

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TRAMFLOC® 568FC

DATE ISSUED: 06/01/03

SUPERSEDES: 05/07/99

DESCRIPTION: Ferric chloride solution

COMPANY IDENTIFICATION:

Tramfloc, Inc.

P. O. Box 350

Tempe, AZ 85280-0350

480-491-6895

EMERGENCY TELEPHONE: 24 hours a day, 7 days a week

CHEMTREC 1-800-424-9300

SECTION 2 - COMPOSITION/INFORMATION on INGREDIENTS

CHEMICAL NAME	WT/WT % EQUAL TO	CAS NUMBER
Ferric Chloride	39-43 %	7705-08-0
Hydrochloric Acid	40 %	7647-01-0

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW - Reddish brown liquid with no sediment.

POTENTIAL HEALTH EFFECTS - Ferric chloride can affect the body if the solution is ingested or contacts skin or eyes.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Prolonged or repeated eye contact will cause irritation, burns and conjunctivitis.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Irritating

EFFECTS OF OVEREXPOSURE - INHALATION: Mist may cause damage to respiratory tract.

EFFECTS OF OVEREXPOSURE - INGESTION: Can cause irritation and burns to the gastrointestinal tract.

EFFECTS OF OVEREXPOSURE - Symptoms of Ingestion: Abdominal pain and prolonged vomiting may begin up to one hour after ingestion of soluble iron salts. Hematemesis, dehydration, shock, pallor, cyanosis, hypothermia, vasomotor instability, and coma may follow. Death may occur from 1-3 days afterwards. Survivors may develop reversible hemorrhagic necrosis. Gastric scarring may occur after 4 weeks. Pyloric stenosis and mild hepatic cirrhosis may persist.

PRIMARY ROUTE OF ENTRY - Skin, eyes and mouth

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SECTION 4 - FIRST AID MEASURES

INHALATION: Remove to fresh air. Call a physician.

SKIN: Flush immediately with soap and water for at least 30 minutes and remove contaminated clothing.

EYE CONTACT: Flush with water at least 30 minutes with eyelids open. Washing within one minute of exposure is essential to achieve maximum first aid effectiveness. Call a physician.

INGESTION: Give 1 or 2 glasses of water or milk. Do not induce vomiting. Consult a physician. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASHPOINT: Na; **FLAMMABILITY:** None; **AUTO FLAMMABILITY:** None

EXPLOSIVE LIMITS: LOWER: Not applicable; **UPPER:** Not applicable.

EXTINGUISHING MEDIA: Whatever media is appropriate for surrounding fire.

EXTINGUISHING MEDIA WHICH MUST NOT BE USED: None. Keep fire exposed drums cool.

SPECIAL EXPOSURE HAZARDS IN A FIRE: Na; **EXPLOSION HAZARD-** None

SPECIAL PROTECTIVE EQUIPMENT: Self-contained breathing apparatus should be worn by firefighters. Move exposed containers from fire area, if that may be done without risk.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS: Avoid runoff into storm sewers and ditches. CERCLA Reportable Quantity is 1000 lbs.

METHODS FOR CLEANUP: Wear proper safety equipment. Recycle if possible. If not, dike and absorb spill with inert materials such as clays, sand, earth, or other commercially available dry sweeping compound, and collect for disposal in accordance with federal, state, local or other applicable laws and regulations. Material which cannot be diked should be covered with soda ash or sodium bicarbonate. Large spills should be contained and pumped into salvage tanks. Flush residue to sewer with water. If slippery conditions persist, apply more dry sweeping compound.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Avoid contact with eyes, skin and clothing. Do not take internally. Keep container tightly closed. Store in corrosion-proof area. Containers of this material may be hazardous when empty since they retain product residues. Observe all warnings and precautions listed for the product.

STORAGE: Avoid storage temperatures <20⁰ F. Product may stratify.

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SECTION 8 - EXPOSURE CONTROLS/ PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust is preferred as it prevents vapors from entering the general work area. Eyewash and safety shower stations are recommended.

