Safety data sheet Safety data sheet
TPP- FC 40%

Section 01 - Chemical And Product and Company Information

Product Identifier	**Ferric chloride**
Trade name	**TPP- FC 40%**
Product Use	**Wastewater treatment, purifying factory effluents and deodorizing sewage, mordant in dyeing and printing textiles; pigments and inks; photoengraving**
Supplier Name	**Tayseer international chemicals,** **2 Ali amine. Naser city the 10th floor , office 1003**
Manufacturing by	**Tayseer international chemicals** **Cairo - Badr Al-Rubiki, area of 800 acres, plot 165**
Manufacturing date	**15/3/2024**
24-Hour Emergency Phone	**02/ 223866483**

Section 02 - Composition / Information on Ingredients

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Hazardous Ingredients	Ferric Chloride Hydrochloric Acid	Min, 40% Max. 1%
CAS Number	Ferric Chloride Hydrochloric Acid	7705-08-0 7641-01-0
Synonym (s)	.Iron(III) chloride, ferric chloride	

Section 03 - Hazard Identification

Inhalation	**Inhalation of spray mist may produce tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Repeated exposure may produce respiratory tract irritation leading to frequent attacks of bronchial infection.**
Skin Contact / Absorption	**Skin contact may produce burns. Skin inflammation is characterized by itching, scaling, reddening, or occasionally blistering**
Eye Contact.	**Irritating to eyes; possible burns to eyes.**
Ingestion	**Irritation of the mouth and stomach. Symptoms of severe poisoning include stomach pain, vomiting, diarrhea, dehydration, shock, pallor, weak pulse, drowsiness, dilated pupils, and coma.**
Exposure Limits	**ACGIH/TLV-TWA: 1mg/m3 (ferric chloride)** **OSHA/TWA: 1mg/m3 (ferric chloride)** **ACGIH: 2ppm ceiling (hydrogen chloride gas)** **OSHA: 5ppm ceiling (hydrogen chloride gas)**

Section 04 - First Aid Measures

Inhalation	**Remove victim to fresh air. Give artificial respiration only if breathing has stopped. If breathing is difficult, give oxygen. Seek immediate medical attention**
Skin Contact / Absorption	**Remove contaminated clothing. Wash affected area with soap and water. Seek medical attention if irritation occurs or persists.**
Eye Contact.	**Flush immediately with water for at least 20 minutes. Forcibly hold eyelids apart to ensure complete irrigation of eye tissue. Seek immediate medical attention.**

Ingestion	**Do not induce vomiting. If vomiting occurs, lean victim forward to prevent breathing in vomit. Give large amounts of water. Do not give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention.**
Additional Information	**Note to physician: for inhalation, consider oxygen. Avoid gastric lavage or emesis**

Section 05 - Fire Fighting

Means of Extinction	**Product does not burn. Where fire is involved, use any firefighting agent (water spray, fog, foam) appropriate for surrounding material; use water spray to cool fire-exposed surfaces.**
Flash Point	**Not applicable**
Auto-ignition Temperature	**Not applicable**
Upper Flammable Limit	**Not applicable**
Lower Flammable Limit	**Not applicable**
Hazardous Combustible Products	**Hydrogen chloride, phosgene**
Special Fire Fighting Procedures	**Wear NIOSH-approved self-contained breathing apparatus and protective clothing.**
Explosion Hazards	**Not sensitive to mechanical impact or static discharge. Ferric chloride reacts with most metals to give flammable, potentially explosive hydrogen gas. Latent fire and explosion hazard when in contact with metals due to hydrogen gas.**

Section 06 - Accidental Release Measures

Leak / Spill	**Wear appropriate personal protective equipment. Ventilate area. Stop or reduce leak if safe to do so. Prevent material from entering sewers.**
Deactivating Materials	**Neutralize waste with lime, limestone, or soda ash. Generation of CO_2 requires ventilation.**
Auto-ignition Temperature	**Not applicable**

Section 07 - Handling and Storage

Handling Procedures	**Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure.**
Storage Requirements	**Keep container tightly closed. Do not store it in metal containers. Aluminum, copper, and stainless steel are readily attacked. Provide venting for rubber lined steel to avoid pressure buildup. Materials of construction to be used can include polyethylene, polypropylene, rubber-lined steel and FRP designated as appropriate for use with this product. Storage tanks should be vented to scrubber or exterior atmosphere. Storage facilities should have secondary containment as required by law or regulation. Storage tanks, piping and off-loading points should be labeled with appropriate signage to avoid accidents. Some concentrations of this product will freeze or crystallize at low temperatures. Insulate and heat-trace storage tanks, pumps, pipes, and ancillary equipment as necessary. Product should be used within one year.**

