# SAFETY DATA SHEET

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## SECTION 1: COMPANY AND PRODUCT INFORMATION

### 1.1 Product identifiers

Product name : Ferric Chloride Hexahydrate

Product code : 40600016

CAS number : 10025-77-1

Synonyms : Iron(III) chloride hexahydrate

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : For research and laboratory use only.

### 1.3 Details of the supplier of the safety data sheet

Address : Genelinx International Inc, dba bioWORLD
4150 Tuller Rd. Suite 228
Dublin, OH 43017

Email : info@buffersandreagents.com

Phone : 614-792-8680, Toll free: 1-888-bio-PLUS

Fax : 614-792-8685

### 1.4 Emergency telephone number

Emergency phone : 1-888-bio-PLUS

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1 Classification of substance or mixture

Corrosive to metals (Category 1), H290.
Acute toxicity, Oral (Category 4), H302.
Skin irritation (Category 2), H315.
Serious eye damage (Category 1), H318.

### 2.2 GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Corrosive to metals (Category 1), H290.
Acute toxicity, Oral (Category 4), H302.
Skin irritation (Category 2), H315.
Serious eye damage (Category 1), H318.

### 2.3 Label elements and precautionary statements

Pictogram :

Signal word : Danger

| | | |
|---|---|---|
| Hazard statement(s) | : | H290 - May be corrosive to metals.<br>H302 - Harmful if swallowed.<br>H315 - Causes skin irritation.<br>H318 - Causes serious eye damage. |
| Precautionary statement(s) | : | P234 - Keep only in original container.<br>P264 - Wash skin thoroughly after handling.<br>P270 - Do not eat, drink or smoke when using this product.<br>P280 - Wear eye protection/face protection/protective gloves.<br>P301+312+330 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.<br>P302+352 - IF ON SKIN: Wash with plenty of soap and water.<br>P305+351+338+310 - 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.<br>P332+313 - If skin irritation occurs: Get medical advice/attention.<br>P362 - Take off contaminated clothing and wash before reuse.<br>P390 - Absorb spillage to prevent material damage.<br>P406 - Store in corrosive resistant stainless steel container with a resistant inner liner.<br>P501 - Dispose of contents/container to an approved waste disposal plant. |

### 2.4 Hazards not otherwise classified (HNOC) or not covered by GHS

No unclassified hazards known.

### 2.5 NFPA Rating

| | | |
|---|---|---|
| Health hazard | : | 2 |
| Fire hazard | : | 0 |
| Reactivity hazard | : | 0 |

### 2.6 HMIS Rating

| | | |
|---|---|---|
| Health hazard | : | 2 |
| Chronic health hazard | : | - |
| Reactivity hazard | : | 0 |
| Flammability | : | 0 |
| Physical hazard | : | 0 |

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

| Substance | CAS# | EC# | Concentration |
|---|---|---|---|
| Iron(III) chloride hexahydrate<br>M.F: $Cl_3Fe \bullet 6H_2O$<br>M.W: 270.30 g/mol | 10025-77-1 | 231-729-4 | <= 100% |

### 3.2 Hazardous components & classification

Met. Corr. 1; Acute Tox. 4; Skin Irrit. 2; Eye Dam. 1; H290, H302, H315, H318

## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

**General advice**

Consult a physician if symptoms are severe or persistent. Provide this data sheet to medical personnel. If product is spilled or leaked, evacuate area.

**In case of inhalation**

If inhaled, move person to fresh air and monitor breathing. If not breathing, give artificial ventilation. Consult a physician if symptoms are severe or persistent.

**In case of skin contact**

Immediately wash with excess soap and water. If spilled on clothing, remove all affected clothing. Consult a physician if symptoms are severe or persistent.

**In case of eye contact**

Flush eyes with water or eye wash solution as a precaution for 15 minutes. Consult a physician if symptoms are severe or persistent.

**In case of ingestion**

Only induce vomiting if recommended by medical personnel. If subject is unconscious, do not give anything by mouth. If conscious, rinse mouth with water. Consult a physician if symptoms are severe or persistent.

**4.2 Most important symptoms and effects, both acute and delayed**

All known important symptoms are described in Section 2 and/or Section 11. No other important symptoms to report.

**4.3 Indication of any immediate medical attention and special treatment needed**

No special treatment indicated. Provide treatment in accordance with exhibited systems.

## SECTION 5: FIREFIGHTING MEASURES

**5.1 Suitable extinguishing media**

Water spray, alcohol-resistant foam, dry chemical, and carbon dioxide extinguishers are suitable.

