



Mid-Michigan Water Chemical Consortium 2023-2024 Addendum 1 PVS Technologies, Inc. Supplier Response

Event Information

Number: Mid-Michigan Water Chemical Consortium 2023-2024 Addendum 1
Title: 202212213901
Type: Request for Proposal- Sealed
Issue Date: 1/9/2023
Deadline: 1/30/2023 02:00 PM (ET)
Notes: Notice to Bidders:

Sealed Proposals in response to this Request for Proposal (“RFP”) will be received by the Board of Water and Light (“BWL”) for Mid-Michigan Water Chemical Consortium 2023-2024.

Proposals must be in full accordance with the enclosed Scope of Work.

Proposals must be submitted through IonWave. Proposals received via e-mail will not be accepted.

The BWL reserves the right to reject any or all Proposals, waive irregularities or technicalities in any Proposal, and accept any Proposal in whole or in part, which in the opinion of the BWL, is in its best interest. The BWL does not limit the methods or factors to be used for evaluation.

Contact Information

Contact: Monica Clark
Address: 1110 South Pennsylvania Ave.

Lansing, MI 48912
Email: monica.clark@lbwl.com

PVS Technologies, Inc. Information

Contact: Eileen McDonnell / Shauna Barthel
Address: 10900 Harper Avenue
Detroit, MI 48213
Phone: (313) 921-1200
Email: bids@pvschemicals.com

By submitting your response, you certify that you are authorized to represent and bind your company.

Tatyana Lipanovich
Signature

bids@pvschemicals.com
Email

Submitted at 1/30/2023 09:44:11 AM (ET)

Requested Attachments

Exceptions to Terms and Conditions (if applicable)

No response

Sworn and Notarized Affidavit of Compliance

PVS Technologies Sworn and Notarized Affidavit.pdf

Other Attachment

SDS - Ferric Chloride May-20-2020 (002).pdf

Bid Attributes

| | |
|----------|---|
| 1 | Company Contact Please provide the primary contact's name, e-mail, and phone number for this proposal. Tatyana Lipanovich, bids@pvschemicals.com, 313-319-7868 |
| 2 | How many years has your firm been in business under the present ownership? 37 |
| 3 | Have you done business with the Board of Water and Light? If so, furnish specifics. Yes, supplied ferric chloride. |
| 4 | Have you done business with the City of Lansing? If so, furnish specifics. Yes, currently supplying ferric chloride. |
| 5 | Have you ever defaulted on a contract or been involved in litigation with the BWL or the City of Lansing? If so, furnish specifics. No |
| 6 | Have you ever defaulted on a contract or been involved in litigation with any other client in the past five years? If so, furnish specifics. No |
| 7 | List any relationships between your firm's staff and any current BWL employee. Not Applicable |

8 List at least three (3) references for similar work you have performed for other clients. Include client's name, contact name, title and phone number.

City of Trenton, Isabel Garcia, Purchasing Agent, 609-989-3138
 District of Columbia Water, Scott Kang, Senior Sourcing Specialist, 202-787-7058
 Pittsburgh Water Sewer Authority, Susan Kemery, Senior Contract Specialist, 412-255-8800 Ext. 5561

9 List subcontractors that you plan to use on this project.

Not Applicable

10 Indicate any exceptions to the enclosed Terms and Conditions
 If YES, Contractor must provide red-lined editing on the BWL Terms and Conditions Microsoft Word document only. Any submission of, or general references to Contractor Terms and Conditions in its entirety anywhere within the proposal will invalidate the proposal.

No

11 Acknowledgment of receipt of any Addendas issued.

Yes

12 Confirm you have reviewed all attachments included in this solicitation.

Yes (Yes)

13 Product meets quality specifications in the Scope of Work?

Yes

14 Able to meet delivery requirements for each municipality in the Scope of Work?
 Including but not limited to delivery days of week, hours, load size, unloading requirements.

Yes

15 I have read and agreed.

The Bidder states that this proposal is made in conformity with the Proposal Documents and agrees that, in the event of any discrepancies or differences between any conditions of their proposal and the Proposal Documents provided in the Instructions to Bidders and completed by the bidder, the provisions of the latter shall prevail. No verbal or written agreements or understandings considered or entered into prior to signing of a contract in the form of a purchase order, shall be binding after the signing of the contract unless incorporated in the contract.

