MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: TRAMFLOC® 568FS

DATE ISSUED: 06/01/14 SUPERSEDES: 05/07/99

DESCRIPTION: Ferric sulfate solution

COMPANY IDENTIFICATION: TRAMFLOC, INC. P. O. Box 60469 Houston, TX 77205-0469 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 Sulfate	60 %	10028-22-5
Water	40 %	7732-18-5

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW - Reddish brown liquid with no sediment. This product does not contain any hazardous ingredients as defined in 29 CFR 1910.1200. There are no ingredients listed as carcinogens by IARC, NTP, or OSHA.

POTENTIAL HEALTH EFFECTS

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

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 - CHRONIC HAZARDS: Na

PRIMARY ROUTE OF ENTRY - Na

SECTION 4 - FIRST AID MEASURES

Product Name: Tramfloc® 568FS

INHALATION: Remove to fresh air. Call a physician.

SKIN: Flush immediately with soap and water for at least 15 minutes and remove contaminated clothing.

EYE CONTACT: Flush with water at least 15 minutes with eyelids open. Call a physician.

INGESTION: Have conscious patient drink several glasses of water. 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.

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

SPECIAL PROTECTIVE EQUIPMENT: Self-contained breathing apparatus should be worn.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS: Avoid runoff into storm sewers and ditches.

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. 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.

STORAGE: Avoid storage temperatures <20° F. Product may stratify.

SECTION 8 - EXPOSURE CONTROLS/ PERSONAL PROTECTION

ENGINEERING CONTROLS: General ventilation is recommended. Eyewash and safety shower stations are recommended.

EXPOSURE GUIDELINES - No MAC values have been established.

PERSONAL PROTECTIVE EQUIPMENT: See below and wear boots.

RESPIRATORY PROTECTION: Generally needed under normal conditions.

Product Name: Tramfloc® 568FS

HAND PROTECTION: Wear impervious rubber gloves.

EYE PROTECTION: Wear chemical splash goggles or face mask.

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 brown liquid with a slightly muddy odor.

pH as is: ~1.0; BOILING POINT/RANGE: na; VAPOR DENSITY(air=1.0): essentially H₂O

FLASH POINT: Na; VAPOR PRESSURE: same as H₂O; SPECIFIC GRAVITY: 1.57-1.61

WATER SOLUBILITY: Completely soluble; OCTANOL/WATER PARTITION COEFFICIENT: Na

SECTION 10 - STABILITY and REACTIVITY

CHEMICAL STABILITY: Stable; CONDITIONS TO AVOID: Very corrosive to all metals.

HAZARDOUS DECOMPOSITION PRODUCTS: None known.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: LD₅₀ ORAL (rat)= > 100g/kg

IRRITANCY AND CORROSIVENESS: May be slightly irritating to skin and eyes on prolonged exposure. No evidence of corrosiveness.

SENSITIZATION: None known.

SUBACUTE, SUBCHRONIC AND PROLONGED TOXICITY: No information available.

EMPIRICAL DATA ON EFFECTS ON HUMANS: Considered non-toxic in normal use.

SECTION 12 - ECOLOGICAL INFORMATION

PERSISTENCE IN THE ENVIRONMENT: Not available.

BIOLOGICAL OXYGEN DEMAND: BOD₅ = 150 mg/I;

CHEMICAL OXYGEN DEMAND: COD = 21,000 mg/I

AQUATIC TOXICITY: Daphnia Magna, 48-hour LC₅₀: Not known Fathead Minnow (Pimephales promelas), 96-Hour LC₅₀: Not known. Product Name: Tramfloc® 568FS

Fathead Minnow (Pimephales promelas), 96-Hour LC₅₀: Not known.

NOTE: Aquatic toxicity is reduced by factors of 10 to 100 times in the presence of 5 to 10 mg/l organic carbon as is found in most surface waters.

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

Non-Hazardous, Non-Regulated

SECTION 15 - REGULATORY INFORMATION

U. S. FEDERAL REGULATIONS: CERCLA-SARA Hazard Category:

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: 0; FLAMMABILITY: 0; REACTIVITY: 0

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 assumes 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.