Section 08 - Personal Protection and Exposure Controls

Protective Equipment	
Eyes	Chemical goggles, full-face shield, or a full-face respirator is to be worn at all times when product is handled. Contact lenses should not be worn; they may contribute to severe eye injury.
Respiratory	Use NIOSH-approved acid gas respirator or a self-contained breathing apparatus if airborne concentrations may exceed exposure limits.
Gloves	Impervious gloves of chemically resistant material (rubber, neoprene, or PVC) should be worn at all times. Wash contaminated clothing with soap and water, dry thoroughly before reuse.
Clothing	Body suits, aprons, and/or coveralls of chemical resistant material should be worn at all times. Wash contaminated clothing with soap and water, dry thoroughly before reuse.
Footwear	Impervious boots of chemically resistant material should be worn at all times.
Engineering Controls	
Ventilation Requirements	Mechanical ventilation (dilution or local exhaust), process or personnel enclosure, and control of process conditions should be provided. Supply sufficient replacement air to make up for air removed by exhaust systems.
Other	Emergency shower and eyewash should be in close proximity

Section 09 - Physical and Chemical Properties

Physical State	Liquid
Odor and Appearance	Reddish, brown liquid with a slight pungent odor
Odor Threshold	Not available
Specific Gravity (25℃)	1.38-1.42

Vapor Pressure (mm Hg, 20℃)	**40**
Vapor Density	**Not available**
Evaporation Rate	**Not available**
Boiling Point	**106°C**
Freeze/Melting Point	**Not available**
pH (1%)	**2-3.5**
Water/Oil Distribution Coefficient	**Not available**
Bulk Density	**Not available**
% Volatiles by Volume	**Not available**
Solubility in Water	**Completely miscible and soluble**
Molecular Formula	**$FeCl_3$**
Molecular Weight	**162.20**

Section 10 - Stability and Reactivity

Stability	**Stable under normal conditions. Decomposes to yield hydrochloric gas on exposure to light**
Incompatibility	**Highly reactive with oxidizing, bases, acids and reducing agents. Reactive with metals and combustible materials.**
Hazardous Products of Decomposition	**Decomposes to yield hydrochloric gas on exposure to light**
Polymerization	**Will not occur**

Section 11 - Toxicological Information

Irritancy	**Irritant Animal**
Sensitization	**Not available**
Chronic/Acute Effects	**Not available**
Synergistic Materials	**Not available**
Toxicity Data	**LD50(Oral, Rat): 895 mg/kg LD50(Dermal, Rabbit): >2000 mg/kg**

Carcinogenicity	**Not considered carcinogenic by NTP, IARC, or ACGIH**
Reproductive Toxicity	**Not available**
Teratogenicity	**Not available**
Mutagenicity	**Tests on lab animals indicate material may produce adverse effects.**

Section 12 - Ecological Information

Fish Toxicity	**Ferric Chloride: LC50(96 hr, Striped bass, 96): 6 mg/L LC50(96 hr, Mosquitofish): 75.6 mg/L Hydrochloric acid: LC50(96 hrs, Mosquitofish): 282 mg/L LC50(96 hrs, Bluegill sunfish): 3.6 mg/L**
Biodegradability	**Not available**
Environmental Effects	**Not available**

Section 13 - Disposal Consideration

Waste Disposal	**Dispose in accordance with all federal, provincial, and/or local regulations including the Egyptian guidelines**

Section 14 - Transportation Information

TDG Classification	
Class	**8**
Group	**III**
PIN Number	**UN 2582**
Other	**Secure containers (full and/or empty) with suitable hold down devises during shipment**

Section 15 - Regulatory Information

WHMIS Classification	E
NOTE: THE PRODUCT LISTED ON THIS MSDS HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE EGYPT CONTROLLED PRODUCTS REGULATIONS. THIS MSDS CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.	

Section 16 - Other Information

Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations. Attention: Receiver of the chemical goods / MSDS coordinator as part of our commitment to the TSC Responsible Distribution® initiative, TSC and its associated companies require, as a condition of sale, that you forward the attached Material Safety Data Sheet(s) to all affected employees, customers, and end-users. TSC will send any available supplementary handling, health, and safety information to you at your request. If you have any questions or concerns, please call our customer service or technical service department