

# Material Safety Data Sheet

EMERGENCY PHONE: 1-800-424-9300 (CHEMTREC)  
INFORMATION PHONE:

## I. CHEMICAL PRODUCT AND COMPANY DATA

PRODUCT: TYFO PR ADHESIVE, COMPONENT A  
CHEMICAL FAMILY: EPOXY RESIN MIXTURE  
REVISION DATE: 8/2005

## II. COMPOSITION / INFORMATION ON INGREDIENTS

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

### EXPOSURE LIMITS

INGREDIENT	CAS. NO.	TLV	STEL	PEL	CONTENT
BIS A EPOXY RESIN	25068-38-6	N/E	N/E	N/E	60-70%
GLYCIDYL DILUENT	2426-08-6	25 ppm	N/E	25 ppm	5-10%
SILICON DIOXIDE	14808-60-7	.1mg/m3	N/E	N/E	5-10%
ACRYLATE ESTER	15625-89-5	N/E	N/E	N/E	5-10%
TITANIUM DIOXIDE	13463-67-7	5 mg/m3	N/E	5 mg/m3	2-5%
COLLOIDAL SILICA	67762-90-7	N/E	N/E	N/E	2-5%

N/E = NOT ESTABLISHED

## III. HAZARDS IDENTIFICATION

HMIS Hazard Rating No. 2 (Moderate)

PRIMARY ROUTE OF ENTRY: INHALATION, DERMAL, EYES

EFFECTS OF OVER EXPOSURE:

**INHALATION:**

Vapors from product may cause irritation to the nose, throat, and respiratory tract. Coughing and chest pains may result. High vapor concentrations may produce CNS depression.

**EYES:**

Product may cause severe irritation.

**SKIN CONTACT:**

Product may cause irritation, redness and discomfort which is transient.

**SKIN ABSORPTION:**

No known information available.

**INGESTION:**

Not expected to be a relevant route of exposure. Product may be slightly toxic if ingested.

**CHRONIC:**

Repeated exposure may cause skin sensitization, skin irritation, and dermatitis. Preexisting eye, skin, and respiratory disorders may be aggravated by exposure of this product.

**IV. FIRST AID MEASURES**

- INHALATION:** Remove victim from exposure. If difficulty with breathing, administer oxygen. If breathing has stopped, administer artificial respiration. Seek medical attention.
- EYES:** Flush eyes with water, lifting upper and lower lids occasionally for 15 minutes. Seek medical attention.
- SKIN:** Immediately remove contaminated clothing. Wash thoroughly with soap and water for at least 15 minutes. If irritation occurs, get medical attention. Do not re-use clothing until thoroughly cleaned.
- INGESTION:** Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Seek medical attention.

**V. FIRE FIGHTING METHODS**

**HMIS Hazard Rating No. 1 (Slight)**

**Flash Point:** >200° F

**METHOD:** SETAFLASH

**AUTO-IGNITION TEMP.:** NOT AVAILABLE

**LIMITS OF FLAMMABILITY:** LEL: NOT AVAILABLE UEL: NOT AVAILABLE

**EXTINGUISHING MEDIA:** USE WATER FOG, DRY CHEMICAL OR CO<sub>2</sub>.

**SPECIAL FIRE FIGHTING PROEDURES 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. Heating may cause polymerization. Pressure build-up may occur with possible rupture of container.

**VI. ACCIDENTAL RELEASE MEASURES**

**ACTION TO TAKE FOR SPILLS/ LEAKS:** 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.

**VII. HANDLING AND STORAGE**

Keep away from open flames, high temperatures and oxidizers.

Store in ventilated area

**VIII. EXPOSURE CONTROLS/PERSONALPROTECTION**

**RESPIRATORY PROTECTION:** Avoid prolonged or repeated breathing of vapors. 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.

**PROTECTIVE CLOTHING:** Do not get on skin or clothing. Wear chemical resistant protective clothing, gloves, and boots. Wear chemical goggles to prevent contact with eyes.

**ADDITIONAL PROTECTIVE MEASURES:** Use explosion proof ventilation to control vapors or mist concentrations. Eye wash fountains and safety showers should be available for emergency use.

### IX. Physical And Chemical Properties

Boiling Point (°C):	N/AV	Water/Oil Distribution	
Percent Volatile:	.1%	Coefficient:	N/AV
Freezing Point (°C):	N/AV	Solubility in Water:	NEGLIGIBLE
Vapor Pressure mmHg @ 20° C	<10	Specific Gravity:	1.13
Vapor Density	>AIR	pH:	N/AV
Odor Threshold:	N/AV	Evaporation Rate:	N/AV
Appearance:	CLEAR LIQUID	Odor:	Slight
N/AV = Not Available		ca. = Approximate	

### X. STABILITY AND REACTIVITY

HMIS Hazard Rating No. 0

**STABILITY:** Stable      Hazardous polymerization will not occur

**CONDITIONS AND MATERIALS TO AVOID:** Avoid heat, flame and contact with strong oxidizing agents. Contamination with strong acids, bases, amines and mercaptans may cause an exothermic polymerization. Do not store or handle in aluminum equipment at temperatures above 120 deg f.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, aldehydes and acids may be formed during combustion.

### XI. TOXICITY INFORMATION

HMIS Hazard Rating No. 2 (MODERATE)

**PRIMARY ROUTE OF ENTRY:** INHALATION, DERMAL, EYES

#### EFFECTS OF OVEREXPOSURE

**INHALATION:** May cause irritation on the respiratory tract.

**LC(50) INHAL.** N/AV

**EYES:** May be severely irritating to the eyes

**SKIN CONTACT:** May be irritating to the skin. In some individuals it may cause sensitization.

**SKIN ABSORPTION:** No information available.

**INGESTION:** Not expected to be expected route of entry. May be slightly toxic if ingested.

**LD(50) ORAL**      INGREDIENT  
25068-38-6 11.4 g/kg (rat)

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

This product contains residual (<5ppm) quantities of epichlorohydrin ECH (cas no. 106-89-8). It is very unlikely that normal work practices with this product could result in measurable ECH concentrations in the workplace atmosphere. Nevertheless, you should be aware that ECH has been reported to produce cancer in laboratory animals and to produce mutagenic changes in bacteria and cultured human cells. It has been classified by IARC as a probable human carcinogen. It has been classified as an anticipated human carcinogen by NTP.

This product contains silicon dioxide and titanium dioxide as the filler, which are bound in the resin matrix, hence effects of any exposure to inhalation as nuisance dust is unlikely.

## XII. ECOLOGICAL INFORMATION

Marine Pollutant: NL

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

## XIII. DISPOSAL CONSIDERATIONS

Dispose in a manner which complies with local, state and federal regulations.

## XIV. TRANSPORT INFORMATION

DOT/UN SHIPPING NAME: Not regulated

DOT HAZARD CLASS: Not regulated

Shipping Name: Not Regulated

Emergency Response Guide: 128

## XV. REGULATORY INFORMATION

Components are listed on the EPA/TSCA

TITLE III SECTION 302:

TITLE III SECTION 311/312:

TITLE III SECTION 313:

Inventory of chemical substances

No reportable materials.

Health hazard: Immediate

Physical hazard: Fire

NO REPORTABLE

## XVI. OTHER INFORMATION

Information contained in this MSDS refers only to the specific material designated and does not relate to any process or to use with any other materials. This information is based on data believed to be reliable as of the date hereof. It is furnished without warranty of any kind express or implied. Since actual use is beyond our control, no guarantee, express or implied, and no liability is assumed by xxxxxx in conjunction with the use of this information. Nothing herein is to be construed as a recommendation to infringe any patents.