The Bidder certifies that this proposal is made in good faith, upon the best information, with knowledge and accuracy, and without collusion or connection with any other person or persons submitting proposals for the work.

I have read and agreed (I have read and agreed)

Bid Lines

1 Sodium Hypochlorite (per gallon)
 Quantity: 1 UOM: GAL **No Bid**

2 Sodium Hypochlorite Demurrage (first 4 hours free)
 Quantity: 1 UOM: HR **No Bid**

| | | |
|----|---|---------------|
| 3 | Hydrofluosilic Acid- 40,000 lbs. minimum shipments Quantity: <u> 1 </u> UOM: <u> ton </u> | <i>No Bid</i> |
| 4 | Hydrofluosilic Acid- 30,000 lbs. minimum shipments Quantity: <u> 1 </u> UOM: <u> ton </u> | <i>No Bid</i> |
| 5 | Hydrofluosilic Acid- multiple locations in 40,000 lbs. minimum shipments Quantity: <u> 1 </u> UOM: <u> ton </u> | <i>No Bid</i> |
| 6 | Hydrofluosilic Acid- Demurrage (first 4 hours free) Quantity: <u> 1 </u> UOM: <u> hr </u> | <i>No Bid</i> |
| 7 | Ferric Chloride- Dry Quantity: <u> 1 </u> UOM: <u> ton </u> Price: <input type="text" value="\$1,150.00"/> Total: <input type="text" value="\$1,150.00"/> | |
| 8 | Ferric Chloride-Liquid Quantity: <u> 1 </u> UOM: <u> ton </u> | <i>No Bid</i> |
| 9 | Ferric Chloride-Demurrage (first 4 hours free) Quantity: <u> 1 </u> UOM: <u> hr </u> Price: <input type="text" value="\$125.00"/> Total: <input type="text" value="\$125.00"/> | |
| 10 | Pebble Quicklime Quantity: <u> 1 </u> UOM: <u> ton </u> | <i>No Bid</i> |
| 11 | Pebble Quicklime- Demurrage (first 4 hours free) Quantity: <u> 1 </u> UOM: <u> hr </u> | <i>No Bid</i> |
| 12 | Soda Ash Quantity: <u> 1 </u> UOM: <u> ton </u> | <i>No Bid</i> |
| 13 | Soda Ash- Demurrage (first 4 hours free) Quantity: <u> 1 </u> UOM: <u> hr </u> | <i>No Bid</i> |

Response Total: \$1,275.00

1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|----------------------|---|
| Product Name | Ferric Chloride Solution DWG Grade |
| Synonyms | Iron (III) Chloride, Iron trichloride, FeCl ₃ |
| UN/ID No. | UN2582 |
| Item # | 10244 |
| Revision Date | May-20-2020 |
| Safety Data Sheet | 5443 |
| Recommended Use | Water treatment chemical |
| Uses advised against | Consumer uses: Private households (= general public = consumers). |

Company Name

PVS Technologies, Inc.
10900 Harper Ave.
Detroit, MI 48213
(313) 571-1100

24 Hour Emergency Phone Number CHEMTREC 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification

| | |
|-----------------------------------|-------------|
| Acute toxicity - Oral | Category 4 |
| Skin corrosion/irritation | Category 1 |
| Serious eye damage/eye irritation | Category 1 |
| May be corrosive to metals | Category 1 |
| Carcinogenicity | Category 1A |

Emergency Overview

| | |
|--|--|
| <p>DANGER</p> <p>Hazard statements</p> | <p>Harmful if swallowed Causes severe skin burns and eye damage May cause cancer</p> |
| | |

Precautionary statements

Prevention

- Obtain special instructions before use
- Do not handle until all safety precautions have been read and understood
- Use personal protective equipment as required
- Wash face, hands and any exposed skin thoroughly after handling
- Do not eat, drink or smoke when using this product
- Do not breathe dust/fume/gas/mist/vapors/spray

