MATERIAL SAFETY DATA SHEET

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Chemical Product
HYE-CLEAN IRON OUT
Common Name: Ethanedioic acid solution.
Chemical Description: Ethanedioic acid solution.
TSCA/CAS No.: Primary CAS #: 144-62-7

Manufactured For
Gar Tootelian, Inc.
8246 S. Crawford
Reedley, CA 93654

Emergency Phone Numbers
Emergency Telephone: DAYS: (559) 638-6311 EVES: (559) 351-4156
CHEMTREC (24-Hour Emergency Number): (800) 424-9300
EPA National Response Center: (800) 424-8802

SECTION 2. HAZARDOUS INGREDIENTS

CHEMICAL	CAS NO.	%	TLV OR PEL	RQ (lbs)
Ethanedioic acid	144-62-7	10.0	1 mg/m^3 (ACGIH TLV TWA / OSHA PEL) 2 mg/m^3 (ACGIH TLV STEL)	*N.E.

* N.E. - Not Established.

SECTION 3. EMERGENCY/HAZARDS OVERVIEW

Clear, colorless liquid with no odor. May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Causes severe irritation and/or burns to skin, eyes, and respiratory tract. Carbon oxides may form when heated to decomposition. D.O.T. regulated as a corrosive material.

HEALTH: 3 REACTIVITY: 1 FLAMMABILITY: 0 ENVIRONMENT: 1
(0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme)

SECTION 4. FIRST AID

Eyes: Hold eyes open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a Poison Control Center or doctor for treatment advice.

Skin: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a Poison Control Center or doctor for treatment advice.

Ingestion: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a Poison Control Center or doctor. Do not give anything to an unconscious person.

Inhalation: Move person to fresh air. If person is not breathing, call 911 or an ambulance then give artificial respiration, preferably mouth-to-mouth if possible. Call a Poison Control Center or doctor for further treatment advice.

Have the product container or label with you when calling a Poison Control Center or doctor, or going for treatment.

SECTION 5. FIRE AND EXPLOSION HAZARDS

Flash Point:	Not considered a fire hazard.
Test Method:	Not pertinent.
LEL Flammable Limits:	Not pertinent.
UEL Flammable Limits:	Not pertinent.
Autoignition Temperature:	Not pertinent.
Flammability Classification:	None.
Known Hazardous Products of Combustion:	None.
Properties that Initiate/Contribute to Intensity of Fire:	None.
Potential For Dust Explosion:	None.
Reactions that Release Flammable Gases or Vapors:	None.
Potential For Release of Flammable Vapors:	None.
Unusual Fire & Explosion Hazards:	Not considered a fire or explosion hazard.
Extinguishing Media:	As appropriate for surrounding fire.
Special Firefighting Procedures:	Wear positive pressure, self-contained breathing apparatus and goggles. Avoid smoke inhalation. Contain any runoff.

SECTION 6. SPILLS AND LEAKS

Containment:	Prevent product spillage from entering drinking water supplies or streams.
Clean Up:	Neutralize with alkaline materials (soda ash, lime). Collect liquid or absorb onto absorbent material and package for disposal.
Evacuation:	Not required, but keep unnecessary and unprotected personnel from entering area.

SECTION 7. STORAGE AND HANDLING

Storage:	Store in plastic or stainless steel container in a cool, well-ventilated, dry place at temperatures above 40°F. Do not store near food or feeds. Do not stack pallets more than two (2) high.
Transfer Equipment:	Transfer product using chemical-resistant plastic or stainless steel tanks, pumps, valves, etc.
Work/Hygienic Practices:	May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Causes severe irritation and/or burns to skin, eyes, and respiratory tract. Do not get in eyes, or on skin or clothing. Avoid breathing vapors. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing before reuse. Do not contaminate feed and foodstuffs.

