

Material Safety Data Sheet

Section 1 – Chemical Product and Company Identification

Catalog Numbers: AWGFE3144-A, AWGFE3144-B, AWGFE3144-C, AWGFE3144-D, AWGFE3144-P, AWGFE3144-Q, AWGFE3144-G, AWGFE3144-T
Product Identity: Ferroun Indicator

Chemical Family: No information available

Synonyms: None

Recommended Use: Laboratory chemicals

Manufacturer's Name: AquaPhoenix Scientific, Inc., 9 Barnhart Dr., Hanover, PA 17331, (866) 632-1291
Emergency Contact Number (24hr): Chemtel (800) 255-3924

Issue Date: 12/28/06

Revision Date: 07/03/08, 04/19/10, 02/19/16

Section 2 – Hazard Identification

Emergency Overview

Warning. May be harmful if swallowed. Handle with care. If ingested, dilute with water and induce vomiting. Wash areas of contact with water. Get medical attention.

Appearance: Clear, dark red liquid **Odor:** Odorless

Target Organs: Eyes, skin, liver.

Potential Health Effects/ Routes of Exposure:

Eyes: May cause slight irritation.

Skin: May cause slight irritation.

Ingestion: Large doses may cause upset stomach

Inhalation: Not likely to be a hazard by inhalation.

Chronic Effect / Carcinogenicity: None(IARC, NTP, OSHA)

Aggravated Medical Conditions No information available

These chemicals are not considered hazardous by OSHA.

See section 11 for toxicological information. See section 12 for potential environmental effects.

Section 3 – Composition, Information on Ingredients

1,10-Phenanthroline Monohydrate, CAS# 5144-89-8, 0.7% w/v

Ferrous Sulfate Heptahydrate, CAS# 7782-63-0, <0.4% w/v

Water, purified, CAS# 7732-18-5, >98% w/v

Section 4 – First Aid

Eyes: Immediately flush eyes with water for at least 15 minutes. Immediately get medical assistance.

Skin: Flush with water for 15 minutes. Get medical assistance if irritation develops.

Ingestion: Induce vomiting. Dilute with water or milk. Get medical assistance.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

Notes to Physician Treat symptomatically.

Section 5 – Fire Fighting Measures

Flash Point: Not Applicable **Autoignition Temperature** No information available.

Explosion Limits Upper No data available **Lower** No data available

Extinguishing Media: Use means suitable to extinguishing surrounding fire.

Unsuitable Extinguishing Media: No information available

Fire & Explosion Hazards: Not considered to be a fire or explosion hazard.
Fire Fighting Instructions / Equipment: Use normal procedures. Toxic gas may be produced in fire. Use protective clothing. Use NIOSH-approved breathing equipment.
Hazardous Combustion Products: No information Available
Sensitivity to mechanical impact No information available.
Sensitivity to static discharge No information available.
Specific Hazards Arising from the Chemical: No information available.
NFPA Rating: (estimated) Health: 1; Flammable: 0; Reactivity: 0

Section 6 – Accidental Release Measures

Personal Precautions Use personal protective equipment. Avoid contact with skin, eyes and clothing.
Environmental Precautions No information Available.
Methods for Containment and Clean Up Soak up with inert absorbent material

Section 7 – Handling and Storage

Handling: Wash hands after handling. Avoid contact with skin and eyes.
Storage: Keep Protect from freezing and physical damage.

Section 8 – Exposure Controls, Personal Protection

1,10-Phenanthroline Monohydrate, CAS# 5144-89-8, ACGIH TLV: NA, OSHA PEL: NA
Ferrous Sulfate Heptahydrate, CAS# 7782-63-0, ACGIH TLV 1 mg/m³, OSHA PEL: NA
Water, purified, CAS# 7732-18-5, ACGIH TLV: NA, OSHA PEL: NA
Engineering Measures/ General Hygiene: Normal ventilation is adequate. Ensure eyewash and safety showers are available.
Personal Protection Equipment: Skin Protection: Chemical resistant gloves.
Eye/Face Protection: Safety Glasses or goggles. **Respiratory Protection:** Normal ventilation is adequate

Section 9 – Physical and Chemical Properties

Appearance/Physical State: Clear, dark red liquid
Odor: Odorless
Boiling Point: Approx 100C
Melting Point: Approx 0C
Vapor Density: No Information Available
Evaporation Rate: No information Available
pH: No information Available
Flammability: No Information Available
Solubility: Infinite
available
Relative Density: No Information Available

% Volatility: No Information Available
Specific Gravity: Approx 1
Vapor Pressure: No information Available
Flash Point: Not Applicable
Coefficient of water/oil distribution: Not Available
Odor Threshold: Not Available
Decomposition Temperature: No Information Available
Partition Coefficient n-octanol/water: No data
Molecular Weight: Not available

Section 10 – Stability and Reactivity

Chemical Stability: Stable under normal conditions of use and storage.
Incompatible Materials: Alkalis, oxidizing agent.
Conditions to Avoid: No information Available
Hazardous Decomposition Products: Oxides of sulfur, carbon, and nitrogen.
Hazardous Polymerization: Does not occur
Hazardous Reactions: Not available.