Response

- Immediately call a POISON CENTER or doctor/physician
- Specific treatment (see section 4 on this Safety Data Sheet)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

Ferric Chloride Solution DWG Grade

- Skin IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower Wash contaminated clothing before reuse
- Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Immediately call a POISON CENTER or doctor/physician
- Ingestion IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell Rinse mouth Do NOT induce vomiting

Storage

- Store locked up

Disposal

- Dispose of contents/container to an approved waste disposal plant

Other Information

Other hazards

- Toxic to aquatic life with long lasting effects
- Toxic to aquatic life

Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

3. COMPOSITION/INFORMATION ON INGREDIENTS

| Chemical Name | CAS No. | EC No. | Weight-% * |
|-------------------|-----------|-----------|------------|
| Water | 7732-18-5 | 231-791-2 | 55-69 |
| Iron trichloride | 7705-08-0 | 231-729-4 | 31-45 |
| Hydrogen chloride | 7647-01-0 | 231-595-7 | 0.0-1.0 |
| Ferrous chloride | 7758-94-3 | 231-843-4 | 0.0-0.7 |

4. FIRST AID MEASURES

General advice

- Immediate medical attention is required

Eye contact

- Immediate medical attention is required
- Do not rub affected area
- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes
- Keep eyes wide open while rinsing

Skin contact

- Immediate medical attention is required
- Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes

Inhalation

- Call a physician or poison control center immediately
- Remove to fresh air
- If not breathing, give artificial respiration
- If breathing is labored, administer oxygen

Ingestion

- Do NOT induce vomiting
- Never give anything by mouth to an unconscious person
- Immediate medical attention is required
- Drink plenty of water
- Remove from exposure, lie down
- Clean mouth with water and drink afterwards plenty of water
- Call a physician or poison control center immediately

Note to physician

- Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Do not give chemical antidotes. Asphyxia from glottal edema may occur. Marked decrease in blood pressure may occur with moist rales, frothy sputum, and high pulse pressure
- Treat symptomatically

Self-protection for first aid

- Use personal protective equipment as required

**Ferric Chloride Solution DWG Grade
personnel**

- Avoid contact with skin, eyes or clothing

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media**
- Dry chemical, CO₂, water spray or alcohol-resistant foam
 - Use extinguishing measures that are appropriate to local circumstances and the surrounding environment
- Unsuitable extinguishing media**
- No information available
- Specific hazards arising from the chemical**
- The product causes burns of eyes, skin and mucous membranes
 - Thermal decomposition can lead to release of irritating and toxic gases and vapors
 - In the event of fire and/or explosion, do not breathe fumes
- Protective equipment and precautions for firefighters**
- Wear a self-contained breathing apparatus and chemical protective clothing
- Flammable properties**
- No information available
- Explosive properties**
- No information available

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions**
- Evacuate personnel to safe areas
 - Use personal protective equipment as required
 - Avoid contact with skin, eyes or clothing
 - Keep people away from and upwind of spill/leak
- Environmental precautions**
- For small spills, absorb material with clay absorbent or other compatible material. Dispose of the waste material according to local, state and governmental requirements.
 - For large spills, contain the material using barriers of absorbent pigs, clay absorbent or earth dams.
 - US regulations require reporting spills of this material that could reach any surface waters. The toll-free phone number for the US Coast Guard National Response Center is 1-800-424-8802
- Methods for cleaning up**
- Take up mechanically, placing in appropriate containers for disposal
 - Clean contaminated surface thoroughly
 - Soak up with inert absorbent material
 - Dike far ahead of liquid spill for later disposal
 - Prevent product from entering drains
 - Dam up
 - After cleaning, flush away traces with water
- Other Information**
- Spills exceeding the Reportable Quantity (RQ) of 1000 pounds or more must be reported to the National Response Center, (800) 424-8802.

