



# MATERIAL SAFETY DATA SHEET

FILE NO.: T1V1  
MSDS DATE: 11/30/2009  
MSDS No.: T1113009

**Product: T1**

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** T1 Threadlocker  
**PRODUCT CODES:** T1ML10, T1ML50, T1ML250  
**COMPANY NAME:** SmartAdhesives LLC  
**ADDRESS:** San Francisco, CA 94129

**EMERGENCY PHONE:** Chemtrec: 1-800-424-9300

**PRODUCT USE:** Anaerobic adhesive and sealant; Industrial use  
**ISSUE DATE:** 11-30-2009

## SECTION 2: INFORMATION ON INGREDIENTS

<u>HAZARDOUS INGREDIENT:</u>	<u>C.A.S. No.</u>	<u>% by Wt.</u>
Ethoxylated Bisphenol A Dimethacrylate	41673-38-1	50-65%
Dibutyl Phthalate	84-74-2	30-40%
Ethylene Dimethacrylate	97-90-5	1-10%

## SECTION 3: HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW:** Normal physical form - liquid

### IMMEDIATE HEALTH AND ENVIRONMENTAL HAZARDS

Causes eye, skin and respiratory tract irritation. May cause skin sensitization.  
Hazardous polymerization may occur.

### POTENTIAL HEALTH EFFECTS

**EYE CONTACT:** Eye irritant.

**SKIN CONTACT:** Skin irritant. May cause skin sensitization.

**INHALATION:** irritating to the mucous membranes and upper respiratory tract.

**INGESTION:** Not expected to be ingested under normal conditions of use. May be harmful if swallowed.

### MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Eye, skin and respiratory disorders.

Acute Toxicity: Symptoms of overexposure include dizziness, headache or nausea.

### CARCINOGENICITY

Ethoxylated Bisphenol A Dimethacrylate	<b>OSHA:</b> NO	<b>NTP:</b> NO	<b>IARC:</b> NO
Dibutyl Phthalate	<b>OSHA:</b> NO	<b>NTP:</b> NO	<b>IARC:</b> NO
Ethylene Dimethacrylate	<b>OSHA:</b> NO	<b>NTP:</b> NO	<b>IARC:</b> NO

## SECTION 4: FIRST AID MEASURES

<b>EYES:</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Seek medical advice immediately.
<b>SKIN:</b>	Immediately remove product from skin with dry cloth or towel. Wash skin with soap and plenty of warm water. If symptoms occur, seek medical advice. Wash contaminated clothing prior to reuse.
<b>INGESTION:</b>	Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately. Never give anything by mouth to an unconscious person.
<b>INHALATION:</b>	Move to fresh air. If symptoms persist, seek medical advice.

## SECTION 5: FIRE FIGHTING MEASURES

<b>FLAMMABLE LIMITS UPPER:</b> (% BY VOLUME) <b>LOWER:</b>	not determined not determined
<b>FLASH POINT:</b>	200°F (93°C) (closed cup)
<b>AUTOIGNITION TEMP:</b>	not determined

### NFPA HAZARD CLASSIFICATION

**HEALTH:** 2    **FLAMMABILITY:** 1    **REACTIVITY:** 1

### HMIS HAZARD CLASSIFICATION

**HEALTH:** \*2    **FLAMMABILITY:** 1    **PHYSICAL HAZARD:** 1    **PROTECTION:** none

**EXTINGUISHING MEDIA:** Use foam, dry chemical powder, water fog or carbon dioxide.

### SPECIAL FIRE FIGHTING PROCEDURES:

Wear positive pressure, self-contained breathing apparatus and full protective clothing.

### UNUSUAL FIRE AND EXPLOSION HAZARDS:

High temperatures, inhibitor depletion, accidental impurities, or exposure to radiation or oxidizers may cause polymerization reaction, generating heat and/or pressure. Closed containers may rupture or explode during rapid polymerization.