Section 11 – Toxicological Information

Routes of Exposure/Symptoms/Corrosiveness – See Section 2
LD50 orl-rat: 319 mg/kg (Ferrous Sulfate) LC50 inhalation-rat: Not available
Irritation: No Information Available
Toxicologically Synergistic: No Information Available
Chronic Exposure

Carcinogenicity There are no known carcinogenic chemicals in this product

Sensitization No information available.

Mutagenic Effects No information available.

Reproductive Effects No information available.

Developmental Effects (Immediate/Delayed) No information available.

Teratogenicity No information available.

Other Adverse Effects No information available.

Endocrine Disruptor Information No information available

Section 12 – Ecological Information

Ecotoxicity: No information available

Persistence and Degradability: No Information Available

Mobility: No Information Available

Bioaccumulation/ Accumulation: No Information Available

Section 13 – Disposal Considerations

Dilute with water.

Waste Disposal/Waste Disposal of Packaging: All chemical waster generators must determine whether a discarded chemical is classified as hazardous waste. Comply with all local, state, and federal regulations.

Section 14 – Transport Information

DOT - Not Regulated

Section 15 – Regulatory Information (not meant to be all inclusive)

OSHA Status: These chemicals are not considered hazardous by OSHA.

Canada DSL: These chemicals are listed on Canada's DSL list.

TSCA: The components of this solution are listed on the TSCA Inventory

SARA Title III Section 313: Not Applicable

RCRA Status: Not Applicable

CERCLA Reportable Quantity: Ferrous Sulfate Heptahydrate – 1000 lbs.

WHMIS: -2B: Poisonous and infectious Material: Materials causing other toxic effects – Toxic material
This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16 – Additional Information

Disclaimer: The information on this MSDS applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to determine the suitability and completeness of this information for his own particular use. No warranty is implied regarding the accuracy of the data or the results to be obtained from the products use.

Material Safety Data Sheet

Section 1 – Chemical Product and Company Identification

Catalog Numbers: AWGND2270-A, AWGND2270-B, AWGND2270-C, AWGND2270-D, AWGND2270-P, AWGND2270-Q, AWGND2270-G, AWGND2270-T

Product Identity: CAN Solution, Nitrite Titrant

Chemical Family: Not Available

Synonyms: Not Available

Recommended Use: Laboratory chemicals

Manufacturer's Name: AquaPhoenix Scientific, Inc., 9 Barnhart Dr., Hanover, PA 17331
Emergency Contact Number (24hr): Chemtel (800) 255-3924

Issue Date: 12/29/06

Revision Date: 07/07/08, 05/24/10, 10/06/10, 02/19/12

Section 2 – Hazard Identification

Emergency Overview: Corrosive liquid. May cause irritation to the skin, and eyes. Avoid contact with skin, eyes, and clothing. Wash areas of contact with water. If ingested, dilute with water and get medical attention. DO NOT induce vomiting.

Appearance: Clear, orange colored liquid **Odor:** Odorless

Target Organs: Eyes, skin, respiratory system, and teeth.

Potential Health Effects/ Routes of Exposure:

Eyes: May cause irritation, redness, pain, and tearing.

Skin: May cause irritation, redness, and pain.

Ingestion: May cause throat irritation, vomiting, and diarrhea

Inhalation: May cause irritation.

Chronic Effect / Carcinogenicity: No Information available

Aggravated Medical Conditions No information available

These chemicals are considered hazardous by OSHA.

See section 11 for toxicological information. See section 12 for potential environmental effects.

Section 3 –Composition, Information on Ingredients

Sulfuric Acid, CAS# 7664-93-9, <10% v/v

Ceric Ammonium Sulfate, CAS# 16774-21-3, <12%w/v

Water, purified, CAS# 7732-18-5, >78% w/v

Section 4 – First Aid

Eyes: Immediately flush eyes with water for at least 15 minutes. Immediately get medical assistance.

Skin: Flush with water for 15 minutes. Get medical assistance if irritation develops.

Ingestion: DO NOT induce vomiting. Dilute with water or milk. Get medical assistance.

Inhalation: Remove to fresh air. Give artificial respiration if necessary. If breathing is difficult, give oxygen.

Notes to Physician Treat symptomatically.

Section 5 – Fire Fighting Measures

Flash Point: Not Applicable **Autoignition Temperature** No information available.

Explosion Limits Upper No data available **Lower** No data available

Extinguishing Media: Use dry chemical, alcohol foam, or carbon dioxide for extinguishing surrounding fire.

Unsuitable Extinguishing Media: No information available

Fire & Explosion Hazards: Contact with most metals causes formation of flammable and explosive hydrogen gas.