7. HANDLING AND STORAGE

- Advice on safe handling**
- Use personal protective equipment as required
 - Avoid contact with skin, eyes or clothing
 - Ensure adequate ventilation, especially in confined areas
 - In case of insufficient ventilation, wear suitable respiratory equipment
 - Use only with adequate ventilation and in closed systems
- Storage Conditions**
- Keep container tightly closed in a dry and well-ventilated place
 - Keep out of the reach of children
 - Keep containers tightly closed in a dry, cool and well-ventilated place
 - Keep in properly labeled containers
- Incompatible materials**
- Incompatible with strong acids and bases, oxidizers, steel, and most metals, Incompatible with strong acids and bases, Incompatible with oxidizing agents

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| Chemical Name | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|--------------------------------|-----------------------------|--|-----------------------------|
| Iron trichloride 7705-08-0 | TWA: 1 mg/m ³ Fe | | TWA: 1 mg/m ³ Fe |
| Hydrogen chloride 7647-01-0 | Ceiling: 2 ppm | Ceiling: 5 ppm Ceiling: 7 mg/m ³ | IDLH: 50 ppm |
| Ferrous chloride 7758-94-3 | TWA: 1 mg/m ³ Fe | | TWA: 1 mg/m ³ Fe |

Exposure Guidelines

Engineering Controls

Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Respiratory protection

• A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant the use of a respirator.

Eye/Face protection

- Tight sealing safety goggles
- Face protection shield

Skin and body protection

- Wear suitable protective clothing
- Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact

General Hygiene Considerations

- Wash contaminated clothing before reuse
- When using do not eat, drink or smoke
- Keep away from food, drink and animal feeding stuffs
- Contaminated work clothing should not be allowed out of the workplace
- Regular cleaning of equipment, work area and clothing is recommended
- Avoid contact with skin, eyes or clothing
- Take off all contaminated clothing and wash it before reuse
- Wear suitable gloves and eye/face protection

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | |
|-----------------------|--------------------------|
| Physical state | Liquid |
| Appearance | Clear to slightly hazy |
| Color | Red brown |
| Odor | Slight Iron acidic |
| Odor threshold | No information available |

| <u>Property</u> | <u>Values</u> | <u>Remarks • Method</u> |
|--------------------------------------|--------------------------|-------------------------|
| pH | <2 | |
| Melting point/Freezing Point | -26 °C / -15 °F | |
| Boiling point / boiling range | 110 °C / 230 °F | |
| Flash point | No information available | |
| Evaporation rate | <1 | n-Butyl acetate =1 |
| Flammability (solid, gas) | No information available | |
| Flammability Limit in Air | | Not flammable |
| Upper flammability limit (%) | No information available | |
| Lower flammability limit (%): | No information available | |
| Vapor pressure | No information available | negligible |
| Vapor density | No information available | |
| Specific Gravity | 1.40 | |
| Water solubility | Miscible in water | |
| Solubility in other solvents | No information available | |
| Partition coefficient | No information available | |
| Autoignition temperature | No information available | |
| Decomposition temperature | No information available | |

Ferric Chloride Solution DWG Grade

| | |
|----------------------|--------------------------|
| Kinematic viscosity | No information available |
| Dynamic viscosity | No information available |
| Explosive properties | No information available |
| Oxidizing properties | No information available |

Other Information

| | |
|--------------------|--|
| Softening point °C | No information available |
| Molecular weight | No information available |
| VOC Content (%) | No information available |
| Density | No information available |
| Bulk density | 11.7 Pounds per gallon (lb/gal), Typical |

10. STABILITY AND REACTIVITY

| | |
|---|---|
| Stability | • Stable under recommended storage conditions |
| Conditions to avoid | • Exposure to air or moisture over prolonged periods |
| Incompatible materials | Incompatible with strong acids and bases, oxidizers, steel, and most metals, Incompatible with strong acids and bases, Incompatible with oxidizing agents |
| Hazardous Decomposition Products | • Thermal decomposition can lead to release of irritating and toxic gases and vapors |
| Possibility of Hazardous Reactions | • None under normal processing and storage |

