SECTION 1: Identification of the substance/mixture and of the supplier

Product name: Ferric Sulfate, Reagent Grade

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: S25322A

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:
    AquaPhoenix Scientific
    9 Barnhart Drive, Hanover, PA 17331

Supplier Details:
    Fisher Science Education
    15 Jet View Drive, Rochester, NY 14624

Emergency telephone number:
    Fisher Science Education  Emergency Telephone No.: 800-535-5053

SECTION 2: Hazards identification

Classification of the substance or mixture:

Corrosive
    Serious eye damage, category 1
    Corrosive to metals, category 1

Irritant
    Acute toxicity (oral, dermal, inhalation), category 4
    Skin irritation, category 2

Corrosive to metals (Category 1)
Acute toxicity, Oral (Category 4)
Skin irritation (Category 2)
Serious eye damage (Category 1)

Signal word: Danger

Hazard statements:
    May be corrosive to metals
    Harmful if swallowed
    Causes serious eye damage
    Causes skin irritation

Precautionary statements:
    If medical advice is needed, have product container or label at hand
    Keep out of reach of children
    Read label before use
    Keep only in original container
    Wash … thoroughly after handling
    Do not eat, drink or smoke when using this product
    Wear protective gloves/protective clothing/eye protection/face protection
    Do not eat, drink or smoke when using this product
    Specific treatment (see … on this label)
IF ON SKIN: Wash with soap and water
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
If skin irritation occurs: Get medical advice/attention
Take off contaminated clothing and wash before reuse
Absorb spillage to prevent material damage
Immediately call a POISON CENTER or doctor/physician
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth
Store in a corrosive resistant/... container with a resistant inner liner
Dispose of contents/container to ...

Combustible Dust Hazard: :
May form combustible dust concentrations in air (during processing).

Other Non-GHS Classification:

WHMIS

NFPA/HMIS

SECTION 3 : Composition/information on ingredients

Ingredients:

| CAS 10028-22-5 | Ferric Sulfate monohydrate | 100 % |

Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. If breathing difficult, give oxygen. Give artificial respiration if necessary. Do NOT use mouth to mouth resuscitation.

After skin contact: Wash affected area with soap and water. Rinse thoroughly. Seek medical attention if irritation persists or if concerned. Wash clothes before reuse.

After eye contact: Protect unexposed eye. Remove contact lens(es) if able to do so during rinsing.
Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Immediately seek medical assistance or advice.

**After swallowing:** Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek immediate medical attention. If victim is conscious and alert give 2-4 cup fulls of milk or water.

**Most important symptoms and effects, both acute and delayed:**
- Irritation, Nausea, Headache, Shortness of breath.
- May cause kidney and liver damage

**Indication of any immediate medical attention and special treatment needed:**
- If seeking medical attention, provide SDS document to physician.

**SECTION 5 : Firefighting measures**

**Extinguishing media**
- **Suitable extinguishing agents:** If in laboratory setting, follow laboratory fire suppression procedures.
- **For safety reasons unsuitable extinguishing agents:**

**Special hazards arising from the substance or mixture:**
- Combustion products may include carbon oxides or other toxic vapors. Thermal decomposition can lead to release of irritating gases and vapors. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

**Advice for firefighters:**
- **Protective equipment:** Use NIOSH-approved respiratory protection/breathing apparatus.
- **Additional information (precautions):** Move product containers away from fire or keep cool with water spray as a protective measure, where feasible. Use spark-proof tools and explosion-proof equipment.

**SECTION 6 : Accidental release measures**

**Personal precautions, protective equipment and emergency procedures:**
- Wear protective equipment. Transfer to a disposal or recovery container. Avoid contact with skin, eyes and clothing. Use respiratory protective device against the effects of fumes/dust/aerosol. Ensure adequate ventilation. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent.

**Environmental precautions:**
- Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13

**Methods and material for containment and cleaning up:**
- If in a laboratory setting, follow Chemical Hygiene Plan procedures. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor. Dust deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Collect solids in powder form using vacuum with (HEPA filter)

**Reference to other sections:**

**SECTION 7 : Handling and storage**

**Precautions for safe handling:**
- Minimize dust generation and accumulation. Wash hands after handling. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, smoke, or use personal products when handling chemical substances. If in a laboratory setting, follow Chemical Hygiene Plan. Use only in well ventilated areas. Avoid contact with eyes, skin, and clothing.

**Conditions for safe storage, including any incompatibilities:**
Safety Data Sheet
according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 12.17.2014

Ferric Sulfate, Reagent Grade

Store in a cool location. Provide ventilation for containers. Avoid storage near extreme heat, ignition sources or open flame. Store away from foodstuffs. Store away from oxidizing agents. Store in cool, dry conditions in well sealed containers. Keep container tightly sealed.

SECTION 8 : Exposure controls/personal protection

Control Parameters: 10028-22-5, Ferric Sulfate, , ACGIH TLV: 1 mg/m3 TWA , OSHA PEL: NA

Appropriate Engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Use under a fume hood. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment).

