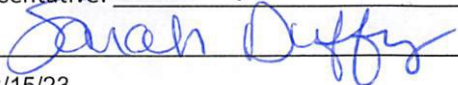


**BAY AREA CHEMICAL CONSORTIUM  
STANDARD AGREEMENT, PAGE 1 OF 2  
BID NO. 06-2023  
SUPPLY AND DELIVERY OF FERRIC CHLORIDE**

I hereby agree to furnish FERRIC CHLORIDE identified in the attached bid forms, as solicited by the Bay Area Chemical Consortium (BACC), to one or more of the participating BACC Agencies.

Company: Pencco, Inc.  
Address: PO Box 600  
City, State, ZIP: San Felipe, Tx 77473  
Phone: 979.885.0005  
Email: sarah@pencco.com  
Authorized Representative: Sarah Duffy  
Signature:   
Date: 2/15/23

**WE ACKNOWLEDGE RECEIVING ADDENDUM/ADDENDA NUMBER    THROUGH   .**

**SPECIFIC DEVIATIONS:**

This box must be checked if bidder has any proposed specific deviations. Per Section 2.12 Proposed Deviations from the Specifications by the Bidder, the absence of a proposed change in the specifications will hold the bidder strictly accountable to the specifications as described in the bid document, including any addendum.

Describe the specific deviations below. A copy of the proposed specifications must be attached to this Standard Agreement at the time of submission, with bidder's name clearly shown on each document.

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**STANDARD AGREEMENT, PAGE 2 OF 2**

**BIDDER INFORMATION**

1. Legal Name of Bidder:  
Pencco, Inc.
  
2. Bidder's Street Address:  
831 Bartlett Rd, Sealy, Tx 77474
  
3. Mailing Address:  
PO Box 600 San Felipe, Tx 77473
  
4. Business Telephone: 979.885.0005 Fax Number: 979.885.3208
  
5. Type of Supplier:  
 Sole Proprietor       Partnership       Corporation       LLC  
If Corporation, indicate State where incorporated: Texas
  
6. Business License Number issued by the City where the Supplier's principal place of business is located.  
Number: \_\_\_\_\_ Issuing City: \_\_\_\_\_
  
7. Supplier Federal Tax Identification Number: 74-2333384
  
8. Emergency Contact: Name: Pencco, Inc.  
Phone Number: 979.885.0005
  
9. Order Contact: Name: Danny Herrera  
Address: 4921 Gifford Avenue, Vernon, CA 90058  
Phone Number: 323.210.4473 Fax Number: 979.885.3208  
Email: orderswest@pencco.com
  
10. References:

<u>Company/Agency Name</u>	<u>Contact Name</u>	<u>Phone Number</u>
<u>1) Long Beach Water Department</u>	<u>Armando Arzate</u>	<u>562.570.2406</u>
<u>2) City of Sacramento, CA</u>	<u>Tamblynn Stewart</u>	<u>916.876.6000</u>
<u>3) City of Glendale, AZ</u>	<u>Anthony Weathersby</u>	<u>623.930.2864</u>
  
11. Chemical Manufacturer's name and address (if different from Bidder):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Non-Collusion Affidavit**  
**To Be Executed By Bidder and Submitted With Bid**

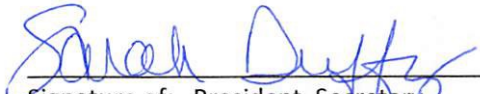
State of ~~California~~ Texas )  
 ) ss.  
County of Austin )

Sarah Duffy, being first duly sworn, deposes and says that he or she is the  
(Bidder's Authorized Representative)