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

| | |
|-------------------------------------|---|
| Principle Routes of Exposure | Inhalation, Skin contact, Eye contact |
| Inhalation | May cause irritation of respiratory tract. Avoid breathing vapors or mists. |
| Ingestion | May cause adverse kidney effects. May cause adverse liver effects. |
| Skin contact | Contact causes severe skin irritation and possible burns. |
| Eye contact | Corrosive to the eyes and may cause severe damage including blindness. |

| Chemical Name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|--------------------------------|---|-------------------------|-------------------------|
| Water 7732-18-5 | > 90 mL/kg (Rat) | | |
| Iron trichloride 7705-08-0 | = 316 mg/kg (Rat) = 450 mg/kg (Rat) | >2000 mg/kg (rat) | |
| Hydrogen chloride 7647-01-0 | 238 - 277 mg/kg (Rat) | > 5010 mg/kg (Rabbit) | = 1.68 mg/L (Rat) 1 h |
| Ferrous chloride 7758-94-3 | 450 mg/kg (Rat) | | |

Information on toxicological effects

| | |
|-----------------|---|
| Symptoms | Vomiting, Hypoxemia (reduced O2 in the blood), Metabolic Acidosis |
|-----------------|---|

Delayed and immediate effects as well as chronic effects from short and long-term exposure

| | |
|-------------------------------|--|
| Sensitization | No information available. |
| Germ cell mutagenicity | No information available. |
| Carcinogenicity | The table below indicates whether each agency has listed any ingredient as a carcinogen. |

| Chemical Name | ACGIH | IARC | NTP | OSHA |
|--------------------------------|-------|---------|-----|------|
| Hydrogen chloride 7647-01-0 | | Group 3 | | X |

IARC (International Agency for Research on Cancer)

Not classifiable as a human carcinogen

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

| | |
|---------------------------------|---------------------------|
| Reproductive toxicity | No information available. |
| STOT - single exposure | No information available. |
| STOT - repeated exposure | No information available. |

Ferric Chloride Solution DWG Grade

Chronic toxicity

Chronic exposure to corrosive fumes/gases may cause erosion of the teeth followed by jaw necrosis. Bronchial irritation with chronic cough and frequent attacks of pneumonia are common. Gastrointestinal disturbances may also be seen. Avoid repeated exposure. Possible risk of irreversible effects. May cause adverse liver effects.

Target Organ Effects

Eyes, Gastrointestinal tract (GI), Liver, Respiratory system, Skin.

Aspiration hazard

No information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

Oral LD50

832 mg/kg

LC50 (Dust/Mist)

100.2 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity

Toxic to aquatic life with long lasting effects

0% of the mixture consists of component(s) of unknown hazards to the aquatic environment

| Chemical Name | Algae/aquatic plants | Fish | Crustacea |
|--------------------------------|----------------------|--|--|
| Iron trichloride 7705-08-0 | | 20.95 - 22.56: 96 h Pimephales promelas mg/L LC50 semi-static 20.26: 96 h Lepomis macrochirus mg/L LC50 semi-static 75.6: 96 h Gambusia affinis mg/L LC50 static | 27.9: 48 h Daphnia magna mg/L EC50 9.6: 48 h Daphnia magna mg/L EC50 Static |
| Hydrogen chloride 7647-01-0 | | 282: 96 h Gambusia affinis mg/L LC50 static | |
| Ferrous chloride 7758-94-3 | | 4: 96 h Morone saxatilis mg/L LC50 static | |

Persistence and degradability

No information available

Bioaccumulation

No information available

| Chemical Name | Partition coefficient |
|-------------------------------|-----------------------|
| Iron trichloride 7705-08-0 | -4 |

Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

Disposal of wastes

• This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261)

Contaminated packaging

• Do not reuse container

US EPA Waste Number

• D002

This product contains one or more substances that are listed with the State of California as a hazardous waste.

| Chemical Name | California Hazardous Waste Status |
|-------------------------------|-----------------------------------|
| Iron trichloride 7705-08-0 | Toxic Corrosive |

14. TRANSPORT INFORMATION

DOT

Proper shipping name

Ferric chloride, solution

Hazard Class

8

UN/ID No.