Respiratory protection: Not required under normal conditions of use. Use suitable respiratory protective device when aerosol or mist is formed. For spills, respiratory protection may be advisable.

Protection of skin: The glove material has to be impermeable and resistant to the product/the substance/the preparation being used/handled. Chemical resistant gloves.

Eye protection: Safety glasses with side shields or goggles.

General hygienic measures: The usual precautionary measures are to be adhered to when handling chemicals. Keep away from food, beverages and feed sources. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases/fumes/dust/mist/vapor/aerosols. Avoid contact with the eyes and skin.

SECTION 9 : Physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance (physical state,color)</td>
<td>Yellow-gray solid</td>
</tr>
<tr>
<td>Explosion limit lower:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Explosion limit upper:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Odor:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not Determined</td>
</tr>
<tr>
<td>pH-value:</td>
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<tr>
<td>Melting/Freezing point</td>
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<tr>
<td>Boiling point/Boiling range:</td>
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<tr>
<td>Relative density:</td>
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</tr>
<tr>
<td>Is water soluble.</td>
<td></td>
</tr>
<tr>
<td>Solubilities:</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not Determined</td>
</tr>
</tbody>
</table>
SECTION 10 : Stability and reactivity

Reactivity:
Chemical stability: Stable under normal temperatures and pressures.
Possible hazardous reactions:
Conditions to avoid: Store away from oxidizing agents, strong acids or bases. Incompatible Materials.
Incompatible materials: Corrosive to metals.
Hazardous decomposition products: Oxides of sulfur.

SECTION 11 : Toxicological information

Acute Toxicity:
Oral: OECD 
LD50 Oral - Rat - > 500 - < 2,000 mg/kg

Chronic Toxicity: No additional information.

Corrosion Irritation: No additional information.

Sensitization: No additional information.

Single Target Organ (STOT): No additional information.

Numerical Measures: No additional information.

Carcinogenicity: NTP, IARC: Not listed

Mutagenicity: No additional information.

Reproductive Toxicity: No additional information.

SECTION 12 : Ecological information

Ecotoxicity Persistence and degradability:
Bioaccumulative potential: 
Mobility in soil: 
Other adverse effects: Is not biodegradable.

SECTION 13 : Disposal considerations

Waste disposal recommendations:
Product/containers must not be disposed together with household garbage. Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Consult federal state/provincial and
local regulations regarding the proper disposal of waste material that may incorporate some amount of this product.

SECTION 14 : Transport information

**UN-Number**
3260

**UN proper shipping name**
Corrosive solid, acidic, inorganic, n.o.s. (Diiron tris(sulphate) hydrate, Sulfuric acid)

**Transport hazard class(es)**

- Class:
  - 8 Corrosive substances

**Packing group:** III

**Environmental hazard:**

**Transport in bulk:**

**Special precautions for user:**

SECTION 15 : Regulatory information

**United States (USA)**

**SARA Section 311/312 (Specific toxic chemical listings):**
Reactive, Acute, Chronic

**SARA Section 313 (Specific toxic chemical listings):**
7664 - 93 - 9 Sulfuric Acid

**RCRA (hazardous waste code):**
None of the ingredients is listed

**TSCA (Toxic Substances Control Act):**
All ingredients are listed.

**CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):**
10028-22-5 Ferric Sulfate 1000

**Proposition 65 (California):**

- **Chemicals known to cause cancer:**
  7664 - 93 - 9 Sulfuric Acid

- **Chemicals known to cause reproductive toxicity for females:**
  None of the ingredients is listed

- **Chemicals known to cause reproductive toxicity for males:**
  None of the ingredients is listed

- **Chemicals known to cause developmental toxicity:**
  None of the ingredients is listed

**Canada**

**Canadian Domestic Substances List (DSL):**
All ingredients are listed.

**Canadian NPRI Ingredient Disclosure list (limit 0.1%):**

Created by Global Safety Management, Inc. - Tel: 1-813-435-5161 - www.gsmsds.com
None of the ingredients is listed

**Canadian NPRI Ingredient Disclosure list (limit 1%)**:
None of the ingredients is listed

**SECTION 16 : Other information**

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: 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 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.

**GHS Full Text Phrases:**

**Abbreviations and acronyms:**
IMDG: International Maritime Code for Dangerous Goods  
PNEC: Predicted No-Effect Concentration (REACH)  
CFR: Code of Federal Regulations (USA)  
SARA: Superfund Amendments and Reauthorization Act (USA)  
RCRA: Resource Conservation and Recovery Act (USA)  
TSCA: Toxic Substances Control Act (USA)  
NPRI: National Pollutant Release Inventory (Canada)  
DOT: US Department of Transportation  
IATA: International Air Transport Association  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
ACGIH: American Conference of Governmental Industrial Hygienists  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
WHMIS: Workplace Hazardous Materials Information System (Canada)  
DNEL: Derived No-Effect Level (REACH)

**Effective date**: 12.17.2014  
**Last updated**: 03.19.2015