Bid Sec. \_\_\_\_\_ of Pencco, Inc. the party making the  
(Title of Representative) (Legal Name of Bidder)

foregoing bid that the bid is not made in the interest of, or on behalf of, any undisclosed person, partnership, company, association, organization, or corporation; that the bid is genuine and not collusive or sham; that the bidder has not directly or indirectly induced or solicited any other bidder to put in a false or sham bid, and has not directly or indirectly colluded, conspired, connived, or agreed with any bidder or anyone else to put in a sham bid, or that anyone shall refrain from bidding; that the bidder has not in any manner, directly or indirectly, sought by agreement, communication, or conference with anyone to fix the bid price of the bidder or any other bidder, or to fix any overhead, profit, or cost element of the bid price, or of that of any other bid, or to secure any advantage against the public body awarding the contract of anyone interested in the proposed contract; that all statements contained in the bid are true; and, further, that the bidder has not, directly or indirectly, submitted his or her bid price or any breakdown thereof, or the contents thereof, or divulged information or data relative thereto, or paid, and will not pay, any fee to any corporation, partnership, company association, organization, bid depository, or to any member or agent thereof to effectuate a collusive or sham bid.

I declare under penalty of perjury under the laws of the state of California that the foregoing is true and correct.

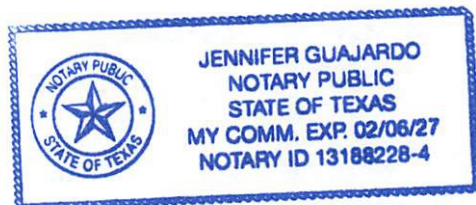
  
Signature of: President, Secretary,  
Manager, Owner, or Representative

Subscribed and sworn to before me this, 15 day of February, 20 23

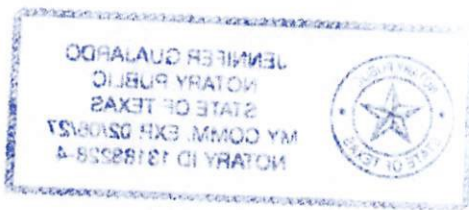
  
Signature of Notary Public In and For

The County of Austin

State of Texas



**All Signatures Must Be Witnessed By Notary**





**BAY AREA CHEMICAL CONSORTIUM  
BID FORM FOR BID NO. 06-2023  
FOR SUPPLY AND DELIVERY OF FERRIC CHLORIDE**

Sealed bids must be submitted in a PDF format and bidders must enter bid prices into the electronic bid platform (Line Item page)  
<https://bacwa.org/bacc/>

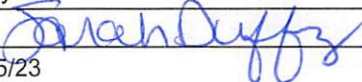
No later than 4:00 PM. PT  
Thursday, February 23, 2023

Legal Name of Bidder:  
Pencco, Inc.

Business Address  
PO Box 600 San Felipe, Tx 77473

Telephone Number: 979.885.0005  
Facsimile Number: 979.885.3208  
Email Address: sarah@pencco.com

Authorized Representative (Please Print):  
Sarah Duffy

Signature:   
Date: 2/15/23

**I. All costs except California State sales tax for the purchase of FERRIC CHLORIDE must be included in the amount shown entered into the electronic bid platform (Line Item page), including any and all mill assessments, fees, excise taxes, transportation charges, etc. Any exceptions to the bid must be noted under Specific Deviations on the Standard Agreement. Bidders shall submit bids per unit of measure as specified in the electronic bid platform (Line Item page).**

**II. Bidders must submit all of the following, attached to this Bid Form:**

- a. All requirements listed in Section 2.21 Manufacturer's Info.
- b. If applicable, the name, address, and contact information for the third party hauling company as well as an affidavit signed by the Bidder that the third party hauler can and will deliver the chemical to each and every participating BACC Agency.

**III. Bidder Obligations**

By signing this Bid Form and entering into individual purchase orders, purchase agreements and /or contracts with BACC agencies, the bidder expressly agrees to be bound by all the provisions of the bid solicitation, including Sections I-IV.



PO Box 600 San Felipe, Texas 77473  
(979) 885-0005 Fax: (979) 885-3208

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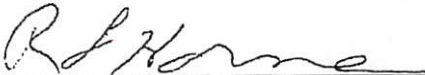
## BOARD OF DIRECTORS MEETING

Prior Notice was waived and a meeting of the Directors was held on August 15, 2014. The following resolution was adopted in respects to the official signing of bids on behalf of Penccco, Inc.

