.
Do NOT touch damaged containers or spilled material unless wearing appropriate protective clothing.
Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.
For personal protection, see section 8 of the SDS. Not responsible for mishandling product.

Methods and Materials for Containment and Clean-Up:
This product is miscible in water. It should NOT be released into the environment.

Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible.
Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers following product recovery, flush area with water.

Small Spills: Wipe with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.
Never return spills to original containers for reuse.
For waste disposal, see section 13 of the SDS.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do NOT contaminate water.
Avoid discharge into drains, water courses or onto the ground.

SECTION 7: HANDLING AND STORAGE

Precautions for Safe Handling:

Do NOT breathe mist or vapor. Do NOT get in eyes, on skin, or on clothing. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.
Keep out of reach of children.

Conditions for Safe Storage, Including any Incompatibilities:

Read directions, close containers after using. Store in accordance with local regulations.
Store in original container protected from direct sunlight in a cool, dry and well-ventilated area, away from incompatible materials (see section 10), and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use.
Containers that have been opened must be carefully resealed and kept upright to prevent leakage.
Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Occupational Exposure Limits: None.

Appropriate Engineering Controls: If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental Exposure Controls: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

Individual Protection Measures

Hygiene Measures: A washing facility or water for eye and skin cleaning purposes should be present.

Eye/Face Protection: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead. Recommended: Wear safety glasses.

Skin Protection

Hand Protection: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Body Protection: Personal protective equipment for the body should be selected bases on the task being performed and the risks involved.

Other Skin Protection: Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory Protection: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State:	Liquid
Color:	Light to dark Brown
Odor:	Minimum Odor
Odor Threshold:	Avoid Breathing Fumes; possible irritation
pH:	0.7
Melting/Freezing Point:	F
Boiling/Condensation Point:	F
Sublimation Temperature:	

Flash Point:	N/A
Evaporation Rate:	(Butyl Acetate = 1); slower than either
Flammability:	
Lower and Upper Explosive (flammable) Limits:	
	Lower: Not Determined.
	Upper: Not Determined.
Vapor Pressure:	5.65 mmHg at 20`C
Vapor Density:	Heavier
Relative Density:	9.8lb/gal.
Solubility:	in H2O soluble
Solubility in Water:	Total.
Partition Coefficient:n-octanol/water:	Not Determined.
Auto-Ignition Temperature:	Not Available.
Decomposition Temperature:	Not Available.
Viscosity:	Not Available.
Other Information:	
Density:	0.28g/cm3 estimated.
Specific Gravity:	1.220

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Reacts violently with strong alkaline substances. This product may react with reducing agents.
Chemical Stability:	Material is stable under normal conditions.
Possibility of Hazardous Reactions:	No dangerous reaction known under conditions of normal use.
Conditions to Avoid:	Do NOT mix with other chemicals. Contact with incompatible materials.
Incompatible Materials:	Bases. Reducing agents.
Hazardous Decomposition Products:	No hazardous decomposition products are known.

SECTION 11: TOXICOLOGICAL INFORMATION

Routes of Exposure:

Inhalation: May cause irritation to the respiratory system. Prolonged inhalation may be harmful.
Skin Contact: Not Available.
Eye Contact: Not Available.
Ingestion: Causes digestive tract burns.

Symptoms Related to the Physical, Chemical and Toxicological Characteristics:

Symptoms may include stinging, tearing, redness, swelling and blurred vision. Skin irritation.

Information on Toxicological Effects

Acute Toxicity:

Components	Species	Test Results
Iron Aqueous Solution CAS#1336-21-6		
Derived from dissodium or diammonium iron, Ethylenediaminetetraacetic acid		
Acute		**N/A**
Zinc Aqueous solution CAS#1336-21-6		
Derived from disodium diammonium zinc, Ethylenediaminetetraacetic acid		
Acute		**N/A**

*Estimates for product may be bases on additional component data not shown.

Skin Corrosion/Irritation:	Not Available.
Serious Eye Damage/ Eye Irritation:	Not Available.
Respiratory Sensitization:	Not a respiratory sensitizer.
Skin Sensitization:	This product is not expected to cause skin sensitization.

Germ Cell Mutagenicity:	No data available to indicate product or any components present at great than 0.1% are mutagenic or genotoxic.
Carcinogenicity:	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not Listed.	
Reproductive Toxicity:	This product is not expected to cause reproductive or developmental effects.
Specific Target Organ Toxicity Single Exposure:	Not Classified.
Specific Target Organ Toxicity Repeated Exposure:	Not Classified.
Aspiration Hazard:	Not an aspiration hazard.
Chronic Effects:	Prolonged inhalation may be harmful.

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:

Because of the low pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems.