**5.2 Unsuitable extinguishing media**

No known unsuitable extinguishing media.

**5.3 Special hazards arising from the substance**

No special hazards are known to exist regarding combustion of this product.

**5.4 Advice for firefighters**

Wear protective gear, such as self-contained breathing apparatus, if necessary

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures**

Provide suitable ventilation. Use any necessary personal protective equipment. Avoid contact with skin and eyes, and avoid creation and inhalation of vapor or dust. Keep all unnecessary personnel away.

**For personal protection see section 8**

**6.2 Environmental precautions**

Prevent product from entering public sewers and waterways.

**6.3 Methods and material for containment and cleaning up**

Use inert absorbent material to absorb any spilled or leaked product. Keep in suitable, closed containers for disposal.

**For proper disposal see section 13**

## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Provide suitable ventilation. Wear any necessary personal protective equipment.

**For precautions see section 2**

### 7.2 Conditions for safe storage, including any incompatibilities

| | | |
|---|---|---|
| Storage conditions | : | Store upright, closed container in arid, ventilated environment. |
| Incompatible materials | : | Strong oxidizing agents, potassium, and sodium/sodium oxides are incompatible with this product. Product can form shock-sensitive mixtures with certain other materials. |

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

Iron (III) Chloride, Hexahydrate CAS No.: 10025-77-1

TWA: 1 mg/m3. Basis: USA. ACGIH Threshold Limit Values (TLV). Remarks: Upper Respiratory Tract irritation, skin irritation, varies
TWA: 1 mg/m3. Basis: USA. NIOSH Recommended Exposure Limits.
PEL: 1 mg/m3. Basis: California permissible exposure limits for chemical contaminants (Title 8, Article 107).

### 8.2 Engineering controls

Follow good industrial hygiene and safety practices when handling product.

### 8.3 Personal protective equipment

| | | |
|---|---|---|
| Eye/face protection | : | Use only government-approved safety glasses with side-shields. |
| Skin protection | : | Use gloves when handling product. Inspect gloves before use to ensure suitability for use. Remove without exposing skin to the gloves outer surface. Discard used gloves according to all pertinent laws and/or current good practices (cGXP). Wash hands with soap and water. |
| Body protection | : | Wear appropriate clothing. Ensure clothing is in good condition, with no holes or tears. When selecting clothing, consider the concentration and amount of substance to be handled. |
| Respiratory protection | : | Use only approved respirators and components which comply with CDC and NIOSH (US) or CEN (EU) regulations. Required only when vapors or aerosols are created. |
| Control of environmental exposure | : | Prevent product from entering the environment, especially through public sewers or waterways. |

| | | | |
|---|---|---|---|
| | General hygiene considerations | : | Comply with general industrial hygiene practice guidelines. |

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

| | | | |
|---|---|---|---|
| **a)** | Appearance | : | Yellow |
| **b)** | Physical states | : | Solid |
| **c)** | Odor | : | Not available |
| **d)** | Odor threshold | : | Not available |
| **e)** | Melting point | : | 37°C |
| **f)** | Boiling point range | : | 280-285°C |
| **g)** | pH | : | Not available |
| **h)** | Density | : | Not available |
| **i)** | Flash point | : | Not available |
| **j)** | Evaporation rate | : | Not available |
| **k)** | Flammability | : | Not available |
| **l)** | Upper/lower flammability or explosive limits: | : | Not available |
| **m)** | Vapor pressure | : | 1 hPa (1 mmHg) @ 194°C |
| **n)** | Vapor density | : | Not available |
| **o)** | Relative density | : | 1.820 g/cm3 |
| **p)** | Water solubility | : | Not available |
| **q)** | Partition coefficient:n-octanol/water | : | Not available |
| **r)** | Autoignition temperature | : | Not available |
| **s)** | Decomposition temperature | : | Not available |
| **t)** | Kinematic viscosity | : | Not available |
| **u)** | Explosive properties | : | Not available |
| **v)** | Oxidizing properties | : | Not available |
| **w)** | Solubility in other solvents | : | Not available |
| **x)** | Surface tension | : | Not available |

## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

No special reactivity is known.

### 10.2 Chemical stability

Product is stable when stored and used as recommended.

### 10.3 Stability note(s)

Avoid exposing the product to moisture.

### 10.4 Polymerization

No known polymerization.

### 10.5 Possibility of hazardous reactions

No hazardous reactions are known.

**10.6 Incompatible materials**

Strong oxidizing agents, sodium/sodium oxides, and potassium are incompatible with this product. Product can form shock-sensitive mixtures with certain other materials.