BE IT RESOLVED by the Board of Directors of Penccco, Inc. in a meeting duly assembled that Monica Avila, former Bid Secretary of the Corporation, no longer has authority to negotiate for and sign any bid proposals and/or contracts on behalf of the Corporation.

BE IT FURTHER RESOLVED that Sarah Duffy, Bid Secretary, of the Corporation has authority to negotiate for and sign any bid proposals and/or contracts which the Corporation might enter into for the furnishing of services for the Corporation under such terms, conditions, and stipulations, and for such consideration as she may deem to be in the best interest of the Corporation.

No further business was necessary and the meeting was concluded.

  
Ron L. Horne, President

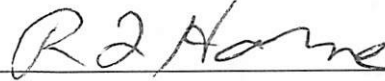


PO Box 600 San Felipe, Texas 77473  
(979) 885-0005 Fax: (979) 885-3208

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## AFFIDAVIT OF COMPLIANCE

This is to certify that the Liquid Ferric Chloride supplied by our company meets AWWA Standard B407-18 or the latest revision and is certified to NSF/ANSI Standard NSF-60.



\_\_\_\_\_  
Signature

R. L. Horne, President

\_\_\_\_\_  
Name and Title of Official

1/14/2022

\_\_\_\_\_  
Date

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The Public Health and Safety Organization

## NSF Product and Service Listings

These NSF Official Listings are current as of **Wednesday, February 15, 2023** at 12:15 a.m. Eastern Time. Please contact NSF to confirm the status of any Listing, report errors, or make suggestions.

Alert: NSF is concerned about fraudulent downloading and manipulation of website text. Always confirm this information by clicking on the below link for the most accurate information:

<http://info.nsf.org/Certified/PwsChemicals/Listings.asp?CompanyName=penco&>

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## NSF/ANSI/CAN 60 Drinking Water Treatment Chemicals - Health Effects

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### PENCCO, Inc.

831 Bartlett Road

Sealy, TX 77474

United States

800-864-1742

979-885-0005

Visit this company's website

(<http://www.penco.com>)

**Facility :** Distribution Center - Birmingham, AL

#### Ferric Sulfate

##### *Trade Designation*

50% Ferric Sulfate

60% Ferric Sulfate

Ferric Sulfate

Ferric Sulfate Solution

Poly Ferric Sulfate

##### *Product Function*

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

Coagulation & Flocculation

##### *Max Use*

650mg/L

650mg/L

650mg/L

650mg/L

650mg/L

**Facility : Distribution Center - Stockton, CA****Ferric Chloride**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Ferric Chloride	Coagulation & Flocculation	600mg/L

**Hydrofluosilicic Acid**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Fluorosilicic Acid	Fluoridation	5mg/L
Fluosilicic Acid	Fluoridation	5mg/L
HFS	Fluoridation	5mg/L
HFSA	Fluoridation	5mg/L
Hydrofluorosilicic Acid	Fluoridation	5mg/L
Hydrofluosilicic Acid	Fluoridation	5mg/L

**Facility : Vernon, CA****Ferric Chloride**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Ferric Chloride	Coagulation & Flocculation	600mg/L

**Ferrous Chloride**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Ferrous Chloride	Coagulation & Flocculation	500mg/L

**Facility : Distribution Center - Willow Springs, IL****Hydrofluosilicic Acid**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Fluorosilicic Acid	Fluoridation	5mg/L
Fluosilicic Acid	Fluoridation	5mg/L
Hydrofluosilicic Acid	Fluoridation	5mg/L



**Facility : Distribution Center - Whippany, NJ****Hydrofluosilicic Acid**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Hydrofluosilicic Acid	Fluoridation	5mg/L

**Facility : Distribution Center - Hickory, NC****Fluorosilicic Acid**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Fluorosilicic Acid	Fluoridation	5mg/L
Fluosilicic Acid	Fluoridation	5mg/L
HFS	Fluoridation	5mg/L
HFSA	Fluoridation	5mg/L
Hydrofluorosilicic Acid	Fluoridation	5mg/L
Hydrofluosilicic Acid	Fluoridation	5mg/L