Components	Species	Test Results
Iron Aqueous Solution	1336-21-6	
Derived from dissodium or diammonium iron, Ethylenediaminetetraacetic acid		
Zinc Aqueous solution	1336-21-6	
Derived from disodium diammonium zinc, Ethylenediaminetetraacetic acid		
Water		
Aqueous Yucca Extract Solution		

**Estimates for product may be based on additional component data not shown.*

Persistence and Degradability:	No data available.
Bioaccumulative Potential:	No data available.
Mobility in Soil:	No data available.

Other Adverse Effects:

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do NOT allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local Disposal Regulations:	Dispose in accordance with all applicable regulations.
Hazardous Waste Code:	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from Residues / Unused Products:	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see disposal instructions).
Contaminated Packaging:	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

SECTION 14: TRANSPORT INFORMATION

DOT:	Not regulated as dangerous goods. Per packaging exceptions 173.154 8(A) inside containers 1.3 gallons or less DOT exempt. In containers greater than 1.3 gallons DOT proper shipping name: UN3264 Corrosive Liquid, acidic, inorganic, n.o.s., 8, III. Not regulated fertilizing compounds (manufactured fertilizers) NOI, Liquid, (NMFC 68140, Sub 6: Class: 70)
IATA:	
UN Number:	ID8000
UN Proper Shipping Name:	Consumer Commodity.
Transport Hazard Clases(es)	
Class:	9
Subsidiary Risk:	Not applicable.
Packaging Group:	Not applicable.
Environmental Hazards:	No.
ERG Code:	9L
Special Precautions for User:	Read safety instructions, SDS and emergency procedures before handling.
Other Information	
Passenger and Cargo Aircraft:	Allowed.
Cargo Aircraft Only:	Allowed.
IMDG	
UN Number:	ID8000
UN Proper Shipping Name:	Consumer commodity.
Transport Hazard Class(es)	
Class:	9
Subsidiary Risk:	Not applicable.
Label(s):	9
Packaging Group:	Not applicable.
Environmental Hazards	
Marine Pollutant:	No.
EmS:	Not available.
Special Precautions for User:	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 And IBC Code:	Not established.

IATA; IMDG



(insert pictogram)

SECTION 15: REGULATORY INFORMATION

US Federal Regulations: This product is a "Hazardous Chemical" as defined by the OSHA Communication Standard, 29 CFR 1910.1200. One or more components are not listed on TSCA.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D): Not Regulated.
CERCLA Hazardous Substance List (40 CFR 302.4):
SARA 304 Emergency Release Notification: Not Regulated.
OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050): Not Listed.
Superfund Amendments and Reauthorization Act of 1986 (SARA) Hazard Categories:

- Immediate Hazard: Yes
- Delayed Hazard: No
- Fire Hazard: Slight
- Pressure Hazard: No
- Reactivity Hazard: No

SARA 302 Extremely Hazardous Substance: Not Listed.
SARA 311/312 Hazardous Chemical: No
SARA 313 (TRI reporting): Acute: Chemical: Zinc Compounds.

Other Federal Regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List: Not Regulated.

Clean Air Act (CAA) Section 112® Accidental Release Prevention (40 CFR 68.130): Not Regulated.
Safe Drinking Water Act (SDWA): Not Regulated.

US State Regulations

US. California Controlled Substances.
CA Department of Justice (California Health and Safety Code Section 11100): Not Listed.
US. Massachusetts RTK – Substance List: PHOSPHORIC ACID (CAS 7664-38-2)
US. New Jersey Worker and Community Right-to-Know Act: PHOSPHORIC ACID (CAS 7664-38-2)
US. Pennsylvania Worker and Community Right-to-Know Law: PHOSPHORIC ACID (CAS 7664-38-2)
US. Rhode Island RTK: PHOSPHORIC ACID (CAS 7664-38-2)

US. California Proposition 65 California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65):
This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories:

Country(s) or Region	Inventory Name	On Inventory *(Yes/No)*
Australia:	Australian Inventory of Chemical Substances (AICS):	No
Canada:	Domestic Substances List (DSL):	No
Canada:	Non-Domestic Substances List (NDSL)	No
China:	Inventory of Existing Chemical Substances in China (IECSC):	No
Europe:	European Inventory of Existing Commercial Chemical Substances (EINECS):	No
Japan:	Inventory of Existing and New Chemical Substances (ENCS):	No
Korea:	Existing Chemicals List (ECL):	No
New Zealand:	New Zealand Inventory:	No
Philippines:	Philippine Inventory of Chemicals and Chemical Substances (PICCS):	No
United States & Puerto Rico:	Toxic Substances Control Act (TSCA) Inventory:	No

**"Yes" indicates all components of this product comply with inventory requirements administered by the governing country(s).*
**"No" indicates one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).*

SECTION 16: OTHER INFORMATION

HMIS Ratings (Hazardous Material Information System (USA):
Health: 1
Flammability: 0
Physical Hazard: 0

NFPA Ratings (National Fire Protection Association (USA):
Health: 1
Flammability: 0
Instability: 0

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