

MATERIAL SAFETY DATA SHEET

MSDS IDENTIFICATION NAME: TYFO® TC-1, Component B **DATE:** April 6, 2010 **PAGE:** 1 OF 4
MSDS NUMBER: TYFO-TC1B-001 **SUPERSEDES MSDS:** 3/3/09

SECTION I: MATERIAL AND MANUFACTURER IDENTIFICATION

MANUFACTURER:
 FYFE CO. LLC
 8380 Miralani Drive, Suite A
 San Diego, CA 92126

EMERGENCY TELEPHONE NUMBER:
 800-424-9300 or 703-527-3887

INFORMATION TELEPHONE NUMBER:
 858-642-0694

PRODUCTION IDENTIFICATION NUMBER: TYFO® TC-1, Component B
CHEMICAL FAMILY: AMINE MIXTURE

SECTION II: HAZARDOUS INGREDIENTS

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

MATERIAL OR COMPONENT	CAS NUMBER	% BY WEIGHT	OSHA(PEL)	ACGIH(TLV)
MODIFIED AMINE MIXTURE	*	>50%	N/E	N/E
ALKYL ALCOHOL	100-51-6	<30%	N/E	N/E

N/E = NOT ESTABLISHED

* Specific chemical identity of this mixture is being held as trade secret information in accordance with CFR 1910.1200

SECTION III: HAZARD IDENTIFICATION

EMERGENCY OVERVIEW:

PRIMARY ROUTES OF EXPOSURE:

EYES--YES SKIN CONTACT--YES INHALATION--YES INGESTION--NO

HMIS RATING:

HEALTH--3 FLAMMABILITY--1 REACTIVITY--0 SPECIAL--NONE

POTENTIAL HEALTH EFFECTS:

EYES: Product may cause irritation to the eyes. Corrosive to the eyes and may cause severe damage including blindness.

SKIN: Corrosive to the skin. May cause skin sensitization.

INHALATION: Vapors/mist may be corrosive to upper respiratory tract. Repeated or prolonged exposure can result in lung damage. Lung damage may be evidenced by shortness of breath and may be accompanied by chronic cough.

INGESTION: Not expected to be a relevant route of exposure. However, may cause permanent damage to mouth, throat and stomach.

CHRONIC: Repeated exposure may cause skin sensitization, or sensitization to the respiratory tract and development of an asthmatic reaction to future exposure. Preexisting eye, skin, and respiratory disorders may be aggravated by exposure to this product.

SECTION IV: FIRST AID MEASURES

EYES: In case of eye contact, immediately flush eyes with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Seek medical attention immediately.

SKIN CONTACT: In case of contact, immediately wash skin with soap and plenty of water. Wash contaminated clothing before re-use and destroy contaminated shoes. If irritation occurs, seek medical attention. Do not re-use clothing until thoroughly cleaned.

INHALATION: If inhaled, remove to fresh air. If breathing has stopped, administer artificial respiration, preferably mouth-to-mouth. If breathing is difficult, qualified personnel may administer oxygen. Seek medical attention.

INGESTION: Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Give one glass of water unless victim is drowsy, convulsing or unconscious. Seek medical attention.

SECTION V: FIRE FIGHTING MEASURES

FLASH POINT/METHOD OF DETERMINATION: >200°F / SETAFLASH

AUTO-IGNITION TEMP: Not available

LIMITS OF FLAMMABILITY: LEL: Not available UEL: Not available

MEANS OF EXTINCTION: Use water-spray, foam, dry chemical or CO₂ to extinguish fires. Use water to keep containers cool.

SPECIAL FIRE FIGHTING PROCEDURES AND PRECAUTIONS: Do not enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with water.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture. Delayed lung damage can be experienced after exposure to combustion product. Nitrogen oxides and nitrogen containing organic compounds may be released upon combustion.

SECTION VI: ACCIDENTAL RELEASE MEASURES

PROCEDURES IN CASE OF ACCIDENTAL RELEASE OF LEAKAGE: Danger. Corrosive. Prevent all bodily contact with spilled material. Clean up personnel must be equipped with self-contained breathing apparatus, rubber gloves and protective clothing. Dike and contain the spill. Soak up residue with an absorbent such as clay, sand or other suitable material. Dispose of the absorbent material in accordance with federal, state and local regulations. Residual resin may be removed with hot soapy water.

WASTE DISPOSAL METHOD: Dispose in compliance with federal, state and local regulations.

SECTION VII: HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in a cool, dry place with adequate ventilation. Store in closed containers. Keep sealed from dirt and moisture. Keep away from open flames and high temperatures.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE/FACE PROTECTION: Avoid eye and skin contact. Wear chemical goggles or glasses with safety side shields to prevent contact with eyes.

SKIN PROTECTION: Do not get on eyes, skin or clothing. Wear chemical resistant protective clothing, gloves, and boots.

SECTION VIII: EXPOSURE CONTROLS/PERSONAL PROTECTION (CONTINUED)

RESPIRATORY PROTECTION: Do not breath vapors/mists. Use a NIOSH approved respirator to prevent overexposure. In accord with 29 cfr 1910.134, use a full face, air supplying respirator or an air-purifying respirator for organic vapors. Avoid breathing vapors which may be produced under some conditions such as application of uncured material in confined spaces or over large surfaces.

