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1. Identification

Synonyms Product Use Manufacturer/Supplier Address General Information	 Inorganic liquid fertilizer Helena Chemical Company 225 Schilling Blvd. Collierville, TN 38017 901-761-0050
General Information Transportation Emergency Number	

2. Hazard Identification



Eye Irritation Acute Toxicity Oral	 Warning Causes skin irritation Causes serious eye irritation May be harmful if ingested May be harmful if absorbed through skin
Hazard Categories	: Oral/Dermal/Inhalation Toxicity-5/5/5; Eye/Skin Irritation-2A/2
Hazard Statement	: May be harmful if swallowed May be harmful in contact with skin Causes serious eye irritation Causes skin irritation May be harmful if inhaled

3. Composition / Information on Ingredients

Component Blend of urea nitrogen, ferrous sulfate heptahydrate and water. GUARANTEED ANALYSIS:	CAS Number Proprietary	Weight % 100.00	
Total Nitrogen (N):		15.00%	
15.00% Urea Nitrogen Sulfur (S):		3.40%	
3.40% Combined Sulfur Iron (Fe): 6.00% Water Soluble Iron		6.00%	

4. First Aid Measures

	 Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for further treatment advice. Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.
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.
Ingestion	. Call a poison control center or doctor immediately for treatment advice. Rinse mouth with water. Do not induce vomiting. Do not give anything by mouth if unconscious.
Indication of Immediate Medical Attention and Special Treatment Needed	: In the event of an adverse response, treatment should be directed toward control of the symptoms.



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5. Fire Fighting Measures

	 Noncombustible liquid. Use extinguishing media for underlying cause of fire. Decompose on heating to nitrogen oxides.
Chemical	
Special Fire Fight Proc	: Use positive pressure self-contained breathing apparatus and full protective clothing. Use water spray to keep fire exposed containers cool.

6. Accidental Release Measures

Personal Precautions	: Keep unprotected and unnecessary personnel out of spill area.
Protective Equipment	: Splashproof goggles or face shield, impervious gloves, impervious apron and footwear. Respiratory protection not normally needed. Eyewash and emergency shower should be available in work area.
Emergency Procedures	: Contain product. Do not contaminate water supplies.
Methods and Materials for Containment and Cleanup	: Reuse material if uncontaminated. If contaminated, absorb material with an absorbent such as clay or sand and place in suitable container for proper disposal.

7. Handling and Storage	
Precautions for Safe Handling	: Keep locked up and out of reach of children. Do not contaminate water, food or feed by storage, handling or disposal. Keep container tightly closed. Do not
Conditions for Safe Storage	allow water to be introduced into the contents of the container. : Store in original container only. Do not store near heat or open flame. Do not store with oxidizing agents or ammonium nitrate.

8. Exposure Controls / Personal Protection

TLV/PEL	: Ferrous sulfate heptahydrate - TLV 5 mg/m3.
Appropriate Engineering Controls	: Local (mechanical) exhaust normally sufficient.
Personal Protective Equipment	: Splashproof goggles or face shield, impervious gloves, impervious apron and
	footwear. Respiratory protection not normally needed. Eyewash and emergency
	shower should be available in work area.

9. Physical and Chemical Properties

Odor/Appearance	: Clear, dark green liquid with sulfurous odor.
Flash Point, ^o F	: Noncombustible
Boiling Point, ^o F	: >212 Degrees F.
Melting Point(Freezing point), ^o C	: <32 Degrees F.
Vapor Pressure, mm Hg @ 20 ºC	: Not determined
Vapor Density	: Not determined
Solubility in Water	: 99% Soluble
Molecular Formula	: Not applicable
Density, g/mL @ 25 °C	: 1.31-1.36
Evaporation Rate(Butyl Acetate =	: No information found
1)	
Octanol/Water Partition	: No information found
Coefficient	
рН	: >2.1



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 Flammable Limits (approximate volume % in air)
 : Not applicable

 Auto-ignition Temperature
 : Not applicable

 Decomposition temperature
 : No information found

10. Stability and Reactivity

Reactivity	: No information found
Chemical Stability	: Stable
Hazardous Decomposition	: May produce nitrogen oxide and oxides of carbon under fire conditions.
Products	
Hazardous Polymerization	: Will not occur
Conditions to Avoid	: Avoid extreme heat.
Incompatible Materials	: Hypochlorite bleach, strong acids and alkalis.

11. Toxicological Information

Acute Toxicity (Oral LD50)	: No LD50 available. May be harmful if swallowed.
Acute Toxicity (Dermal LD50)	: No LD50 available. May be harmful in contact with skin.
Acute Toxicity Inhalation LC50	: No LC50 available. May be harmful if inhaled.
Likely Routes of Exposure	: Skin, eyes, inhalation
Skin Irritation	: Causes skin irritation.
	: Causes serious eye irritation.
Skin Sensitization	: Not listed as a skin sensitizer.
Carcinogenic	: Not listed
Chronic Effects	: None currently known.
Other Hazards	: None currently known.

12. Ecological Information

Ecotoxicity	: No information found
Persistence and Degradability	: No information found
Bioaccumulative Potential	: No information found
Mobility in Soil	: No information found
Other Adverse Effects	: No information found

13. Disposal Considerations Waste Disposal Method : This material must be disposed of according to federal, state, or local procedures under the Resource Conservation and Recovery Act.

14. Transport Information

UN Proper Shipping Name	: Not regulated by DOT, unless >300 gallons in a single container.
Transport Hazard Class	: None
UN Identification Number	: None
Packaging Group	: None
Environmental Hazards	: No information found
Transport in Bulk	: If 300.3 gallons or more in a single package, ship as RQ, UN3082,
	Environmentally Hazardous Substance, Liquid, n.o.s. (Ferrous Sulfate), 9, PG III "ERG # 171"



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Special Precautions for Transportation	: Reportable quantity for ferrous sulfate is met when 300.3 gallons in a single package.
Freight Classification	: Fertilizing Compound, (Manufactured Fertilizer), Liquid, NOIBN (NMFC Item 68140, Sub 6, Class 70)

15. Regulatory Information						
National Fire Protection Association Rating						
	Health:	2	Fire: 0		Reactivity: 0	
		Rating Level:	(4-Extreme,	3-High,	2-Moderate, 1-Slight	, 0-Minimum)
S.A.R.A Title III Hazard Classification (Yes/No)						· ·
	Immediate(Acute) Hea	lth: Y				
Delayed (Chronic) Health: N						
	Sudden Release	of N				
	Pressu	ire:				
	F	ire: N				
	Reacti	ve: N				

16. Other Information

Data of Preparation/Revision : 31-October-2018