Fire Fighting Instructions / Equipment: Use normal procedures. Poisonous gases may be produced in fire. Use protective clothing. Use NIOSH-approved breathing equipment.

Hazardous Combustion Products: No information Available

Sensitivity to mechanical impact No information available.

Sensitivity to static discharge No information available.

Specific Hazards Arising from the Chemical: Thermal decomposition can lead to release of irritating gases and vapors

NFPA Rating: (estimated) Health: 2; Flammable: 0; Reactivity: 1

Section 6 – Accidental Release Measures

Personal Precautions Use proper personal protective equipment as indicated in Section 8.

Environmental Precautions No Information Available.

Methods for Containment and Clean Up Cover spill with soda ash-slicked lime mixture or calcium carbonate. Mix with water to form slurry. Decant liquid to drain. Treat the solid residue as normal refuse. Wash site with soda ash solution. Always obey local regulations.

Section 7 – Handling and Storage

Handling: Wash hands after handling. Avoid contact with skin and eyes.

Storage: Protect from freezing and physical damage. Do not mix with bases. Contact with water will generate heat.

Section 8 – Exposure Controls, Personal Protection

Sulfuric Acid, CAS# 7664-93-9, ACGIH TLV: 1 mg/m³, OSHA PEL: 1 mg/m³

Ceric Ammonium Sulfate, CAS# 16774-21-3, ACGIH TLV: NA, OSHA PEL: NA

Water, purified, CAS# 7732-18-5, ACGIH TLV: NA, OSHA PEL: NA

Engineering Measures/ General Hygiene: Use under a chemical fume hood. Ensure eyewash and safety showers are available.

Personal Protection Equipment: Skin Protection: Chemical resistant gloves.

Eye/Face Protection: Safety Glasses or goggles. **Respiratory Protection:** Chemical fume hood

Section 9 – Physical and Chemical Properties

Appearance/Physical State: Clear, orange colored liquid

Odor: Odorless

% Volatility: No Information Available

Boiling Point: Approx 100C

Specific Gravity: Approx 1.05

Melting Point: Approx 0C

Vapor Pressure: Not available

Vapor Density: >1

Flash Point: Not Applicable

Evaporation Rate: Not available

Coefficient of water/oil distribution: Not Available

pH: < 3

Odor Threshold: Not Available

Flammability: No Information Available

Decomposition Temperature: No Information Available

Solubility: Infinite

Partition Coefficient n-octanol/water: No data

available

Relative Density: No Information Available

Molecular Weight: Not available

Section 10 – Stability and Reactivity

Chemical Stability: Stable under normal conditions of use and storage.

Incompatible Materials: Organics, chlorates, carbides, fulminates, picrates, alkalines, reducing agents, nitrates, acetic acids, oxidizing agents, metals.

Conditions to Avoid: Incompatible materials, excess heat

Hazardous Decomposition Products: Oxides of sulfur

Hazardous Polymerization: Does not occur

Hazardous Reactions: Not Available

Section 11 – Toxicological Information

Routes of Exposure/Symptoms/Corrosiveness – See Section 2

LD50 orl-rat: 2140 mg/kg (Sulfuric Acid) LC50 inhalation-rat: 510 mg/kg//2H (Sulfuric Acid)

Irritation: No Information Available

Toxicologically Synergistic: No Information Available

Chronic Exposure

Carcinogenicity There are no known carcinogenic chemicals in this product

Sensitization No information available.

Mutagenic Effects No information available.

Reproductive Effects No Information available.

Developmental Effects (Immediate/Delayed) No information available.

Teratogenicity No information available.

Other Adverse Effects No information available.

Endocrine Disruptor Information No information available

Section 12 – Ecological Information

Ecotoxicity: No information Available

Persistence and Degradability: No Information Available

Mobility: No Information Available

Bioaccumulation/ Accumulation: No Information Available

Section 13 – Disposal Considerations

Waste Disposal/Waste Disposal of Packaging: Dilute solution with water. Neutralize with calcium carbonate or soda ash. Wash solution down drain. Treat solid residue as normal refuse. Comply with all local, state, and federal regulations.

Section 14 – Transport Information

DOT – UN1760, Corrosive Liquids, N.O.S., (Sulfuric Acid Solution), 8, II

Section 15 – Regulatory Information (not meant to be all inclusive)

OSHA Status: These chemicals are considered hazardous by OSHA.

Canada DSL: These chemicals are on Canada's DSL list.

TSCA: The components of this solution are listed on the TSCA Inventory

SARA Title III Section 313: Not Applicable

RCRA Status: Not Applicable

CERCLA Reportable Quantity: Sulfuric Acid – 1000 lbs

WHMIS: E: Corrosive Material

This product has been classified in accordance with the hazard criteria of the CPR and the MSDS contains all the information required by the CPR.

Section 16 – Additional Information

Disclaimer: The information on this MSDS applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to determine the suitability and completeness of this information for his own particular use. No warranty is implied regarding the accuracy of the data or the results to be obtained from the products use.