### HAZARDOUS DECOMPOSITION PRODUCTS:

see Section 10

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### ACCIDENTAL RELEASE MEASURES:

No action shall be taken involving any personal risk or without suitable training. Evacuate untrained and unprotected people from release areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Ventilate area. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see section 8). Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

For small spills, absorb with inert material (sand, silica gel, universal binder) and dispose in appropriate waste disposal container. For larger spills, first extinguish all sources of ignition. Material is combustible. Make sure to first stop spill or leak at source before clean-up. Dike if necessary. Absorb with inert material and place in appropriate waste disposal container. Spilled or release material may polymerize and release heat and/or gases. Dispose of all material in accordance with Federal, State, and local regulations.

## SECTION 7: HANDLING AND STORAGE

**HANDLING:** Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face with soap and water before eating, drinking and smoking.

Avoid contact with eyes and skin. Material is a potential skin sensitizer. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Keep in the original container or an approved alternative made from a compatible material. Prevent contaminating product with foreign material.

**STORAGE:** Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from sources of heat and ignition, and water. Prevent moisture contact and contaminating product with foreign material. Store in accordance with local regulations.

**SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS**

**VENTILATION :** Use local exhaust ventilation, sufficient in pattern and volume, to maintain vapor concentration below established TLV requirements.

**RESPIRATORY PROTECTION:** Use NIOSH approved respirator if there is a potential to exceed exposure limits.

**EYE PROTECTION:** Avoid contact with eyes. Use safety glasses with side shields or indirect vented goggles.

**SKIN PROTECTION:** Avoid contact with skin. Use nitrile, PVA, or butyl rubber gloves.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Facilities storing or utilizing this material should be equipped with eye wash fountains and safety shower.

**WORK HYGIENIC PRACTICES:** Remove contaminated clothing and launder before next use. Wash thoroughly after handling.

**EXPOSURE GUIDELINES:**

	<u>Organization</u>	<u>Type</u>	<u>Limit</u>
Dibutyl phthalate	ACGIH (TLV)	TWA	5 mg/m <sup>3</sup>
	OSHA (PEL)	TWA	5 mg/m <sup>3</sup>

ACGIH: American Conference of Governmental Industrial Hygienists  
 OSHA: Occupational Safety and Health Administration

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>COLOR &amp; APPEARANCE:</b>	blue liquid	<b>VAPOR PRESSURE (mmHg):</b>	not available
<b>ODOR THRESHOLD:</b>	slight	<b>VAPOR DENSITY (AIR=1):</b>	not available
<b>PHYSICAL FORM:</b>	liquid	<b>SPECIFIC GRAVITY (H2O=1):</b>	1.06
<b>FLAMMABLE LIMITS</b>		<b>EVAPORATION RATE:</b>	not available
<b>LEL:</b>	not available		
<b>UEL:</b>	not available		
<b>BOILING POINT:</b>	not available	<b>SOLUBILITY IN WATER:</b>	slight
<b>AUTOIGNITION TEMP:</b>	not available	<b>VISCOSITY:</b>	140 ± 10 cP
<b>FLASH POINT:</b>	200°F (93°C)	<b>VOLATILE ORGANIC COMPOUNDS (VOC)</b>	
(Pensky-Martens Closed Cup ASTM D 93)		<b>VOC:</b>	NA
		<b>VOC less H2O &amp; Exempt Solvent:</b>	NA
<b>pH AS SUPPLIED:</b>	not available		

**SECTION 10: STABILITY AND REACTIVITY**

**STABILITY:** Stable under recommended storage conditions. Hazardous polymerization may occur under the conditions listed below.

**MATERIALS AND CONDITIONS TO AVOID (STABILITY):**

Product will be unstable at high temperatures, fire conditions, or depletion of inhibitor. Avoid direct sunlight, oxidizing agents, inert gas blanketing, and freezing conditions.

Acids, bases, chlorines, free radical initiators, inert gases, nitrates, oxidizing agents, oxygen scavengers, and reducing agents.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:**

Carbon oxides. Nitrogen oxides. Sulfur oxides. May emit other toxic fumes under fire conditions.

**HAZARDOUS POLYMERIZATION:** Hazardous polymerization may occur in the event of accidental impurities, exposure to radiation or oxidizers, lack of inhibitor, high temperatures, or when exposed to direct sunlight or heat.