**Facility : Distribution Center - Morganton, NC****Fluorosilicic Acid**

<i>Trade Designation</i>	<i>Product Function</i>	<i>Max Use</i>
Fluorosilicic Acid	Fluoridation	5mg/L
Fluosilicic Acid	Fluoridation	5mg/L
HFS	Fluoridation	5mg/L
HFSA	Fluoridation	5mg/L
Hydrofluorosilicic Acid	Fluoridation	5mg/L
Hydrofluosilicic Acid	Fluoridation	5mg/L

**Facility : Middlesex, NC****Ferric Sulfate**

**Trade Designation**

50% Ferric Sulfate  
 60% Ferric Sulfate  
 Ferric Sulfate  
 Penn 3202  
 Poly Ferric Sulfate

**Product Function**

Coagulation & Flocculation  
 Coagulation & Flocculation  
 Coagulation & Flocculation  
 Coagulation & Flocculation  
 Coagulation & Flocculation

**Max Use**

650mg/L  
 650mg/L  
 650mg/L  
 650mg/L  
 650mg/L

**Hydrofluosilicic Acid****Trade Designation**

Hydrofluorosilicic Acid

**Product Function**

Fluoridation

**Max Use**

5mg/L

**Facility : Distribution Center - Bardwell, TX****Ferric Chloride****Trade Designation**

Ferric Chloride  
 Pencco 3012

**Product Function**

Coagulation & Flocculation  
 Coagulation & Flocculation

**Max Use**

600mg/L  
 600mg/L

**Ferric Sulfate****Trade Designation**

Ferric Sulfate Solution

**Product Function**

Coagulation & Flocculation

**Max Use**

650mg/L

**Ferrous Chloride****Trade Designation**

Ferrous Chloride  
  
 Pencco 0210

**Product Function**

Corrosion Control  
 Coagulation & Flocculation  
 Corrosion Control  
 Coagulation & Flocculation

