Safety Data Sheet: CHEM-AQUA 81900

Supercedes Date 08/16/2010 **Issuing Date** 05/09/2014

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name CHEM-AQUA 81900
Recommended use Water treatment chemical
Information on Manufacturer
CHEM-AQUA, INC

BOX 152170
IRVING, TEXAS 75015

Product Code 0C74
Chemical nature Aqueous solution
Emergency Telephone Number
CHEMTREC® 800-424-9300
Telephone inquiry
972-579-2477

2. HAZARD IDENTIFICATION

Color Orange - Brown **Physical State** Liquid **Odor** Slight Amine-like

GHS Classification

Physical Hazards

Substances/mixtures corrosive to metal	Category 1

Health Hazard

Acute Oral Toxicity	Category 4
Skin Corrosion/Irritation	Category 1
Serious Eye Damage/Eye Irritation	Category 1
Specific target organ systemic toxicity (repeated exposure)	Category 2

Other hazards
None

Labeling
Signal Word
DANGER

Hazard Statements
H314 - Causes severe skin burns and eye damage
H302 - Harmful if swallowed
H373 - May cause damage to organs through prolonged or repeated exposure
H290 - May be corrosive to metals

Precautionary Statements
P280 - Wear protective gloves, protective clothing, eye protection and face protection.
P264 - Wash face, hands and any exposed skin thoroughly after handling.
P260 - Do not breathe mist.
P270 - Do not eat, drink or smoke when using this product
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower
P363 - Wash contaminated clothing before reuse
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a physician
P304 + P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.
P342 + P311 - If experiencing respiratory symptoms, call a physician
P301+ P330 + P331 - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Call a physician if unwell.
P390 - Absorb spillage to prevent damage
P406 - Store in a corrosion-resistant container.
P501 - Dispose of contents and container in accordance with applicable regulations.

7 % of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS-No	Weight %
Ferric chloride	7705-08-0	30-60
Epichlorohydrin-dimethylamine copolymer	25988-97-0	5-10

4. FIRST AID MEASURES

General advice Do not get in eyes, on skin or on clothing. Do not breathe mist.

Eye Contact Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Get medical attention immediately.

Skin Contact Remove immediately all contaminated clothing. Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately.

Inhalation Move to fresh air. In case of shortness of breath, give oxygen. If breathing has stopped, apply artificial respiration. Get medical attention immediately.

Ingestion Drink 1 or 2 glasses of water. Do NOT induce vomiting. Get medical attention immediately. Never give anything by mouth to an unconscious person. Rinse mouth.

Notes to physician The product causes burns of eyes, skin and mucous membranes. Control of circulatory system, shock therapy if needed.

5. FIRE-FIGHTING MEASURES

Flash Point Does not flash **Method** Not applicable

Flammability Limits in Air % Hydrogen, by reaction with metals. **Upper** 75 **Lower** 4

Suitable Extinguishing Media

Dry chemical. Carbon dioxide (CO2). Water spray. Foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Specific hazards arising from the chemical

Contact with metals liberates flammable hydrogen gas. Material can create slippery conditions.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

NFPA	**Health** 3	**Flammability** 1	**Instability** 0
HMIS	**Health** 3	**Flammability** 1	**Instability** 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Prevent further leakage or spillage if safe to do so. Material can create slippery conditions. Ensure adequate ventilation.

Environmental Precautions Do not flush into surface water or sanitary sewer system.

Methods for Containment Contain spillage, soak up with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and transfer to a container for disposal according to local / national regulations (see section 13).

Methods for Cleaning Up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust)

Neutralizing Agent Neutralize with lime milk or soda and flush with plenty of water.

7. HANDLING AND STORAGE

Handling Do not get in eyes, on skin or on clothing. Do not breathe mist.

Storage Store in original container. Do not store in metal containers. Keep containers tightly closed in a dry, cool and well-ventilated place. Freezing will affect the physical condition but will not damage the material. Thaw and mix before using.

Storage Temperature	**Minimum**	35 °F / 2 °C		**Maximum**	120 °F / 49 °C
Storage Conditions	**Indoor**	X	**Outdoor**	**Heated**	**Refrigerated**

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH
Ferric chloride	TWA: 1 mg/m^3	No data available	TWA: 1 mg/m^3
Epichlorohydrin-dimethylamine copolymer	No data available	No data available	No data available

Engineering Measures Ensure adequate ventilation, especially in confined areas. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction.

Personal Protective Equipment

Eye/Face Protection Tightly fitting safety goggles. Face-shield.

Skin Protection Wear suitable protective clothing, Impervious gloves.

