

## Safety Data Sheet

According to Canadian Hazardous Products Regulations and WHMIS 2015

### Ferroun Indicator

#### SECTION 1: Identification

**Material name:** Ferroun Indicator

**Product code:** AR-1022-60

**Recommended use of the product and restriction on use:**

Recommended for use as a laboratory reagent only.

#### Manufacturer or supplier details

**Manufacturer:**

Aqua Analytics  
245 Matheson Blvd East, Units 1 & 2  
Mississauga, Ontario Canada L4Z 3C9  
(888) 712-4000

**Emergency telephone number:**

**Emergency Phone No.**

(613) 996-6666

#### SECTION 2: Hazard identification

**GHS classification:** Not a hazardous substance or mixture

#### Label elements

**Hazard pictograms:** None

**Signal word:** None

**Hazard statements:** None

**Precautionary statements:** None

**Hazards not otherwise classified:** None

#### SECTION 3: Composition/information on ingredients

Identification	Name	Wt. %
<b>CAS number:</b> 7732-18-5	Water	>90
<b>CAS number:</b> 7782-63-0	Ferrous Sulfate	<5
<b>CAS number:</b> 66-71-7	1,10-phenanthroline	<5

#### SECTION 4: First-aid measures

#### Description of first aid measures

**After inhalation:**

Loosen clothing as necessary and position individual in a comfortable position.

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Maintain an unobstructed airway.  
Get medical advice/attention if you feel unwell.

### After skin contact:

Rinse affected area with soap and water.  
If symptoms develop or persist, seek medical attention.

### After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes.  
Remove contact lenses, if present and easy to do.  
Get medical advice/attention.

### After ingestion:

Rinse mouth and then drink plenty of water.  
Do not induce vomiting.  
Get medical advice/attention if you feel unwell.

### Most important symptoms and effects, both acute and delayed

#### Acute symptoms:

No information available.

#### Delayed symptoms:

No information available.

### Immediate medical attention and special treatment:

No information available.

## SECTION 5: Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition.

#### Unsuitable extinguishing media:

No information available.

### Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors.

### Special protective equipment for firefighters:

Wear protective eye wear, gloves and clothing.  
Refer to Section 8.  
Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit.

### Additional information:

Heating causes a rise in pressure, risk of bursting and combustion.  
Shut off sources of ignition.  
Carbon monoxide and carbon dioxide may form upon combustion.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation.

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Ensure air handling systems are operational.  
Wear protective eye wear, gloves and clothing.

### Environmental precautions:

Should not be released into the environment.  
Prevent from reaching drains, sewer or waterway.

### Methods and material for containment and cleaning up:

Absorb with non-combustible liquid-binding material (sand, diatomaceous earth (clay) , acid binders, universal binders).  
Dispose of contents / container in accordance with local regulations.

### Reference to other sections:

None

## SECTION 7: Handling and storage

### Precautions for safe handling:

Do not eat, drink, smoke or use personal products when handling chemical substances.  
Avoid breathing mist or vapor.  
Use only with adequate ventilation.

### Conditions for safe storage, including any incompatibilities:

Store in a cool, well-ventilated area.  
Store away from foodstuffs.

## SECTION 8: Exposure controls/personal protection

### Components with workplace control parameters:

Component name	Identifier	Permissible concentration
Ferrous Sulfate	7782-63-0	ACGIH TLV: 1 mg/m <sup>3</sup>

### Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.  
Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

### Respiratory protection:

When necessary, use NIOSH-approved breathing equipment.

### Eye protection:

Safety goggles or glasses, or appropriate eye protection.

### Skin and body protection:

Select glove material impermeable and resistant to the substance.

### General hygienic measures:

Wash hands before breaks and at the end of work.  
Avoid contact with skin, eyes and clothing.

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Perform routine housekeeping.  
Wash contaminated clothing before reusing.

### SECTION 9: Physical and chemical properties

<b>Appearance (physical state, color):</b>	Clear, dark red liquid	<b>Explosion limit lower: Explosion limit upper:</b>	Not available Not available
<b>Odor:</b>	Odorless	<b>Vapor pressure:</b>	Not available
<b>Odor threshold:</b>	Not available	<b>Vapor density:</b>	Not available
<b>pH-value:</b>	Not available	<b>Relative density:</b>	Not available
<b>Melting/Freezing point:</b>	Approx. 0 °C	<b>Solubilities:</b>	Infinite solubility in water.
<b>Boiling point/range:</b>	Approx 100°C	<b>Partition coefficient (n-octanol/water):</b>	Not available
<b>Flash point (closed cup):</b>	Not available	<b>Auto/Self-ignition temperature:</b>	Not available
<b>Evaporation rate:</b>	Not available	<b>Decomposition temperature:</b>	Not available
<b>Flammability (solid, gaseous):</b>	Not available	<b>Dynamic viscosity:</b>	Not available
<b>Density:</b>	Not available	<b>Kinematic viscosity:</b>	Not available

### SECTION 10: Stability and reactivity

**Reactivity:**

Does not react under normal conditions of use and storage.