**Max Use**

500mg/L  
  
 500mg/L

**Hydrofluosilicic Acid****Trade Designation**

Hydrofluorosilicic Acid

**Product Function**

Fluoridation

**Max Use**

5mg/L

**Facility : Ennis, TX****Ferric Chloride**

**Trade Designation**

Ferric Chloride

Penco 3012

**Product Function**

Coagulation &amp; Flocculation

Coagulation &amp; Flocculation

**Max Use**

600mg/L

600mg/L

**Ferric Sulfate****Trade Designation**

50% Ferric Sulfate

60% Ferric Sulfate

Ferric Sulfate

Ferric Sulfate Solution

Poly Ferric Sulfate

**Product Function**

Coagulation &amp; Flocculation

Coagulation &amp; Flocculation

Coagulation &amp; Flocculation

Coagulation &amp; Flocculation

Coagulation &amp; Flocculation

**Max Use**

650mg/L

650mg/L

650mg/L

650mg/L

650mg/L

**Ferrous Chloride****Trade Designation**

Ferrous Chloride

Penco 0210

**Product Function**

Corrosion Control

Coagulation &amp; Flocculation

Corrosion Control

Coagulation &amp; Flocculation

**Max Use**

500mg/L

500mg/L

**Ferrous Sulfate****Trade Designation**

Ferrous Sulfate

GreenIron

SafeIron

**Product Function**

Coagulation &amp; Flocculation

Coagulation &amp; Flocculation

Coagulation &amp; Flocculation

**Max Use**

150mg/L

150mg/L

150mg/L

**Hydrofluosilicic Acid****Trade Designation**

Hydrofluorosilicic Acid

**Product Function**

Fluoridation

**Max Use**

5mg/L

**Facility : Sealy, TX****Ferric Sulfate****Trade Designation**

50% Ferric Sulfate

60% Ferric Sulfate

Ferric Sulfate

Ferric Sulfate Solution

Penn 3202

**Product Function**

Coagulation &amp; Flocculation

Coagulation &amp; Flocculation

Coagulation &amp; Flocculation

Coagulation &amp; Flocculation

Coagulation &amp; Flocculation

**Max Use**

650mg/L

650mg/L

650mg/L

650mg/L

650mg/L

Poly Ferric Sulfate

Coagulation & Flocculation

650mg/L

**Hydrofluosilicic Acid**

***Trade Designation***

***Product Function***

***Max Use***

Fluorosilicic Acid

Fluoridation

5mg/L

Fluosilicic Acid

Fluoridation

5mg/L

Hydrofluosilicic Acid

Fluoridation

5mg/L

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Number of matching Manufacturers is 1

Number of matching Products is 64

Processing time was 1 seconds



Customer Service 800-864-1742  
FAX 888-273-6226

## Safety Data Sheet (SDS) Ferric Chloride Solution

### SECTION 1 – Chemical Identification and Supplier's Information

**Product ID:** Ferric Chloride Solution  
**Product Use:** Water Treatment Chemical  
**Product Formula:** FeCl<sub>3</sub>  
**Chemical Family:** Inorganic Iron Salts  
**CAS #:** 7705-08-0

**Supplier's Name and Address:**

Pencco, Inc.  
P.O. Box 600  
San Felipe, TX 77473

**Emergency Phone Number:**

PENCCO (979) 885-0005  
CHEMTREC (800) 424-9300 – 24 hours a day

### SECTION 2 – Hazard Identification

#### GHS Information

**Signal Word:** **Warning**

**Hazard Class:** Corrosive to Metals (H290)

**Hazard Category:** 1

**Hazard Statement:** Toxic if Swallowed (H301)  
Causes severe skin damage and eye damage. (H314)

**Appearance and Odor:** Reddish-brown liquid with a slightly acidic odor.

**Emergency Overview:** A corrosive chemical. Harmful or fatal if swallowed. Harmful if inhaled. Eye or skin contact may cause irritation. Contact with liquid or vapor form of this chemical may cause severe injury. Avoid overexposure.

**Pictograms:**



#### Health Hazards

**Acute Toxicity, Oral** – Category 4. Toxic if ingested. May cause irritation to the mouth and stomach. Higher doses may lead to abnormal liver function with nausea or vomiting, stomach pain, diarrhea, fast and weak pulse, lethargy, pallor, shock, hypertension, dilated pupils, fever, coma, and even death. Individuals with pre-existing liver diseases may have increased susceptibility to the toxicity of exposure.

**Acute Toxicity, Dermal** – Category 4. Prolonged contact may cause irritation and, possibly, burns.

**Eye Contact** – Irritation and, possibly, burns.

**Inhalation** – May cause irritation of the upper respiratory tract, resulting in difficulty breathing.

#### Precautionary Statements

##### Prevention

- Wash skin thoroughly after handling. (P264)
- Do not eat, drink, or smoke when using this product. (P270)





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- Avoid release to the environment. (P273)

Response

- If swallowed: Rinse mouth. (P301+P330)
  - Call a POISON CENTER/doctor/physician. (P312)
  - Collect spillage (P391)

Disposal Considerations

- Dispose of this material and its container to hazardous or special waste collection point in accordance with local, regional, national, and/or international regulation. (P501)

**Carcinogenicity:** None of the components of this material are listed as a carcinogen by IARC, NTP, OSHA, or ACGIH.

**Fire and Explosion Hazards:** Substance itself does not burn, but may decompose upon heating to produce corrosive and/or toxic fumes. Not considered a fire or explosion hazard.

