

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT and COMPANY IDENTIFICATION

PRODUCT NAME: TRAMFLOC® 552

DATE ISSUED: 06/01/03

SUPERSEDES: 05/07/99

DESCRIPTION: Polyquaternary and aluminum salt blend.

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
Polydimethyldiallylammonium Chloride	~25 %	26062-79-3
Aluminum chlorhydroxide complex	~75 %	12042-91-0

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW - Clear colorless liquid with no odor. Spills are very slippery. Avoid contact with skin eyes and clothing.

POTENTIAL HEALTH EFFECTS

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Prolonged or repeated eye contact may cause irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Prolonged or repeated skin contact may cause irritation.

EFFECTS OF OVEREXPOSURE - INHALATION: None expected.

EFFECTS OF OVEREXPOSURE - INGESTION: May be harmful based on animal studies.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: None known.

PRIMARY ROUTE OF ENTRY- Skin contact.

SECTION 4 - FIRST AID MEASURES

INHALATION: Not expected to be harmful. Remove patient to fresh air.

Product Name: Tramfloc® 552

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

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

INGESTION: Material is not expected to be harmful by ingestion. If swallowed, do not induce vomiting. Give victim a glass of water. Consult a physician. Never give anything by mouth to an unconscious person.

SECTION 5 - FIRE-FIGHTING MEASURES

FLASHPOINT: None; FLAMMABILITY: None; AUTO FLAMMABILITY: None

EXPLOSIVE LIMITS:

LOWER: Not applicable; UPPER: Not applicable. EXPLOSION HAZARD- None

EXTINGUISHING MEDIA: Not expected to burn unless heated to dryness. Residue may ignite. Use water, foam, carbon dioxide or dry chemical to extinguish.

EXTINGUISHING MEDIA WHICH MUST NOT BE USED: None.

SPECIAL EXPOSURE HAZARDS IN A FIRE: In a fire may liberate oxides of nitrogen, carbon or hydrogen chloride. Keep containers cool by spraying with water if exposed to fire.

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: 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. Product may cause a slip hazard. If slippery conditions persist, apply more dry sweeping compound.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Keep containers closed. Avoid contact with eyes, skin and clothing.

STORAGE: Avoid storage temperatures <32⁰ 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.

Product Name: Tramfloc® 552

PERSONAL PROTECTIVE EQUIPMENT: See below

RESPIRATORY PROTECTION: Is normally not needed since volatility and toxicity are low. If significant vapors, mists, or aerosols are present, use NIOSH approved respirator (ANSI Z 882.1980) or equivalent

HAND PROTECTION: Wear impervious 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: Clear colorless liquid with no odor.

pH as is: 3.7

BOILING POINT/RANGE: ~212⁰F

VAPOR PRESSURE: NA

SPECIFIC GRAVITY: 1.29

WATER SOLUBILITY: Completely soluble

SECTION 10 - STABILITY and REACTIVITY

CHEMICAL STABILITY: Stable.

CONDITIONS TO AVOID: None.

MATERIALS TO AVOID: Avoid contact with alkalis; precipitates aluminum hydroxide.

HAZARDOUS DECOMPOSITION PRODUCTS: At temperatures > 500⁰F, hydrogen chloride gas will be liberated.

SECTION 11 -TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: Acute Oral Toxicity (Albino Rat) LD₅₀ = > 5000mg/kg

Acute Dermal Toxicity(Albino Rabbit) LD₅₀ = >2000mg/kg.

IRRITANCY: Skin: Draize rating (Albino Rabbit) = 0.1/8.0 (non-irritating)

Eye: Draize rating (Albino Rabbit) = 9.0/110.0.

Some initial conjunctive blistering was noted in 3 of 6 animals but, this condition completely disappeared by the end of the observation period.

Product Name: Tramfloc® 552

SUBACUTE AND PROLONGED TOXICITY: Not known. SENSITIZATION: None known.

EMPIRICAL DATA ON EFFECTS ON HUMANS: No studies known.

SECTION 12 - ECOLOGICAL INFORMATION

PERSISTENCE IN THE ENVIRONMENT: Not available.

CHEMICAL OXYGEN DEMAND: COD = 150,000 mg/l; BIOACCUMULATION: $K_{ow} < 10$

AQUATIC TOXICITY:

Bluegill Sunfish (*Lepomis Macrochirus*), 96-Hour LC_{50} : 0.14 mg/l

Rainbow Trout (*Oncorhynchus Mykiss*), 96-Hour LC_{50} : 0.22 mg/l

Water Flea (*Daphnia Magna*), 48-Hour EC_{50} : 0.14 mg/l

Fathead Minnow (*Pimephales promelas*), 96-Hour LC_{50} : 0.4 mg/l

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: Recycle if possible. If not, absorb spilled material on inert absorbent and dispose of solidified material in accordance with federal, state, local or other applicable laws and 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.

Product Name: Tramfloc® 552

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: 0 PROTECTION: B

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.