F1368 -04 Ferric Sulfate, n-Hydrate
Effective: 03/09/92
Page: 1
Issued: 07/10/93

J.T.BAKER INC., 222 Red School Lane, Phillipsburg, NJ 08865

SECTION I - PRODUCT IDENTIFICATION

Product Name: Ferric Sulfate, n-Hydrate
Common Synonyms: Iron (III) Sulfate, Hydrate; Iron Sesquisulfate, Hydrate;
Iron Persulfate
Chemical Family: Iron Compounds
Formula: Fe₂(SO₄)₃•nH₂O
Formula Wt.: N/A
CAS No. : 10028-22-5
NIOSH/RTCS No.: N08505000
Product Use: Laboratory Reagent
Product Codes: 2046

PRECAUTIONARY LABELING

BAKER SAF-T-DATA+ System

<table>
<thead>
<tr>
<th>HEALTH</th>
<th>FLAMMABILITY</th>
<th>REACTIVITY</th>
<th>CONTACT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slight</td>
<td>None</td>
<td>None</td>
<td>Moderate</td>
</tr>
</tbody>
</table>

Laboratory Protective Equipment

- Goggles
- Lab Coat

U.S. Precautionary Labeling

WARNING!
CAUSES IRRITATION. MAY BE HARMFUL IF SWALLOWED OR INHALED.
Avoid contact with eyes, skin, clothing. Avoid breathing dust. Keep in
a tightly closed container. Use with adequate ventilation. Wash thoroughly
after handling.

Continued on Page: 2
F1368 -04  Ferric Sulfate, n-Hydrate Page: 2
Effective: 03/09/92

Issued: 07/10/93

PRECAUTIONARY LABELING (CONTINUED)

International Labeling

Avoid contact with eyes. After contact with skin, wash immediately with plenty of water. Keep container tightly closed.

SAF-T-DATA* Storage Color Code: Orange (general storage)

SECTION II - COMPONENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS No.</th>
<th>Weight %</th>
<th>OSHA/PEL</th>
<th>ACGIH/TLU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ferric Sulfate, n-Hydrate</td>
<td>10028-22-5</td>
<td>90-100</td>
<td>1 mg/m^3</td>
<td>1 mg/m^3</td>
</tr>
</tbody>
</table>

TLV and PEL are for Iron salts, soluble, as Fe.

SECTION III - PHYSICAL DATA

Boiling Point: N/A

Vapor Pressure (mmHg): N/A

Melting Point: N/A

Vapor Density (air=1): N/A

Specific Gravity: 3.10

Evaporation Rate: N/A

(H_2O=1)

% Volatiles by Volume: 0

Solubility(H_2O): Appreciable (>10%)

(21°C)

pH: N/A

% Volatiles by Volume: 0

Odor Threshold (ppm): N/A

Physical State: Solid

Coefficient Water/Oil Distribution: N/A

Appearance & Odor: White to gray solid. Odorless.

Continued on Page: 3
F1368 - 04
Effective: 03/09/92
Ferric Sulfate, n-Hydrate

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point (Closed Cup): N/A
Autoignition Temperature: N/A
Flammable Limits: Upper - N/A  Lower - N/A

Fire Extinguishing Media
Use extinguishing media appropriate for surrounding fire.

Special Fire-Fighting Procedures
Firefighters should wear proper protective equipment and self-contained breathing apparatus with full facepiece operated in positive pressure mode.

Unusual Fire & Explosion Hazards
None identified.

Toxic Gases Produced
sulfur dioxide

Explosion Data-Sensitivity to Mechanical Impact
None identified.

Explosion Data-Sensitivity to Static Discharge
None identified.

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value (TLU/TWA): 1 mg/m³
TLU is for Iron salts, soluble, as Fe.
Short-Term Exposure Limit (STEL): Not Established
Permissible Exposure Limit (PEL): 1 mg/m³
PEL is for Iron salts, soluble, as Fe.
Toxicity of components
Intraperitoneal Mouse LD₅₀ for Ferric Sulfate, n-Hydrate 601 mg/kg
SECTION V - HEALTH HAZARD DATA (CONTINUED)

Carcinogenicity: NTP: No IARC: No Z List: No OSHA Reg: No

Reproductive Effects
None identified.

