



J.T. Baker Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865

24-Hour Emergency Telephone 908-859-2151  
National Response Center 800-424-8802  
Chemtrec 800-424-9300

National Response In Canada  
CANUTEC 613-996-6666

Outside U.S. and Canada  
Chemtrec 202-483-7616

# MATERIAL SAFETY DATA SHEET

FICHE  
SIGNALÉTIQUE

HOJAS DE DATOS  
DE SEGURIDAD

**NOTE:** CHEMTREC, CANUTEC and National Response Center emergency 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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Effective: 06/09/93

Ferric Chloride, 6-Hydrate

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

## SECTION I - PRODUCT IDENTIFICATION

Product Name: Ferric Chloride, 6-Hydrate  
Common Synonyms: Iron (III) Chloride, Hexahydrate  
Chemical Family: Iron Compounds  
Formula:  $\text{FeCl}_3 \cdot 6\text{H}_2\text{O}$   
Formula Wt.: 270.30  
CAS No.: 10025-77-1  
NIOSH/RTECS No.: N05425000  
Product Use: Laboratory Reagent  
Product Codes: 1996,2000

## PRECAUTIONARY LABELING

BAKER SAF-T-DATA\* System

HEALTH	FLAMMABILITY	REACTIVITY	CONTACT
<b>1</b>	<b>0</b>	<b>1</b>	<b>2</b>
SLIGHT	NONE	SLIGHT	MODERATE

## Laboratory Protective Equipment



## U.S. Precautionary Labeling

### WARNING!

CAUSES IRRITATION. HARMFUL IF SWALLOWED OR INHALED.

Avoid contact with eyes, skin, clothing. Do not breathe dust. Keep in tightly closed container. Use with adequate ventilation. Wash thoroughly after handling.

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## PRECAUTIONARY LABELING (CONTINUED)

### International Labeling

Causes burns.

Keep container tightly closed and dry. After contact with skin, wash immediately with plenty of soap and water.

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

## SECTION II - COMPONENTS

Component	CAS No.	Weight %	OSHA/PEL	ACGIH/TLV
Ferric Chloride, 6-Hydrate	10025-77-1	90-100	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>

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

## SECTION III - PHYSICAL DATA

Boiling Point: 280°C (536°F)  
(at 760 mm Hg)

Vapor Pressure (mmHg): N/A

Melting Point: 137°C (98°F)  
(at 760 mm Hg)

Vapor Density (air=1): N/A

Specific Gravity: 1.82  
(H<sub>2</sub>O=1)

Evaporation Rate: N/A

Solubility(H<sub>2</sub>O): Appreciable (>10%)

% Volatiles by Volume: 0  
(21°C)

pH: N/A

Odor Threshold (ppm): N/A

Physical State: Solid

Coefficient Water/Oil Distribution: N/A

Appearance & Odor: Yellow-brown to orange crystals.



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## 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

hydrogen chloride

### Explosion Data-Sensitivity to Mechanical Impact

None identified.

### Explosion Data-Sensitivity to Static Discharge

None identified.

## SECTION V - HEALTH HAZARD DATA

Threshold Limit Value (TLV/TWA): 1 mg/m<sup>3</sup>

TLV is for Iron salts, soluble, as Fe.

Short-Term Exposure Limit (STEL): Not Established

Permissible Exposure Limit (PEL): 1 mg/m<sup>3</sup>

PEL is for Iron salts, soluble, as Fe.

### Toxicity of components

Intraperitoneal Mouse LD<sub>50</sub> for Ferric Chloride, 6-Hydrate

260 mg/kg



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## SECTION V - HEALTH HAZARD DATA (CONTINUED)

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

Carcinogenicity  
None identified.

Reproductive Effects  
None identified.

### Effects of Overexposure

INHALATION: irritation of upper respiratory tract

SKIN CONTACT: severe irritation or burns

EYE CONTACT: severe irritation or burns

SKIN ABSORPTION: none identified

INGESTION: nausea, vomiting, gastrointestinal irritation, burns to mouth and throat

CHRONIC EFFECTS: liver damage

Target Organs  
liver

Medical Conditions Generally Aggravated by Exposure  
none identified

Primary Routes of Entry  
ingestion, inhalation, 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.



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## 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: Yes Chronic: Yes Flammability: No Pressure: No Reactivity: No

Extremely Hazardous Substance: No  
CERCLA Hazardous Substance: No  
SARA 313 Toxic Chemicals: No  
TSCA Inventory: Yes

## SECTION VI - REACTIVITY DATA

Stability: Stable Hazardous Polymerization: Will not occur  
Conditions to Avoid: moisture, light, heat  
Incompatibles: most common metals, strong bases, sodium, potassium, mineral acids  
Decomposition Products: hydrogen chloride

## SECTION VII - SPILL & DISPOSAL PROCEDURES

### Steps to be Taken in the Event of a Spill or Discharge

Wear self-contained breathing apparatus and full protective clothing. With clean shovel, carefully place material into clean, dry container and cover; remove from area. Flush spill area with water.

### Disposal Procedure

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



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## SECTION VIII - INDUSTRIAL PROTECTIVE EQUIPMENT

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

Respiratory Protection: Respiratory protection required if airborne concentration exceeds TLV. At concentrations up to 1 mg/m<sup>3</sup>, a dust/mist respirator is recommended. If airborne concentration exceeds capacity of respirator, a self-contained breathing apparatus is advised.

Eye/Skin Protection: Safety goggles, uniform, 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. Keep containers out of sun and away from heat.

## SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION

### Domestic (D.O.T.)

Proper Shipping Name: Ferric Chloride  
Hazard Class: 8 (Corrosive material)  
UN/NA: UN1773 Reportable Quantity: 1000 LBS. Packaging Group: III  
Labels: CORROSIVE  
Regulatory References: 49CFR 172.101

### International (I.M.O.)

Proper Shipping Name: Corrosive solids, n.o.s. (Ferric Chloride, 6-Hydrate)  
Hazard Class: 8 I.M.O. Page: 8151  
UN: UN1759 Marine Pollutants: No Packaging Group: III  
Labels: CORROSIVE  
Regulatory References: 49CFR 172.12(b); IMDG Code



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## SECTION X - TRANSPORTATION DATA AND ADDITIONAL INFORMATION (CONTINUED)

### AIR (I.C.A.O.)

Proper Shipping Name: Ferric Chloride

Hazard Class: 8

UN: UN1773

Packaging Group: III

Labels: CORROSIVE

Regulatory References: 49CFR 172.101; ICAO=== We believe the transportation data and references contained herein to be factual and the opinion of qualified experts. The data is meant as a guide to the overall classification of the product and is not package size specific, nor should it be taken as a warranty or representation for which the company assumes legal responsibility.=== The information is offered solely for your consideration, investigation, and verification. Any use of the information must be determined by the user to be in accordance with applicable Federal, State, and Local laws and regulations. See shipper requirements 49CFR 172.3 and employee training 49CFR 173.1.

U.S. Customs Harmonization Number: 28273300008

N/A = Not Applicable or Not Available

N/E = Not Established

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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

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## 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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Approved by Quality Assurance Department.