MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT and COMPANY IDENTIFICATION

PRODUCT NAME: TRAMFLOC® 1144

DATE ISSUED: 06/01/12 SUPERSEDES: 05/07/10

DESCRIPTION: A non silicone defoamer approved for application in ultra filtration membrane systems.

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, 800-424-9300

SECTION 2 - COMPOSITION/INFORMATION on INGREDIENTS

CAS No. 8042-47-5, Mineral oil; OSHA PEL = 5 mg/M^3

Proprietary All ingredients in this product are listed in the TSCA inventory and on the Canadian DSL. This product is considered non hazardous according to OSHA 21CFR 1910.1200.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW - Opaque white liquid with very mild odor. Slightly irritating to the eyes and skin. Can be irritating to the respiratory tract.

EFFECTS OF OVEREXPOSURE - EYES: May cause temporary discomfort with redness and dryness.

EFFECTS OF OVEREXPOSURE - SKIN: May cause irritation with repeated contact.

EFFECTS OF OVEREXPOSURE - INHALATION: May be irritating to nose, mouth, throat and lungs.

EFFECTS OF OVEREXPOSURE - INGESTION: May result in nausea/intestinal discomfort.

EFFECTS OF OVEREXPOSURE - SENSITIZATION PROPERTIES: Unknown.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: No adverse affects have been documented in humans as a result of chronic exposure.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: There is no evidence that this product aggravates an existing medical condition. OTHER REMARKS: None.

SECTION 4 - FIRST AID MEASURES

INHALATION: If inhaled, remove to fresh air. If not breathing, clear person's airway and give artificial respiration. If breathing is difficult, medical personnel may administer oxygen. Get medical attention at once.

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SKIN: Remove contaminated clothing and launder before reuse. Wash effected area with soap and water for at least 15 minutes or until all traces of material are removed. Get medical attention if skin irritation develops or skin contact has been prolonged.

EYES: Immediately flush with plenty of water for at least 15 minutes with eyelids open. Call a physician.

INGESTION: Give several glasses of water. Do not induce vomiting. Observe victim for nausea. Consult a physician if conditions persist. Do not give anything by mouth to an unconscious or convulsing person.

SECTION 5 - FIRE-FIGHTING MEASURES

IGNITION TEMPERATURE: NA. HMIS rating: Health: 1; Fire: 1; Reactivity: 0; Personal Protection: B

FLASHPOINT: >380⁰ F, COC; UNUSUAL OR EXPLOSIVE HAZARDS: None.

FLAMMABLE LIMITS % (Lower - Upper): Lower: ND; Upper: ND

RECOMMENDED FIRE EXTINGUISHING AGENTS AND SPECIAL PROCEDURES:

Use water fog, foam or CO_2 to extinguish flames. Keep containers cool.

SPECIAL PROTECTIVE EQUIPMENT: Wear full protective clothing and positive pressure breathing apparatus.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PROCEDURES IN CASE OF ACCIDENTAL RELEASE OR LEAKAGE: Contain spill with absorbent materials such as clay and shovel up. Spills are slippy. Clean promptly. Not a RCRA hazardous waste. Avoid skin and eye contact. Send to an approved landfill. Prevent runoff to streams. Observe local regulations.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Minimum handling temperature of 35⁰ F should be maintained. Keep containers closed.

STORAGE: Periods of exposure to high temperatures should be minimized. Water contamination should be avoided.

SECTION 8 - EXPOSURE CONTROLS/ PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT: EYE/FACE PROTECTION: Avoid eye contact. Chemical type goggles, or face shield should be worn.

SKIN PROTECTION: Launder when work clothing is soiled. Workers should wash exposed skin with soap and water. Impervious gloves are recommended.

RESPIRATORY PROTECTION: Airborne concentrations should be kept to low levels possible. If vapor, mist, or dust is generated and the occupational exposure limit of the product, or any component of the product, is exceeded, use appropriate NIOSH or MSHA approved air purifying or air supplied respirator after determining

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the airborne concentration of the contaminant. If concentration is unknown, wear air supplied respirators.

VENTILATION: Adequate to meet component occupational exposure limits.