SECTION 8. PERSONAL PROTECTIVE EQUIPMENT

Eyes:	Chemical dust/splash goggles or full-face shield to prevent eye contact. As a general rule, do not wear contact lenses when handling.
Skin:	Impervious gloves and clothes.
Respiratory:	Not normally needed. If use generates an aerosol mist or respiratory irritation, use NIOSH-approved dust/mist respirator (such as 3M #8710).
Ventilation:	Provide appropriate ventilation and/or respirators to control level to below TLV (Section 2).

SECTION 9. PHYSICAL AND CHEMICAL DATA

Appearance:	Clear, colorless liquid.
Odor:	None.
pH:	Acidic.
Vapor Pressure:	Not available.
Vapor Density (Air=1):	Not available.
Boiling Point:	101°C / 214°F.
Freezing Point:	Not available.
Water Solubility:	100%.
Density:	~8.7 lbs./gal.
Evaporation Rate:	Not available.
Viscosity:	Not available.
% Volatile:	Not available.
Octanol/Water Partition Coefficient:	Not available.
Saturated Vapor Concentration:	Not available.

SECTION 10. STABILITY AND REACTIVITY

Stability:	Stable under ordinary conditions of use and storage.
Conditions To Avoid:	Incompatibles.
Incompatibility:	Alkalis, chlorites, hypochlorites, oxidizing agents, furfuryl alcohol, and silver compounds.
Hazardous Decomposition Products:	Carbon oxides may form when heated to decomposition. May also form formic acid.
Hazardous Polymerization:	Will not occur.

SECTION 11. POTENTIAL HEALTH EFFECTS

Acute Effects:

Eyes:	May cause severe irritation and possible eye damage.
Skin:	Irritant. May cause redness, pain and burns to the skin.
Ingestion:	Corrosive. Toxic. May cause burns of the mouth and esophagus, nausea, gastroenteritis and shock. Absorption can occur causing systemic poisoning. Symptoms may include headache, weak pulse and muscle cramps. Ethanedioic acid removes calcium from the blood. Kidney damage can be expected as the calcium is removed from the blood, forming calcium oxalate, which obstructs the kidney tubules. Severe poisoning may be fatal. Estimated fatal dose of ethanedioic acid is 5-15 grams.
Inhalation:	Vapors may cause irritation and burns to mucous membranes of the respiratory tract.
Chronic Effects:	Prolonged inhalation of mist may cause inflammation of upper respiratory tract. Skin contact may cause dermatitis. May cause kidney damage, dermatitis, cyanosis of the fingers and possible ulceration.

SECTION 12. ECOLOGICAL INFORMATION

Algal/Lemna Growth Inhibition:	Not known.
Toxicity to Fish and Invertebrates:	Not known.
Toxicity to Plants:	Not known.
Toxicity in Birds:	Not known.

SECTION 13. DISPOSAL

Do not contaminate lakes, streams, ponds, estuaries, oceans or other waters by discharge of waste effluents or equipment washwaters. Dispose of waste effluents in accordance with state and local regulations. Also, chemical additions or other alterations of this product may invalidate any disposal information in this MSDS. Therefore, consult local waste regulators for proper disposal.

SECTION 14. TRANSPORTATION

D.O.T. Proper Shipping Description:	Corrosive Liquid, Acidic, Organic, N.O.S. (Ethanedioic Acid, Solution), 8, UN 3265, PG III.
Other Shipping Information:	Compounds, Water Treating. NMFC Item 50313, LTL Class 65

SECTION 15. REGULATORY INFORMATION

CERCLA: None.
SARA TITLE III, Section 313 Toxic Chemicals: None.
PROPOSITION 65 (CA): None.

SECTION 16. OTHER

All information appearing in this document was based on data provided by third party sources and was compiled to comply with the Federal Hazard Communication Standard and the California Hazardous Substances Information and Training Act. The information is believed to be accurate as of the preparation date, but is not warranted as being the final authority in the use of this product. This information does not purport to be legal or medical advice.