UN2582

Packing Group

III

RQ (lbs)(dry)

Ferric chloride: RQ kg= 454.00, Ferrous chloride: RQ kg= 45.40

RQ as is (lbs)(wet)

2222 (45% Ferric Chloride)

Description

UN2582, Ferric chloride, solution, 8, III, RQ

Special Provisions

B15, IB3, T4, TP1

Ferric Chloride Solution DWG Grade

Emergency Response Guide Number 154

Transport Canada

UN/ID No. UN2582
 Proper shipping name FERRIC CHLORIDE SOLUTION
 Hazard Class 8
 Packing Group III
 Description UN2582, Ferric chloride solution, 8, III

IATA

UN/ID No. UN2582
 Proper shipping name FERRIC CHLORIDE SOLUTION
 Hazard Class 8
 Packing Group III
 ERG Code 8L
 Special Provisions A3, A803

IMDG

UN/ID No. UN2582
 Proper shipping name FERRIC CHLORIDE SOLUTION
 Hazard Class 8
 Packing Group III
 EmS-No. F-A, S-B
 Special Provisions 223

15. REGULATORY INFORMATION**US Federal Regulations****SARA 311/312 Hazard Categories**

Acute health hazard Yes
 Chronic Health Hazard Yes
 Fire hazard No
 Sudden release of pressure hazard No
 Reactive Hazard No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

U.S. - TSCA (Toxic Substances Control Act) - Section 5(a)(2) - Chemicals with Significant New Use Rules (SNURs)**CWA (Clean Water Act)**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

| Chemical Name | CWA - Reportable Quantities | CWA - Toxic Pollutants | CWA - Priority Pollutants | CWA - Hazardous Substances |
|--------------------------------|-----------------------------|------------------------|---------------------------|----------------------------|
| Iron trichloride 7705-08-0 | 1000 lb | | | X |
| Hydrogen chloride 7647-01-0 | 5000 lb | | | X |
| Ferrous chloride 7758-94-3 | 100 lb | | | X |

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

| Chemical Name | Hazardous Substances RQs | CERCLA/SARA RQ | RQ (lbs)(dry) |
|--------------------------------|--------------------------|----------------|--|
| Iron trichloride 7705-08-0 | 1000 lb | | RQ 1000 lb final RQ RQ 454 kg final RQ |
| Hydrogen chloride 7647-01-0 | 5000 lb | 5000 lb | RQ 5000 lb final RQ RQ 2270 kg final RQ |
| Ferrous chloride 7758-94-3 | 100 lb | | RQ 100 lb final RQ RQ 45.4 kg final RQ |

Ferric Chloride Solution DWG Grade

Canada

WHMIS Classification This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR

WHMIS Classification Non-controlled

US State Regulations

California Proposition 65 This product does not contain any Proposition 65 chemicals

U.S. State Right-to-Know Regulations

| Chemical Name | New Jersey | Massachusetts | Pennsylvania |
|--------------------------------|------------|---------------|--------------|
| Water 7732-18-5 | | | X |
| Iron trichloride 7705-08-0 | X | X | X |
| Hydrogen chloride 7647-01-0 | X | X | X |
| Ferrous chloride 7758-94-3 | X | X | X |

DEA List I, List II

| Chemical Name | U.S. - DEA - List I or Precursor Chemicals | U.S.- DEA - List II or Essential Chemicals |
|--------------------------------|--|---|
| Hydrogen chloride 7647-01-0 | - | 0.0 kg, Domestic Sales Weight 50 gallon, Export Volume 27 kg, Export Weight |

International Inventories

TSCA Complies
DSL/NDSL Complies
EINECS/ELINCS Complies
ENCS Complies
IECSC Complies
KECL Complies
PICCS Complies
AICS Complies

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AICS - Australian Inventory of Chemical Substances

16. OTHER INFORMATION

NFPA Health hazards 3 Flammability 0 Instability 0 Physical and Chemical Properties

HMIS Health hazards 3 Flammability 0 Physical hazards 0 Personal protection D

Item # 10244
Safety Data Sheet 5443
Revision Date May-20-2020
Issue Date Jun-02-2020
Version 4
Revision Note *** Updated value on SDS.
Disclaimer