Respiratory Protection In case of inadequate ventilation wear respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

General Hygiene Considerations Wear protective gloves/clothing. Ensure that eyewash stations and safety showers are close to the workstation location. Remove and wash contaminated clothing before re-use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid	**Viscosity**	Non viscous
Color	Orange - Brown	**Odor**	Slight Amine-like
Odor Threshold	Not applicable	**Appearance**	Transparent
pH	< 1	**Specific Gravity**	1.398
Evaporation Rate	< 1 (Butyl acetate=1)	**Percent Volatile (Volume)**	65
VOC Content (%)	0	**VOC Content (g/L)**	0
Vapor Pressure	No information available	**Vapor Density**	No information available
Solubility	Completely soluble	**n-Octanol/Water Partition**	No data available
Melting Point/Range	No data available	**Decomposition Temperature**	No data available
Boiling Point/Range	> 212 °F / 100 °C	**Flammability (solid, gas)**	No data available
Flash Point	Does not flash	**Method**	Not applicable
Autoignition Temperature	No information available.		
Flammability Limits in Air %	Hydrogen, by reaction with metals.	**Upper** 75 **Lower** 4	

10. STABILITY AND REACTIVITY

Chemical Stability	Stable. Hazardous polymerization does not occur.
Conditions to Avoid	Heat, flames, and sparks
Incompatible Products	Bases, Metals.
Hazardous Decomposition Products	Carbon dioxide (CO2), Nitrogen oxides (NOx), Hydrogen chloride gas, Chlorine gas, Fumes of aluminum, Sulfur oxides.
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

The following values are calculated based on chapter 3.1 of the GHS document (Rev. 3, 2009):

Oral LD50	No information available
Dermal LD50	No information available
Inhalation LC50	
Gas	No information available
Mist	No information available
Vapor	No information available

Principle Route of Exposure	Skin contact, Eye contact, Inhalation.
Primary Routes of Entry	Ingestion
Acute Effects	
Eyes	Corrosive to the eyes and may cause severe damage including blindness.
Skin	Causes burns.
Inhalation	Harmful by inhalation. Causes burns.
Ingestion	Ingestion causes burns of the upper digestive and respiratory tracts.
Chronic Toxicity	Liver injury may occur. Inhaled corrosive substances can lead to a toxic edema of the lungs.
Target Organ Effects	Respiratory system, Liver, Gastrointestinal tract.
Aggravated Medical Conditions	Respiratory disorders, Skin disorders, Liver disorders.

Component Information

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	Draize Test	Other
Ferric chloride	= 450 mg/kg (Rat)	no data available	no data available	no data available	no data available
Epichlorohydrin-dimethylamine copolymer	no data available	no data available	no data available	no data available	no data available

Component	Mutagenicity	Sensitization	Developmental Toxicity	Reproductive Toxicity	Target Organ Effects
Ferric chloride	no data available	no data available	no data available	no data available	eyes,skin,respiratory system,liver,GI tract
Epichlorohydrin-dimethylamine copolymer	no data available	no data available	no data available	no data available	no data available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Other
Ferric chloride	not applicable	not applicable	not applicable	not applicable	not applicable
Epichlorohydrin-dimethylamine copolymer	not applicable	not applicable	not applicable	not applicable	not applicable

12. ECOLOGICAL INFORMATION

Product Information No information available.

Component Information

Component	Toxicity to Algae	Toxicity to Fish	Microtox	Water Flea	log Pow
Ferric chloride	no data available	LC50 20.95 - 22.56 mg/L Pimephales promelas 96 h LC50 = 20.26 mg/L Lepomis macrochirus 96 h LC50 = 75.6 mg/L Gambusia affinis 96 h	no data available	EC50 27.9 mg/L Daphnia magna 48 h EC50 9.6 mg/L Daphnia magna 48 h	-4
Epichlorohydrin-dimethylamine copolymer	no data available	no data available	no data available	no data available	N/A

Persistence and Degradability No information available.
Bioaccumulation No information available.
Mobility No information available.

13. DISPOSAL CONSIDERATIONS

Product Disposal Dispose of in accordance with local regulations.
Container Disposal Empty containers should be taken for local recycling, recovery, or waste disposal

14. TRANSPORT INFORMATION

DOT

Proper Shipping Name Corrosive liquid, acidic, inorganic, n.o.s.,(Ferric Chloride)
Hazard Class 8
UN-No UN3264
Packing Group III
Reportable Quantity (RQ) Ferric chloride, RQ kg= 1194.74
Description UN3264,Corrosive liquid, acidic, inorganic, n.o.s.,(Ferric Chloride), 8, PG III

TDG

Hazard Class 8
UN-No UN3264
Packing Group III

ICAO

UN-No UN3264
Proper Shipping Name Corrosive liquid, acidic, inorganic, n.o.s.,(Ferric Chloride)
Hazard Class 8
Packing Group III
Shipping Description UN3264,Corrosive liquid, acidic, inorganic, n.o.s.,(Ferric Chloride), 8, PG III

IATA

UN-No UN3264
Proper Shipping Name Corrosive liquid, acidic, inorganic, n.o.s.,(Ferric Chloride)
Hazard Class 8
Packing Group III
ERG Code 8L
Shipping Description UN3264,Corrosive liquid, acidic, inorganic, n.o.s.,(Ferric Chloride), 8, PG III

IMDG/IMO

Proper Shipping Name Corrosive liquid, acidic, inorganic, n.o.s.,(Ferric Chloride)
Hazard Class 8
UN-No UN3264
Packing Group III
EmS No. F-A, S-B
Shipping Description UN3264,Corrosive liquid, acidic, inorganic, n.o.s.,(Ferric Chloride), 8, PG III

15. REGULATORY INFORMATION

Inventories
TSCA Complies
DSL Complies
U.S. Federal Regulations
SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazardous Categorization

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
Yes	Yes	No	No	No

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Ferric chloride	1000 lb	Not applicable
Epichlorohydrin-dimethylamine copolymer	Not applicable	Not applicable

16. OTHER INFORMATION

Prepared By Adrienne McKee
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Reason for Revision No information available.
Glossary No information available.
List of References. No information available.

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