	NFPA Rating	HMIS Rating	4 = Extreme / Severe
Health	2	2	3 = High / Serious
Reactivity	0	0	2 = Moderate
Flammability	0	0	1 = Slight

**SECTION 3 – Composition/Information on Ingredients**

**Chemical Identity:** FeCl<sub>3</sub>

**Common Name and Synonyms:** Ferric chloride; no known synonyms

Ingredient	CAS #	Weight Percentage	ACGIH TLV	OSHA PEL	STEL
Water	7732-18-5	58 – 72%	N/A	N/A	N/A
Ferric Chloride	7705-08-0	28 – 42%	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	N/A
Ferrous Chloride	7758-94-3	<0.5%	1 mg/m <sup>3</sup>	1 mg/m <sup>3</sup>	N/A
Hydrochloric Acid	7647-01-0	<0.5%	5 ppm	5 ppm	N/A

**Section 313 Supplier Notification:** The hydrochloric acid mentioned above is subject to the reporting requirements of SARA TITLE III Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 (40 CFR 372). This notification must be included in all MSDS's that are copied and distributed for this material.

**SECTION 4 – First Aid Measures**

**Eye Contact First Aid:** Immediately flush eyes for 15 minutes with large amounts of water while holding eyelids apart. Washing within one minute is essential to achieve maximum effectiveness. Obtain medical attention IMMEDIATELY after flushing.

**Skin Contact First Aid:** Flush skin with water. Remove contaminated clothing; wash before reuse. If irritation is still present, seek medical attention IMMEDIATELY.

**Inhalation First Aid:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention IMMEDIATELY.

**Ingestion First Aid:** DO NOT INDUCE VOMITING. Give 1 or 2 glasses of water or milk. Never give anything by mouth to an unconscious individual. Obtain medical attention IMMEDIATELY.



Customer Service 800-864-1742  
FAX 888-273-6226

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## SECTION 5 – Fire Fighting Measures

**Flash Point:** Not applicable.

**Upper/Lower Explosion Limits in Air:** Not applicable.

**Auto Ignition Temperature:** Not applicable.

**Extinguishing Media:** Will not burn; use materials appropriate for surrounding fire.

**Fire and Explosion Hazards:** Substance itself does not burn, but may decompose upon heating to produce corrosive and/or toxic fumes, such as hydrogen chloride and phosgene gas. Ferric chloride can react with metals to form flammable and potentially explosive hydrogen gas.

**Fire Fighting Instructions:** Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face-piece operated in a positive pressure mode. Move exposed containers from fire area if it can be done without risk. Use water to keep fire-exposed containers and tanks cool.

**Hazardous Product of Decomposition or Combustion:** Hydrogen chloride, hydrogen, phosgene.

---

## SECTION 6 – Accidental Release Measures

Review safety precautions before proceeding with cleanup. Use appropriate personal protection equipment. Do not touch spilled material. Neutralize spill with lime (calcium hydroxide), limestone (calcium carbonate), or soda ash (sodium carbonate). Restrict access to area until completion of clean up.

**Caution:** limestone and soda ash will evolve CO<sub>2</sub>; ventilation should be provided in enclosed areas. Dike area around spill to prevent spreading, and use absorbent material to pick up spill.

**CERCLA Reportable Discharge (RQ):** 1000 lbs. (454 kg), Based on anhydrous ferric chloride. Divide by solution concentration to obtain solution weight.

**Disposal:** Under the Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user to determine whether a substance should be classified as a hazardous waste at the time of disposal. This is due to the fact that product use, transformation, synthesis, mixtures, etc. may change the nature of the product. Dispose of waste in accordance with applicable federal, state, and local laws.

**RCRA:** Test waste material for corrosivity, D002, prior to disposal.

**Steps To Be Taken In Case Material Is Released Or Spilled:** Notify the appropriate environmental authorities. Note that spills may need to be reported to the National Response Center ((800) 424-8802)

---

## SECTION 7 – Handling and Storage

**Handling:** Store and handle in corrosion-proof materials (and area). Use FRP or PVC pipes. Be cautious of substance residue in empty containers. Act according to precautions and warnings set forth.



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FAX 888-273-6226

**Storage:** Store in a tightly closed container. Do not store in metal containers. Fiberglass, plastic, or rubber-lined tanks may be used for storage. Protect from damage and keep separated from incompatible substances.

