MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT and COMPANY IDENTIFICATION

PRODUCT NAME: TRAMFLOC® Sodium Bromide Granular DATE ISSUED: 06/01/12

SUPERSEDES: 08/25/99

DESCRIPTION: Sodium Bromide, granular

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 and INFORMATION ON INGREDIENTS

CHEMICAL NAME CAS NUMBER

Sodium bromide 7647-15-6

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: White, free flowing dry powder with no odor. Spills are slippery. Avoid contact with skin, eyes and clothing. Contact with eyes may produce irritation and/or redness. Inhaled dust may cause some respiratory irritation.

POTENTIAL HEALTH EFFECTS

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Eye contact may produce irritation and/or redness. Holding eye lids open, flush eyes for 20 minutes. Get medical attention at once.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: Remove contaminated clothing and lauder. Wash affected area for 15 minutes. Seek medical attention if irritation occurs.

EFFECTS OF OVEREXPOSURE - INHALATION: Inhaled dust may cause some respiratory irritation.

Keep patient warm. Give artificial respiration and seek medical help at once.

EFFECTS OF OVEREXPOSURE: INGESTION: If swallowed, wash mouth thoroughly and give patient water to drink. Seel medical help at once.

PRIMARY ROUTE OF ENTRY: Eyes, Inhalation.

SECTION 4 - FIRST AID MEASURES

INHALATION: Remove patient to fresh air.

SKIN: Remove contaminated clothing and launder before reuse. Wash affected area with soap and water for at least 15 minutes.

EYE CONTACT: Flush with water at least 20 minutes with eyelids open. Call a physician at once.

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INGESTION: Do not give an emetic unless directed by a physician. Never give anything by mouth to an unconscious person.

SECTIONS 5 - FIRE FIGHTING MEASURES

FLASHPOINT: NA; FLAMMABILITY: NA; AUTO FLAMMABILITY: NA

EXPLOSION HAZARD: Dust in sufficient concentration can result in an explosive mixture in air.

EXPLOSIVE LIMITS: LOWER: NA; UPPER: NA

EXTINGUISHING MEDIA: Carbon dioxide, dry chemical or foam to extinguish.

EXTINGUISHING MEDIA WHICH MUST NOT BE USED: None.

SPECIAL EXPOSURE HAZARDS IN A FIRE: Will decompose at 800° C releasing poisonous fumes of hydrogen bromide and sodium oxide. Keep containers cool by spraying with water if exposed to fire.

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

SECTION 6 - ACCIDENTAL RELEASE MEASURES

ENVIRONMENTAL PRECAUTIONS: Avoid runoff into sewers and ditches which lead to waterways.

METHODS FOR CLEANUP: Wear full safety gear. Sweep up product, place in bag for waste disposal or reuse. Ventilate area and wash spill site after material is picked up.

OTHER INSTRUCTIONS: Dispose of solid material in accordance with federal, state, local or other applicable laws and regulations.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Avoid bodily contact. Keep containers closed.

STORAGE: Avoid extremes of temperature: wet damp or humid conditions.

SECTION 8 - EXPOSURE CONTROLS and 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; RESPIRATORY PROTECTION: Use NIOSH approved dust respirator (ANSI Z 882.1980) or equivalent, as required to control exposure.

HAND PROTECTION: Wear impervious gloves. EYE PROTECTION: Wear chemical splash goggles or face mask, body covering clothes and boots.

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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: White, odorless crystalline solid.

pH as is: NA; MELTING POINT/RANGE: 755°C; SPECIFIC GRAVITY: 3.203

WATER SOLUBILITY: 94 gr/100 ml at 25° C. Boiling Point: 1390° C.

SECTION 10 - STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable under normal conditions.

CONDITIONS TO AVOID: None.

MATERIALS TO AVOID: Strong acids, heavy metal salts, strong oxidants such as liquid chlorine, enriched gaseous or liquid oxygen and sodium or calcium hypochlorite. Reacts violently with BF₃.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen bromide and sodium oxide.

SECTION 11 - TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: Not listed as a carcinogen by IARC, NTP, OSHA or ACGIH. The OSHA 8-hour TWA for total dust is 5 mg/M³ (3 mg/M³ for the respirable fraction). The ACGIH TLV-TWA is 2 mg/m³. Rat oral LD50, 4200 mg/kg; Rabbit dermal, >2000 mg/kg.

IRRITANCY AND CORROSIVENESS: 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: EYES; mild irritant. DERMAL: Not an irritant to intact skin. Slightly irritating on prolonged contact on abraded skin. INHALATION: Irritant to upper respiratory tract. INGESTION: may cause abdominal pain, nausea, vomiting. May cause muscular incoordination, sleep and respiratory depression. CHRONIC TOXICITY: Repeated skin contact may cause dematitis. Repeated ingestion, >9 mg/kg body weight/day, may affect central nervous system. Symptoms are: slurred speech, apathy, anorexia, drowsiness, weak memory and sensitivity loss.

SECTION 12 - ECOLOGICAL INFORMATION

AQUATIC TOXICITY: 96 Hour -LC50, Fish: >1000 mg/kg rainbow trout, sunfish. 48 hour-EC50, Daphnia magna, > 1000 mg/kg. Oral LD50, Bobwhite, >2250 mg/kg. Dietary LC50, Mallard duck, >5633 ppm.

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BIOACCUMULATION: not likely to occur as product is highly water soluble.

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.

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: 2; FLAMMABILITY: 1; REACTIVITY: 2; PROTECTION: F

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.