EXPOSURE LIMIT FOR THE TOTAL PRODUCT: None established.

SECTION 9 - PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL STATE, COLOR and ODOR: opaque white liquid with very mild odor.
pH: NA. BOILING POINT: 212° F. MELTING/FREEZING POINT: 32° F.
WATER SOLUBILITY (%): 0.1-1; SPECIFIC GRAVITY: 0.960 @ 25° C VAPOR PRESSURE: 20 mm.
VAPOR DENSITY (Air=1): ND. VISCOSITY: NA.
VOC CONTENT: ND. SOLUBILITY IN WATER: Emulsifies. OTHER: None.

SECTION 10 - STABILITY and REACTIVITY

GENERAL: Product is stable in normal conditions. Will decompose into CO and CO₂.

HAZARDOUS POLYMERIZATIONS: DO NOT OCCUR. AVOID STRONG OXIDANTS.

SECTION 11 - TOXICOLOGICAL INFORMATION

No data are available as of the revision date of this document.

SECTION 12 - DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: This product has been evaluated for RCRA characteristics and does not meet the criteria of a hazardous waste if discarded in its purchased form. This product is not considered a hazardous waste under 21CFR 261. Under RCRA, it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets RCRA criteria for hazardous wastes. This is because product uses, transformations, mixtures, processes, etc. may render the resulting materials hazardous.

SECTION 13 - TRANSPORTATION INFORMATION

This product is not a DOT hazardous material and consequently is not regulated.

SECTION 14 - REGULATORY INFORMATION

FEDERAL REGULATIONS:

SARA Title III: Section 313: This product does not contain any toxic chemicals subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372. The product has no toxic chemicals as listed in 40CFR 355 used for SARA 302, 304, 311 and 312. Tramfloc[®]1144 is 21 CFR 173.340 compliant.

States Right-to-Know Regulations: Chemical Name: None

State Right-to-Know

State list: CT, FL, IL, MI, LA, MA, NJ, PA, RI, CA

California Prop. 65: The following detectable components of this product are substances, or belonging to classes of substances, known to the State of California to cause cancer and/or toxicity or birth defects.

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CHEMICAL NAME: CAS No. None

INTERNATIONAL REGULATIONS:

TSCA INVENTORY STATUS: This product, or its components, are listed on, or are exempt from the Toxic Substance Control Act (TSCA) Chemical Substance Inventory published by the EPA.

WHMIS INVENTORY STATUS: NR

CANADIAN INVENTORY STATUS: This product, or its components, are listed on or are exempt from the Canadian Domestic Substance List (DSL).

EINECS INVENTORY STATUS: This product, or its components, are listed on or are exempt from the EINECS inventory as published by Worksafe Australia.

AUSTRALIAN INVENTORY STATUS: ND

JAPAN INVENTORY STATUS: ND

ENVIRONMENTAL INFORMATION:

AQUATIC TOXICITY: ND. MOBILITY: ND. PERSISTENCE AND BIODEGRADABILITY: ND. POTENTIAL TO BIOACCUMULATE: ND.

SECTION 16 - OTHER INFORMATION

The information in this data sheet is provided independently of any sale of the product. It is provided for the purpose of hazard communication as part of Tramfloc's product safety program. It is intended only as a guide to the appropriate precautionary handling of the product by a properly trained person. You are encouraged and requested to advise those who may come in contact with such products of the information contained herein. The data relates only to the specific product designated, and does not relate to use of the product in combination with any other material or use of the product in any process. The data is not intended to constitute performance information concerning the product. No express warranty, or implied warranty or merchantability for fitness for a particular purpose is made with respect to the product , its composition, its safety or the information in this data sheet.

To determine the applicability or the effects of law or regulation with respect to the product, the user should consult a legal advisor or the appropriate government agency. Tramfloc, Inc. does not undertake to furnish advice on such matters. No person or organization except a duly authorized Tramfloc, Inc. employee is authorized to provide or make available data sheets for Tramfloc, Inc. Data sheets from unauthorized sources may contain information that is no longer current or accurate. No part of this data sheet may be reproduced or transmitted, in any form, or by any means, without permission in writing from Tramfloc, Inc.