**Chemical stability:**

Stable under normal conditions of use and storage.

**Possibility of hazardous reactions:**

None under normal conditions of use and storage.

**Conditions to avoid:**

None known.

**Incompatible materials:**

None known.

**Hazardous decomposition products:**

None known.

### SECTION 11: Toxicological information

**Exposure routes:**

No information available.

**Most important symptoms and effects, both acute and delayed**

**Acute symptoms:**

No information available.

**Delayed symptoms:**

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No information available.

### Acute toxicity:

#### Oral:

Ferrous Sulfate: LD50 Oral - Rat - 1389 mg/kg.

### Skin corrosion/irritation:

Ferrous Sulfate: Causes skin irritation.

### Serious eye damage/irritation:

Ferrous Sulfate: Causes eye irritation.

### Respiratory or skin sensitization:

No information available.

### Carcinogenicity:

### IARC (International Agency for Research on Cancer):

None of the ingredients are listed.

### NTP (National Toxicology Program):

None of the ingredients are listed.

### Germ cell mutagenicity:

No information available.

### Reproductive toxicity:

No information available.

### STOT-single and repeated exposure:

No information available.

### Aspiration toxicity:

No information available.

### Additional toxicological information:

No information available.

## SECTION 12: Ecological information

### Ecotoxicity:

1,10-phenanthroline: Fish, LC50 - Oncorhynchus mykiss - >10 mg/L - 24h.

### Persistence and degradability:

No information available.

### Bioaccumulative potential:

No information available.

### Mobility in soil:

No information available.

### Other adverse effects:

No information available.

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## SECTION 13: Disposal considerations

### Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities.

## SECTION 14: Transport information

### Land transport:

#### Canadian Transportation of Dangerous Goods

<b>UN Number:</b>	Not Regulated
<b>UN Proper shipping name:</b>	Not Regulated
<b>UN Transport hazard classes:</b>	
<b>Packing group:</b> <b>Danger label:</b>	Not Regulated
<b>Environmental hazards:</b>	No
<b>Special precautions for user:</b>	None

### Air transport:

#### IATA-DGR

<b>UN Number:</b>	Not Regulated
<b>UN Proper shipping name:</b>	Not Regulated
<b>UN Transport hazard classes:</b>	
<b>Packing group:</b> <b>Danger label:</b>	Not Regulated
<b>Environmental hazards:</b>	No
<b>Special precautions for user:</b>	None

### Sea transport:

#### IMDG

<b>UN Number:</b>	Not Regulated
<b>UN Proper shipping name:</b>	Not Regulated
<b>UN Transport hazard classes:</b>	
<b>Packing group:</b> <b>Danger label:</b> <b>EMS code:</b>	Not Regulated  None

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<b>Environmental hazards:</b>	No
<b>Special precautions for user:</b>	None
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:</b> Not applicable	

## SECTION 15: Regulatory information

### North American

**SARA Section 311/312 (Specific toxic chemical listings):**

Not classified.

**SARA Section 302 (Extremely hazardous substances):**

**SARA Section 313 (Specific toxic chemical listings):**

**TSCA (Toxic Substances Control Act):**

7782-63-0 Ferrous Sulfate: not listed.

7732-18-5 Water: listed.

66-71-7 1,10-phenanthroline: listed.

**TSCA Rules and Orders:**

Not applicable.

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):**

7782-63-0 Ferrous Sulfate: 1000.

**Proposition 65 (California):**

**Chemicals known to cause cancer:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for females:**

None of the ingredients are listed.

**Chemicals known to cause reproductive toxicity for males:**

None of the ingredients are listed.

**Chemicals known to cause developmental toxicity:**

None of the ingredients are listed.

### Canada

**DSL (Canadian Domestic Substances List):**

7782-63-0 Ferrous Sulfate: not listed.

7732-18-5 Water: listed.

66-71-7 1,10-phenanthroline: listed.

## SECTION 16: Other information

**Abbreviations and Acronyms:** None

This product has been classified in accordance with hazard criteria of the Hazardous Products Regulations and the SDS contains all the information required by the Hazardous Products Regulations. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no

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liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**NFPA:** 1-0-0

**HMIS:** 1-0-0

**Date of Preparation:** 08.28.2016