---

## SECTION 8 – Exposure and Personal Protection

**Respiratory Protection:** Adequate general ventilation should be provided to keep vapor and mists below exposure limits. The exposure limits for some components are listed in Section 2. Wear a NIOSH/OSHA approved respirator with a dust/mist cartridge if there is potential of exposure to mists in excess of applicable limits, in any situation where product vapor or mists may be present, such as in confined spaces.

**Eye Protection:** Wear splash resistant goggles and/or safety glasses with side shields. Wear a full face shield if possibility of material splashing or spraying exists. Maintain eye wash fountain. Water should be supplied through insulated and heat-traced lines to prevent freeze-ups in cold weather.

**Skin Protection:** Where there is possibility of skin contact, use the following as appropriate, to avoid skin contact: gloves impervious to material, apron, boots, hood, pants, and jacket. Maintain a safety shower with quick opening valves. Water should be supplied through insulated and heat-traced lines to prevent freeze-ups in cold weather.

---

## SECTION 9 – Physical and Chemical Properties

<b>Boiling Point:</b>	106°C (223°F)	<b>pH:</b>	< 2.0
<b>Melting Point:</b>	N/A	<b>Solubility in Water:</b>	Complete
<b>Specific Gravity:</b>	1.2 – 1.6	<b>Vapor Pressure:</b>	40 mm Hg @ 20°C
<b>% Volatile:</b>	60 – 75 (Water)	<b>Evaporation Rate:</b>	N/A
<b>Vapor Density (Air = 1):</b>	N/A	<b>Molecular Weight:</b>	162.2
<b>Appearance:</b>	Red/Brown Colored Liquid	<b>Odor:</b>	Slightly acrid

---

## SECTION 10 – Stability and Reactivity

**Stability:** Stable at normal conditions

**Polymerization:** Will not occur.

**Decomposition:** Decomposes upon heating to produce corrosive and/or toxic fumes, such as hydrogen chloride. Contact with metals may evolve flammable hydrogen gas.

**Incompatibility:** Rapidly corrodes most metals (titanium is one exception); may generate flammable, potentially explosive hydrogen gas. Avoid contact with nylon, aluminum/aluminum alloys, carbon steel, stainless steel, and copper / copper alloys. Metals, bases, halocarbons, acids, and combustible materials can be considered incompatible.





Customer Service 800-864-1742  
FAX 888-273-6226

## SECTION 11 – Toxicological Information

**Chronic Effects:** Repeated dosage may cause hemosiderosis, including possible damage to liver and pancreas.

**Toxicological Data:** Anhydrous Ferric Chloride Solid Oral LD<sub>50</sub> (rat) = 450 mg/kg

**Carcinogenicity:** None of the components of this material are listed as a carcinogen by IARC, NTP, OSHA, or ACGIH.

**Reproductive Effects:** TDLo Rat 1 day (intratesticular) 12976 kg; TDLo Rat 1 day (intravaginal) 29 mg/kg pre-pregnancy continuous.

**Target Organs:** No data available.

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## SECTION 12 – Ecological Information

**Ecotoxicological Information:** TLm Daphnia 15 ppm/96 hr fresh water/conditions of bioassay not specified.

**Persistence and Degradation:** No data available

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## SECTION 13 – Disposal Considerations

Under the Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user to determine whether a substance should be classified as a hazardous waste at the time of disposal. This is due to the fact that product use, transformation, synthesis, mixtures, etc. may change the nature of the product. Product containers should be thoroughly emptied before disposal. Dispose of waste in accordance with applicable federal, state, and local laws.

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## SECTION 14 – Transportation Information

**DOT Shipping Name:** Ferric Chloride Solution

**Hazard Class:** 8 – Corrosive Material

**UN Number:** UN 2582

**Packing Group:** III

**Reportable Quantity:** 1000 lbs (454 kg)

**Shipping Containers:** Rubber-lined steel tank cars/trucks; polyethylene drums, bottles.

**Storage Conditions:** Keep containers closed.

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## SECTION 15 – Regulatory Information

**OSHA:** Hazardous Corrosive Liquid – 29 CFR 1920.1200

OSHA Process Safety (29 CFR 1910.119): No

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Customer Service 800-864-1742  
FAX 888-273-6226