VENTILATION: Local exhaust ventilation recommended sufficient to control the vapor, mist or dust being generated. If exhaust ventilation is not available or is inadequate, use a NIOSH approved respirator, as appropriate.

GENERAL HYGIENE RECOMMENDATIONS: Before eating, drinking, smoking or using toilet facilities, wash face and hands thoroughly with soap and water. If significant amounts of this material gets on work clothes, the employee should shower immediately and the clothing should be laundered before it is worn again.

SECTION IX: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE AND ODOR	Amber liquid, Ammonia odor
BOILING POINT (°F/°C)	N/AV
FREEZING POINT (°F/°C)	N/AV
SPECIFIC GRAVITY (WATER=1)	1.2
pH OF UNDILUTED PRODUCT	N/AV
VAPOR PRESSURE (MM Hg. @ 20C)	N/AV
VAPOR DENSITY (AIR-1)	>Air
VISCOSITY	N/AV
PERCENT (%) VOC	0.1%
SOLUBILITY IN WATER	Negligible
ODOR THRESHOLD	N/AV
WATER/OIL DISTRIBUTION COEFFICIENT	N/AV
EVAPORATION RATE	N/AV

N/AV = Not Available

SECTION X: STABILITY AND REACTIVITY

STABILITY: Stable under normal handling and storage conditions.

INCOMPATIBLE MATERIALS: Avoid heat, flame and contact with strong oxidizing agents.

PRODUCTS EVOLVED FROM HEAT OF COMBUSTION OR DECOMPOSITION: The products of combustion and decomposition depend on other materials present in the fire and the actual conditions of the fire. Burning will produce Nitrogen oxides, carbon monoxide and unidentified organic compounds may be formed during combustion.

HAZARDOUS POYMERIZATIONS: Will not occur under normal conditions of use.

SECTION XI: TOXICOLOGICAL INFORMATION

PRIMARY ROUTE OF ENTRY: INHALATION, DERMAL, EYES

EFFECTS OF OVEREXPOSURE:

INHALATION: Vapors may be corrosive to upper respiratory tract.

LC(50) INHAL.: N/AV

EYES: May cause severe damage including blindness.

SKIN CONTACT: Corrosive to the skin. In some individuals it may cause sensitization.

SKIN ABSORPTION: No information available.

INGESTION: Not expected to be a relevant route of entry May cause permanent damage to mouth, throat, and stomach.

CHRONIC: Product does not contain chemicals considered to be carcinogenic by NTP, IARC, or OHSA.

SECTION XII: ECOLOGICAL INFORMATION

Marine Pollutant: NL

(NL = Not Listed; P = Moderate; PP = Severe; ND = Not Determined)

SECTION XIII: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHODS: Material for disposal should be placed in appropriate sealed containers to avoid potential human and environmental exposure. It is the responsibility of the generator to comply with all federal, state, provincial and local laws and regulations. We recommend that you contact an appropriate waste disposal contractor and environmental agency for relevant laws and regulations. Under the US, Resource Conservation and Recovery Act (RCRA), it is the responsibility of the user of the product to determine at the time of disposal, whether the product meets relevant waste classification and to assure proper disposal.

SECTION XIV: TRANSPORTATION INFORMATION

DOT SHIPPING NAME	CORROSIVE LIQUID, N.O.S.
DOT HAZARD CLASS	CLASS 8, PGIII
DOT PLACARD	CORROSIVE
OTHER REQUIREMENTS	UN1760, CLASS 60

SECTION XV: REGULATORY INFORMATION

ALL MATERIALS OF COMPONENTS OF THIS PRODUCT ARE EITHER LISTED OR ARE NOT REQUIRED TO BE LISTED IN THE EPA /TSCA INVENTORY OF CHEMICAL SUBSTANCES.

TITLE III SECTION 302:

No reportable materials.

TITLE III SECTION 311/312:

Health hazard: Immediate

Physical hazard: Fire

TITLE III SECTION 313:

No reportable materials.

SECTION XVI: OTHER INFORMATION

SPECIAL PRECAUTIONS: Empty containers will retain some of the product residue. When handling or disposing of them, follow all label warnings, other instructions and waste disposal procedures.

EXPLANATION AND DISCLAIMER: Wherever such words or phrases as "hazardous," "toxic," "carcinogen," etc. appear herein, they are used as defined or described under state employee right-to-know laws, Federal OSHA laws or the direct sources for these laws such as the International Agency for Research on Cancer (IARC), the National Toxicology Program (NTP), etc. The use of such words or phrases should not be taken to mean that we deem or imply any substance or exposure to be toxic, hazardous or otherwise harmful. ANY EXPOSURE CAN ONLY BE UNDERSTOOD WITHIN THE ENTIRE CONTEXT OF ITS OCCURRENCE, WHICH INCLUDES SUCH FACTORS AS THE SUBSTANCE'S CHARACTERISTICS AS DEFINED IN THE MSDS, AMOUNT AND DURATION OF EXPOSURES, OTHER CHEMICALS PRESENT AND PREEXISTING INDIVIDUAL DIFFERENCES IN RESPONSE TO THE EXPOSURE.

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APPROVED AND AUTHORIZED BY: *Edward R. Fyfe*