Effects of Overexposure

INHALATION: irritation of upper respiratory tract, irritation of mucous membranes

SKIN CONTACT: irritation

EYE CONTACT: irritation

SKIN ABSORPTION: none identified

INGESTION: nausea, vomiting, gastrointestinal irritation

CHRONIC EFFECTS: liver damage

Target Organs
liver

Medical Conditions Generally Aggravated by Exposure
none identified

Primary Routes of Entry
inhalation, ingestion, skin contact, eye contact

Emergency and First Aid Procedures

INGESTION: CALL A PHYSICIAN. If swallowed, if conscious, give large amounts of water. Induce vomiting.

INHALATION: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

SKIN CONTACT: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before re-use.
F1368-04  Ferric Sulfate, n-Hydrate  Effective: 03/09/92  Page: 5  Issued: 07/10/93

SECTION V - HEALTH HAZARD DATA (CONTINUED)

EYE CONTACT: In case of eye contact, immediately flush with plenty of water for at least 15 minutes.

SARA/TITLE III HAZARD CATEGORIES and LISTS

Acute: No  Chronic: Yes  Flammability: No  Pressure: No  Reactivity: No

Extremely Hazardous Substance: No  Contains Ferric Sulfate (RQ = 1000 LBS)
CERCLA Hazardous Substance: Yes  SARA 313 Toxic Chemicals: No
TSCA Inventory: Yes

SECTION VI - REACTIVITY DATA

Stability: Stable  Hazardous Polymerization: Will not occur
Conditions to Avoid: moisture, light
Incompatibles: mineral acids
Decomposition Products: oxides of sulfur

SECTION VII - SPILL & DISPOSAL PROCEDURES

Steps to be Taken in the Event of a Spill or Discharge
Wear suitable protective clothing. Carefully sweep up and remove.

Disposal Procedure
Dispose in accordance with all applicable federal, state, and local environmental regulations.

SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

Ventilation: Use general or local exhaust ventilation to meet TLV requirements.

Respiratory Protection: None required where adequate ventilation conditions exist. If airborne concentration exceeds TLV, a dust/mist respirator is recommended. If concentration exceeds capacity of respirator, a self-contained

Continued on Page: 6
F1368 -04  
Effective: 03/09/92  

Ferric Sulfate, n-Hydrate  

Page: 6  
Issued: 07/10/93

SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT (CONTINUED)

breathing apparatus is advised.

Eye/Skin Protection: Safety goggles, proper gloves are recommended.

SECTION IX - STORAGE AND HANDLING PRECAUTIONS

SAF-T-DATA: Storage Color Code: Orange (general storage)

Storage Requirements
Keep container tightly closed. Suitable for any general chemical storage area. Store in light-resistant containers.

Special Precautions
Material is hygroscopic.

SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

Domestic (D.O.T.)
Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)

International (I.M.O.)
Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)
Marine Pollutants: No

AIR (I.C.A.O.)
Proper Shipping Name: Chemicals, n.o.s. (Non-regulated)

U.S. Customs Harmonization Number: 28332900006

N/A = Not Applicable or Not Available
N/E = Not Established

The information in this Material Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) and the Canadian WORKPLACE HAZARDOUS MATERIALS INFORMATION SYSTEM. This document is intended only as a guide to the appropriate precautionary handling of
the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the precautions and dangers of this chemical for his or her particular application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes.

Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, Baker cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. Baker warrants that the chemical meets the specifications set forth on the label. BAKER DISCLAIMS ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED WITH REGARD TO THE PRODUCT SUPPLIED HEREUNDER, ITS MERCHANTABILITY OR ITS FITNESS FOR A PARTICULAR PURPOSE.

The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. READ ALL PRECAUTIONARY INFORMATION. As new documented general safety information becomes available, Baker will periodically revise this Material Safety Data Sheet.

Note: CHEMTREC, CANUTEC, and NATIONAL RESPONSE CENTER emergency telephone numbers are to be used ONLY in the event of CHEMICAL EMERGENCIES involving a spill, leak, fire, exposure, or accident involving chemicals. All non-emergency questions should be directed to Customer Service (1-800-JTBAKER) for assistance.

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