**CERCLA:** Hazardous Substance – Reportable Quantity (RQ) = 1000 lbs (454 kg)

**SARA Regulations:** 313 and 40 CFR 372: No

**SARA Hazard Categories, SARA Sections 311/312 (40 CFR 370.21):**

Acute: Yes; Chronic: No; Fire: No; Reactive: No; Sudden Release: No

**Clean Water Act:** Designated as a hazardous substance under Section 311(b)(2)(A) of the Federal Water Pollution Control Act; ferric chloride is also regulated by the Clean Water Act Amendments of 1977 and 1978. This chemical is subject to regulations regarding its discharge.

**TSCA Inventory Status:** Yes

**California Proposition 65:** No

**Right-To-Know Lists:** Massachusetts, California, Pennsylvania, New Jersey. This substance does not contain nor is manufactured with ozone-depleting substances.

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## SECTION 16 – Other Information

**IMPORTANT! Read this MSDS before use or disposal of this product. Pass along the information to employees and any other persons who could be exposed to the product to be sure that they are aware of the information before use or other exposure.**

**Revision Date:** March 30, 2022

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## Product Data Sheet Ferric Chloride Solution

Revision Date 07/21/2020

### Description

Pencco's Ferric Chloride is a dark maroon aqueous solution of soluble ferric iron, manufactured to strict specifications from high quality raw materials. Pencco's unique manufacturing process renders a Ferric Chloride that is stable at concentrations up to 15% ferric iron. Pencco's Ferric Chloride has a low ferrous iron content, reducing the likelihood of iron carryover throughout the system.

### Application

Ferric Chloride is manufactured for both municipal and industrial water treatment. Being an iron based coagulant and having only trace amounts of aluminum, it is widely used for the clarification of drinking water. Ferric Chloride is very effective as a coagulant in oily water clarification. It is excellent for turbidity control, as well as the removal of phosphorus, color, and suspended solids. Ferric Chloride is widely used for sludge dewatering as well, resulting in volume reduction. It is very effective at removing metals, especially arsenic and selenium.

### Typical Analysis

Concentration (%FeCl <sup>+3</sup> ) .....	39-41%
Concentration (%Fe <sup>+3</sup> ) .....	13%-15%
Concentration (%Fe <sup>+2</sup> ) .....	<0.5%
Specific Gravity.....	1.39 to 1.43
Free Acid .....	<0.5%
Ph.....	<2.0
Appearance .....	Dark Maroon
Freezing Point .....	<0°F

Metals	Maximum	Average
Arsenic .....	< 5 ppm	< 2 ppm
Cadmium .....	<1 ppm	< .5 ppm
Copper .....	<50 ppm	< 25 ppm
Chrome .....	< 50 ppm	< 10 ppm
Lead .....	< 10 ppm	< 5 ppm
Mercury .....	< .02 ppm	< .001 ppm
Nickel .....	< 50 ppm	< 10 ppm
Selenium .....	< 5 ppm	< 2 ppm
Zinc .....	< 50 ppm	< 20 ppm

### Health and Safety

Ferric Chloride can cause irritation and burns to the skin and eyes. Ensure that individuals handling Ferric Chloride have been fully trained regarding the SDS, along with PPE requirements and specific operational procedures. In the event of an emergency, call 24 hr. CHEMTREC 800-424-9300

### Certifications

Ferric Chloride is NSF/ANSI Standard 60 certified for use in potable water treatment and also meets or exceeds all AWWA Standards.

### Product Handling and Shipping

Ferric Chloride is shipped in railcars, tank trucks, totes and drums. Suitable materials of construction include fiberglass, PVC, polypropylene, polyethylene, and stainless steel. It can be used with diaphragm metering pumps, providing the materials of construction are compatible. No dilution or preparation necessary.

DOT Classification: Corrosive Liquid, Acidic, Inorganic, N.O.S. (Contains Ferric Chloride)  
 Hazard Class: 8      DOT ID Number: UN 2582      Packing Group: III      RQ = 1000 lbs

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