**SECTION 11: TOXICOLOGICAL INFORMATION****TOXICOLOGICAL INFORMATION:**

Dibutyl Phthalate

Acute oral LD50: >8,000 mg/kg (rat)

Acute dermal LD50: >20 mL/kg (rabbit)

Acute inhalation LC50: >4,250 mg/m<sup>3</sup> (rat)

Toxicity: Investigated as a tumorigen, mutagen, and reproductive effector.

Reproductive Toxicity:

Women working where phthalates were used had higher incidence of miscarriages, menstrual disorders, and reduced gestation periods.

**SECTION 12: ECOLOGICAL INFORMATION****ECOLOGICAL INFORMATION:**

Dibutyl Phthalate

When release into the soil, this material may biodegrade to a moderate extent and may leach into groundwater. When release into water, this material is expected to readily biodegrade and have a half-life between 10-30 days. This material is not expected to significantly bioaccumulate. When released into the air, this material may be removed from the atmosphere to a moderate extent by dry deposition.

96 Hr LC50 fathead minnow: 0.85 mg/L (flow-through);

96 Hr LC50 rainbow trout: 1.24 mg/L (flow-through);

96 Hr LC50 bluegill: 0.42 mg/L (flow-through)

Dangerous to the environment. Very toxic to aquatic organisms.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL METHOD:** Disposal of this product, solutions and any by-products should at all times comply with Federal, State and local regulations. Any material should be disposed of in a RCRA approved waste facility or RCRA approved incinerator. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

**RCRA HAZARD CLASS:** Dibutyl phthalate: U069.

**SECTION 14: TRANSPORT INFORMATION****U.S. DEPARTMENT OF TRANSPORTATION (49 CFR)**

**PROPER SHIPPING NAME:** Environmentally Hazardous Substances, N.O.S. (Dibutyl Phthalate)

**HAZARD CLASS:** 9

**ID NUMBER:** UN 3082

**PACKING GROUP:** III

**INTERNATIONAL AIR TRANSPORTATION (ICAO/IATA)**

**PROPER SHIPPING NAME:** Environmentally Hazardous Substances, N.O.S. (Dibutyl Phthalate)

**HAZARD CLASS:** 9  
**ID NUMBER:** UN 3082  
**PACKING GROUP:** III

**WATER TRANSPORTATION (IMO/IMDG)**

**PROPER SHIPPING NAME:** Environmentally Hazardous Substances, N.O.S. (Dibutyl Phthalate)  
**HAZARD CLASS:** 9  
**ID NUMBER:** UN 3082  
**PACKING GROUP:** III  
**MARINE POLLUTANT:** none

**SECTION 15: REGULATORY INFORMATION**

**U.S. FEDERAL REGULATIONS**

**TSCA (Toxic Substance Control Act)**

All components are listed or are exempt from listing on the Toxic Substances Control Act Inventory.

**311/312 HAZARD CATEGORIES:**

Chronic: Yes      Reactivity: Yes      Acute: Yes

**SECTION 313: (Toxic chemicals subject to reporting requirements of that section and 40 CFR part 372 (EPCRA))**

Dibutyl Phthalate      30%-40% (% by weight)      CAS 84-74-2

**CERCLA (COMPREHENSIVE ENVIRONMENTAL RESPONSE COMPENSATION, AND LIABILITY ACT):**

Dibutyl Phthalate:      reportable quantity is 10 lbs.

**STATE REGULATIONS**

**California Prop. 65:**      Dibutyl Phthalate: developmental toxicity, female reproductivity, male reproductivity.

**SECTION 16: OTHER INFORMATION**

**OTHER INFORMATION:**

**HMIS Rating**

<b>Health</b>	<b>*2</b>
<b>Flammability</b>	<b>1</b>
<b>Physical Hazard</b>	<b>1</b>

**NFPA Rating**

<b>Health</b>	<b>2</b>
<b>Flammability</b>	<b>1</b>
<b>Reactivity</b>	<b>1</b>

**PREPARATION INFORMATION:**

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