Ferric Chloride Solution DWG Grade

All information, statements, data, advice, and/or recommendations, including, without limitation, those relating to storage, loading/unloading, piping, and transportation (collectively referred to herein as "information") are believed to be accurate, reliable, and based on reliable industry and regulatory references. However, no representation or warranty, express or implied, is made as to its completeness, accuracy, fitness for a particular purpose or any other matter, including, without limitation, that the practice or application of any such information is free of patent infringement or other intellectual property misappropriation. The Company providing this SDS is not engaged in the business of providing technical, operational, engineering, or safety information for a fee, and therefore, any such information provided herein has been furnished as an accommodation and without charge. All information provided herein is intended for use by persons having requisite knowledge, skill, and experience in the chemical industry. The Company providing this SDS shall not be responsible or liable for the use, application, or implementation of the information provided herein, and all such information is to be used at the risk, and in the sole judgment and discretion of such persons, their employees, advisors, and agents. This safety data sheet (SDS) is offered for your information, consideration, and investigation as required by federal hazardous products act and related legislation.

End of Safety Data Sheet

SWORN AND NOTARIZED AFFIDAVIT OF COMPLIANCE

IRAN ECONOMIC SANCTIONS ACT

Michigan Public Act No. 517 of 2012

All bidders must submit the following certification statement in compliance with Public Act No. 517 of 2012 (the "Iran Economic Sanctions Act") and attach this form to the bid. **The Lansing Board of Water & Light shall not accept any bid that does not include this sworn and notarized certification of statement.**

The undersigned, the owner or authorized officer of PVS Technologies, Inc. (the Bidder), pursuant to the compliance certification requirement provided in the Lansing Board of Water & Light Request for Proposal, hereby certifies, represents and warrants that the Bidder (including its officers, directors and employees) is not an "Iran linked business" within the meaning of the Iran Economic Sanctions Act, and that in the event the Bidder is awarded a contract as a result of the aforementioned Request for Proposal, the Bidder will not become an "Iran linked business" at any time during the course of performing the work or any services under the contract.

Specifically, the undersigned, owner or authorized officer of PVS Technologies, Inc. (the Bidder) attests it does not fall within the following definition of a "Iran linked business" under the Iran Economic Sanctions Act:

MCL 129.312 (e) of the Act provides:

(e) "Iran linked business" means either of the following:

- (i) A person [as defined below by MCL 129.312(f)] engaging in investment activities in the energy sector of Iran, including a person that provides oil or liquefied natural gas tankers or products used to construct or maintain pipelines used to transport oil or liquefied natural gas for the energy sector of Iran.*
- (ii) A financial institution that extends credit to another person, if that person will use the credit to engage in investment activities in the energy sector of Iran.*

MCL 129.312(f) of the Act defines "Person" as follows:

(f) "Person" means any of the following:

- (i) An individual, corporation, company, limited liability company, business association, partnership, society, trust, or any other nongovernmental entity, organization, or group.*
- (ii) Any governmental entity or instrumentality of a government, including a multilateral development institution, as defined in section 1701(c)(3) of the international financial institutional act, 22 USC 262r(c)(3).*

The Bidder further acknowledges that any person who is found to have submitted a false certification is responsible for a civil penalty of not more than \$250,000.00 or two (2) times the amount of the contract or proposed contract for which the false certification is made, whichever is greater, the cost of the Lansing Board of Water & Light's investigation, and reasonable attorney fees, in addition to the fine. Moreover, any person who submitted a false certification shall be ineligible to bid on a Request for Proposal for three (3) years from the date it is determined that the person has submitted the false certification.

BIDDER

Tatyana Lipanovich

By: Tatyana Lipanovich

Its: Director of Sales

Date: January 26, 2023

STATE OF MICHIGAN)

COUNTY OF WAYNE)

This instrument was acknowledged before me on the 26th day of January, 2023, by Tatyana Lipanovich.

Conor Griffith

Conor Griffith, Notary Public

Wayne County, Michigan My

Commission Expires: August 25, 2028 Acting

in the County of: Wayne

CONOR GRIFFITH
NOTARY PUBLIC - STATE OF MICHIGAN
COUNTY OF WAYNE
My Commission Expires August 25, 2028
Acting in the County of Wayne