MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT and COMPANY IDENTIFICATION

PRODUCT NAMES: TRAMFLOC® 1130-40 series

DATE ISSUED: 06/01/03

Nonionic Defoamer

SUPERSEDES: 05/07/99

DESCRIPTION: Alcohols, C14-18, ethoxylated, propoxylated, 100% activity

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. Chemical Identity

68154-98-3 Alcohols, C14-18, ethoxylated, propoxylated

This product is considered hazardous according to OSHA 1910.1200.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW - Light liquid with a mild odor. Avoid contact with skin, eyes and clothing. May cause eye irritation.

EFFECTS OF OVEREXPOSURE - EYES: May cause irritation experienced as mild discomfort and seen as slight excess redness.

EFFECTS OF OVEREXPOSURE - SKIN: May cause slight irritation with discomfort and seen as local redness and possible swelling. Prolonged contact, as with clothing wetted with material, may cause more severe irritation and discomfort.

EFFECTS OF OVEREXPOSURE - INHALATION: Vapors or mist especially as generated from heating the product or as from exposure in poorly ventilated areas or confined spaces, may cause irritation of the nose, throat, headache, nausea and drowsiness.

EFFECTS OF OVEREXPOSURE - INGESTION: May cause abdominal discomfort, nausea, and diarrhea.

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.

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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, qualified medical personnel may administer oxygen. Get medical attention at once.

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: If patient is conscious and can swallow, give 16 oz. of water. Induce vomiting as directed by medical personnel. Do not induce vomiting or give anything by mouth to an unconscious or convulsing person.

SECTION 5 - FIRE-FIGHTING MEASURES

IGNITION TEMPERATURE - AIT (⁰ C): NA.

FLASHPOINT: 240° C (464° F) PMCC; UNUSUAL OR EXPLOSIVE HAZARDS: DANGER! Flammable materials may release vapors which travel long distances, ignite and flash back. Containers may explode in a fire. Do not expose to heat, sparks, flame, or other sources of ignition.

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

RECOMMENDED FIRE EXTINGUISHING AGENTS AND SPECIAL PROCEDURES:

Use water spray, dry chemical, foam or CO_2 to extinguish flames. Use water spray to cool fire-exposed containers. Water or foam may cause frothing.

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

SECTION 6 - ACCIDENTAL RELEASE MEASURES

PROCEDURES IN CASE OF ACCIDENTAL RELEASE, BREAKAGE OR LEAKAGE: Contain spill with absorbent materials such as clay and shovel up. Avoid skin and eye contact.

SECTION 7 - HANDLING AND STORAGE

HANDLING: Minimum feasible handling temperatures should be maintained.

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

SECTION 8 - EXPOSURE CONTROLS/ PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT (Type):

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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 several times daily with soap and water.

RESPIRATORY PROTECTION: Airborne concentrations should be kept to lowest 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 the airborne concentration of the contaminant. Air supplied respirators should always be worn when airborne concentration of the contaminant or oxygen content is unknown.

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: Light, clear liquid with mild odor. pH 6-7. BOILING POINT: ND MELTING/FREEZING POINT: ND

WATER SOLUBILITY (%): 0.1-1; SPECIFIC GRAVITY: 0.99 @ 20°C VAPOR PRESSURE: ND. VAPOR

DENSITY (Air=1): ND VISCOSITY: 192 cSt at 25^o C (77^o F)

VOC CONTENT: ND. SOLUBILITY IN WATER: 1-10%. OTHER: None

SECTION 10 - STABILITY and REACTIVITY

PRODUCTS EVOLVED WHEN SUBJECTED TO HEAT OR COMBUSTION: Toxic levels of carbon monoxide, carbon dioxide, irritating aldehydes and ketones may be formed on burning. Heating in air may produce irritating aldehydes, acids, and ketones.

HAZARDOUS POLYMERIZATIONS: DO NOT OCCUR.

SECTION 11 -TOXICOLOGICAL INFORMATION (Animal Toxicity Data)

ORAL: LD50 Believed to be >2.00-5.00 g/kg (rat), slightly toxic

INHALATION: Not determined

DERMAL: LD50 Believed to be >2.00 g/kg (rabbit) practically toxic

IRRITATION INDEX, ESTIMATION OF IRRITATION (SPECIES)

SKIN: (Draize) Believed to be >0.50-3.00/8.0 (rabbit) slightly irritating. EYES: (Draize) Believed to be >15.00-25.00/110 (rabbit) slightly irritating SENSITIZATION: Not determined.

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. 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. Product uses, transformations, mixtures, processes, etc. may render the resulting materials hazardous.

SECTION 13 - TRANSPORTATION INFORMATION

DOT: PROPER SHIPPING NAME: Not regulated(NR). HAZARD CLASS: NR

IDENTIFICATION NUMBER: NR PACKING GROUP: NR LABEL REQUIRED: NR

Depending on container size, spills of this product may require reporting under SARA 304 and/ or CERCLA 102(A) regulations.

IMDG: PROPER SHIPPING NAME: Not Evaluated(NE)

ICAO: NE

TDG: NR HAZARD CLASS: NR IDENTIFICATION NUMBER: NR LABEL REQUIRED: NR

SECTION 14 - REGULATORY INFORMATION

FEDERAL REGULATIONS:

SARA Title III: Section 302/304 Extremely Hazardous Substances;

CHEMICAL NAME:	CAS No.	Range in %	TPQ	RQ
Residual propylene oxide	75-56-9	0.001	10000	100
Residual ethylene oxide	75-21-8	0.001	1000	10

Section 311 Hazardous Categorization: Acute X; Section 313 Toxic Chemical, Chemical Name: None

CERCLA 102 (a)/DOT Hazardous Substances:

CHEMICAL NAME:	CAS No.	Range in %	RQ
Residual propylene oxide	75-56-9	0.001	100
Residual ethylene oxide	75-21-8	0.001	10
Glycol ethers		0.10-0.99	1

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

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

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.

CHEMICAL NAME: CAS No. Residual propylene oxide 75-56-9 Residual ethylene oxide 75-21-8

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.

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).

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EINECS INVENTORY STATUS: ND

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

Ethoxylated and propoxylated products may contain residual free ethylene or propylene oxides which can accumulate in the container headspace and be released into the environment. This process is enhanced when the product is agitated during use. Ethylene oxide causes tumors in laboratory animals; there is evidence that propylene oxide also causes such tumors. The Occupational Safety and Health Administration(OSHA) Permissible Exposure Level(PEL) for EO is 1.0 ppm for an eight-hour time weighed average exposure. The standard regulate occupational exposure to EO from all sources including container residuals. It is the responsibility of the employer to comply with the OSHA EO standard(219CFR 1910.1047). The OSHA and ACGIH eight-hour time weighed average exposure limits for PO are both 20 ppm. The Tramfloc internal standard is 10 ppm.

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.