**10.7 Hazardous decomposition products**

Hydrogen chloride gas, and iron oxides can form if fire occurs.

## SECTION 11: TOXICOLOGICAL INFORMATION

**11.1 Acute toxicity**

| | | |
|---|---|---|
| LD50 Oral | : | Rat - 900 mg/kg |
| LD50 Dermal | : | No toxicity data available. |
| LC50 Inhalation | : | No toxicity data available. |

**11.2 Skin corrosion/irritation**

No skin/corrosion irritation data available.

**11.3 Serious eye damage/eye irritation**

No eye damage/irritation data available.

**11.4 Respiratory or skin sensitization**

No sensitization data available.

**11.5 Germ cell mutagenicity**

No mutagenicity data available.

**11.6 Carcinogenicity**

| | | |
|---|---|---|
| IARC | : | Product and components are not regulated by the IARC. |
| ACGIH | : | Product and components are not regulated by the ACGIH. |
| NTP | : | Product and components are not regulated by the NTP. |
| OSHA | : | Product and components are not regulated by OSHA. |

**11.7 Reproductive toxicity**

No reproductive toxicity data available.

**11.8 Specific target organ toxicity – single exposure**

No specific organ toxicity data available.

**11.9 Specific target organ toxicity – repeated exposure**

No specific organ toxicity data available.

**11.10 Aspiration hazard**

No aspiration hazard data available.

**11.11 Additional Information**

RTECS: NO5425000.
Overdose of iron compounds may have a corrosive effect on the gastrointestinal mucosa and be followed by necrosis, perforation, and stricture formation. Several hours may elapse before symptoms that can include epigastric pain, diarrhea, vomiting, nausea, and hematemesis occur. After apparent recovery a person may experience metabolic acidosis, convulsions, and coma hours or days later. Further complications may develop leading to acute liver necrosis that can result in death due to hepatic coma.

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1 Toxicity

No ecological toxicity data available.

### 12.2 Aquatic toxicity

No aquatic toxicity data available.

### 12.3 Persistence and degradability

No persistence/degradability data available.

### 12.4 Bioaccumulative potential

No bioaccumulation data available.

### 12.5 Mobility in soil

No soil mobility data available.

### 12.6 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment is not required/was not conducted.

### 12.7 Other adverse effect

No other adverse effect data available.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Product

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult and adhere to local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

### 13.2 Packaging

Packaging should be disposed of in the same manner as unused product.

### 13.3 Recommendation

Disposal must be made according to official regulations.

## SECTION 14: TRANSPORTATION INFORMATION

### 14.1 DOT (US)

UN#3260
Class: 8
Packing group: III
Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s. (Iron trichloride hexahydrate) (Iron trichloride
hexahydrate)
Reportable Quantity (RQ): 1000 lbs.
Poison Inhalation Hazard: No

### 14.2 IMDG

UN#3260
Class: 8
Packing group: III
EMS-No: F-A, S-B
Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s. (Iron trichloride hexahydrate) (Iron trichloride
hexahydrate)

### 14.3 IATA

UN#3260
Class: 8
Packing group: III
Proper shipping name: Corrosive solid, acidic, inorganic, n.o.s. (Iron trichloride hexahydrate) (Iron trichloride
hexahydrate)

## SECTION 15: REGULATORY INFORMATION

### 15.1 SARA

SARA 302: This product and components are not subject to the reporting requirements of SARA Title III, Section 302.
SARA 313: This product does not contain any components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313.
SARA 311/312: Acute Health Hazard

### 15.2 Clean water act (CWA)

No chemicals are present in this product that are subject to regulation under the Clean Water Act.

### 15.3 Right to know components

| | | |
|---|---|---|
| Massachusetts | : | Iron trichloride hexahydrate CAS No.: 10025-77-1 |
| Pennsylvania | : | Iron trichloride hexahydrate CAS No.: 10025-77-1 |
| New Jersey | : | Iron trichloride hexahydrate CAS No.: 10025-77-1 |
| California proposition 65 components | : | This product contains no chemicals which are known to the State of California to cause cancer, or birth defects or other reproductive harm. |

## SECTION 16: OTHER INFORMATION

### 16.1 Disclaimer

This product is offered by Plantmedia for research, laboratory or further manufacturing use. Not for human use or consumption. The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchant-ability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall buffersandreagents.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect,incidental,consequential or exemplary damages, howsoever arising, even if buffersandreagents.com has been advised of the possibility of such damages.

### 16.2 Copyright



### 16.2 Preparation Information

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