EXPOSURE GUIDELINES - No MAC values have been established.

PERSONAL PROTECTIVE EQUIPMENT: NIOSH/MSHA approved respirator if exposure exceeds or may exceed occupational exposure limits.

RESPIRATORY PROTECTION: Generally needed under normal conditions.

HAND PROTECTION: Wear impervious rubber gloves, apron, rain suit and boots.

EYE PROTECTION: Wear chemical splash goggles or full face mask . Do not wear contact lenses.

SKIN PROTECTION: If clothing is contaminated, wash skin and launder clothing.

NOTE: Before eating, drinking or smoking, wash face and hands thoroughly with soap and water.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE, COLOR and ODOR: dark yellow-brown liquid with a slightly muddy odor.

pH as is: ~2.0; **BOILING POINT/RANGE:** 446⁰ F; **VAPOR DENSITY**(air=1.0): essentially H₂O

FLASH POINT: Na; **VAPOR PRESSURE:** same as H₂O; **SPECIFIC GRAVITY:** 1.41-1.46

WATER SOLUBILITY: Completely soluble; **VAPOR PRESSURE:** 20 mm@60⁰ C, (HCl only)

SECTION 10 - STABILITY and REACTIVITY

CHEMICAL STABILITY: Stable; **CONDITIONS TO AVOID:** All metals and strong oxidizing agents.

HAZARDOUS DECOMPOSITION PRODUCTS: When heated to decomposition, emits toxic chlorine or hydrogen chloride.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: LD₅₀ ORAL (rat)= not known

IRRITANCY AND CORROSIVENESS: Will be irritating to skin and eyes on prolonged exposure. Highly corrosiveness.

SUBACUTE, SUBCHRONIC AND PROLONGED TOXICITY: No information available.

EMPIRICAL DATA ON EFFECTS ON HUMANS: Considered non-toxic when used according to all safety recommendations.

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SECTION 12 - ECOLOGICAL INFORMATION

PERSISTENCE IN THE ENVIRONMENT: Not available.

BIOLOGICAL OXYGEN DEMAND: Not known; CHEMICAL OXYGEN DEMAND: Not known

OTHER INFORMATION: Discharge of this product must be in accordance with all federal, state, local or other applicable laws and regulations.

SECTION 13 - DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Residue is an EPA characteristic hazardous waste due to corrosivity (D001). Dispose at an EPA approved hazardous waste disposal facility. Contact the local EPA office for further information. Comply with all federal, state, local or other applicable laws regulations.

SECTION 14 - TRANSPORTATION INFORMATION

DOT Proper Shipping Name: Ferric Chloride, Solution; DOT Hazard Class/ID No. 8 UN3583 III

SECTION 15 - REGULATORY INFORMATION

U. S. FEDERAL REGULATIONS: CERCLA-SARA Hazard Category: This product contains the following toxic chemicals subject to the reporting requirements of SARA Title III Section 313 of the Emergency planning and Community Right To Know Act of 1986 and of 40 CFR 372: CAS 7647-01-0, hydrochloric acid, 1% by weight.

No SARA Section 313 components exist in this product.

INVENTORY INFORMATION- EEC EINECS: All components of this product are included on the European Inventory of Existing Chemical Substances (EINECS) in compliance with Council Directive 67/548/EEC as amended.

US TSCA: This product is manufactured in compliance with all provisions of the Toxic Substances Control Act, 15 U.S.C.

CANADA DSL: Components of this product have been reported to Environment Canada in accordance with subsection 25 of the Canadian Environmental Protection Act and are included on the Domestic Substances List.

SECTION 16 - OTHER INFORMATION

HMIS RATINGS: HEALTH: 1; FLAMMABILITY: 0; REACTIVITY: 1

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, Tramfloc, Inc. makes no guarantee for results obtained, and assume no responsibility for damages incurred by use of this product. It is the responsibility of the user to comply with all federal, state and local laws and regulations.