



# MATERIAL SAFETY DATA SHEET

FILE NO.: T4V1  
MSDS DATE: 11/30/2009  
MSDS No.: T4113009

**Product: T4**

## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** T4 Threadlocker  
**PRODUCT CODES:** T4ML10, T4ML50, T4ML250  
**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

<b>HAZARDOUS INGREDIENT:</b>	<b>C.A.S. No.</b>	<b>% by Wt.</b>
Aromatic Dimethacrylate Ester	24448-20-2	55-65%
Ethoxylated Bisphenol A Dimethacrylate	41637-38-1	25-35%
Neopentyl Glycol Dimethacrylate	1985-51-9	5-15%
Cumene Hydroperoxide	80-15-9	<1%

## SECTION 3: HAZARDS IDENTIFICATION

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

### IMMEDIATE HEALTH AND ENVIRONMENTAL HAZARDS

Skin and eye irritant. May cause respiratory tract irritation. May cause skin sensitization. Polymerization reaction may be caused by inhibitor depletion or exposure to light.

### POTENTIAL HEALTH EFFECTS

**EYE CONTACT:** Eye irritant.

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

**INHALATION:** May cause respiratory tract irritation. Symptoms may include coughing, mucous production, and shortness of breath.

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

### SIGNS AND SYMPTOMS OF OVEREXPOSURE:

May induce an allergic or sensitization reaction.

Cumene hydroperoxide inhalation has been found to result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema.

### CARCINOGENICITY

Aromatic Dimethacrylate Ester  
Ethoxylated Bisphenol A Dimethacrylate  
Neopentyl Glycol Dimethacrylate  
Cumene Hydroperoxide

OSHA: NO  
OSHA: NO  
OSHA: NO  
OSHA: NO

NTP: NO  
NTP: NO  
NTP: NO  
NTP: NO

IARC: NO  
IARC: NO  
IARC: NO  
IARC: 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**

**FLAMMABILITY:** May burn when exposed to fire conditions.

**FLAMMABLE LIMITS UPPER:** not determined  
**(% BY VOLUME) LOWER:** not determined

**FLASH POINT:** 200°F (93°C) (closed cup)  
**AUTOIGNITION TEMP:** not available

**NFPA HAZARD CLASSIFICATION**

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

**HMIS HAZARD CLASSIFICATION**

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

**EXTINGUISHING MEDIA:** Use foam, dry chemical powder, or water spray. Do not use water jet.

**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.

May undergo rapid exothermic reaction polymerization during certain conditions. Closed containers may rupture or explode during 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 (vermiculite, clay, 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. Avoid prolonged exposure to vapor or mist. Use with adequate ventilation. Do not ingest. Do not mix with oxygen-free gas as it renders inhibitor ineffective and makes product susceptible to polymerization. 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. Do not store in direct sunlight. Do not store in an oxygen-free environment. 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>
Cumene Hydroperoxide	AIHA	TWA	1 ppm
	ACGIH (TLV)	TWA	none
	OSHA (PEL)	TWA	none

AIHA: American Industrial Hygiene Association Workplace Env. Exposure Level (WEEL)

ACGIH: American Conference of Governmental Industrial Hygienists

OSHA: Occupational Safety and Health Administration

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**COLOR & APPEARANCE:**

red liquid

**ODOR THRESHOLD:**

slight

**PHYSICAL FORM:**

liquid

**FLAMMABLE LIMITS**

**LEL:**

not available

**UEL:**

not available

**BOILING POINT:**

not available

**AUTOIGNITION TEMP:**

not available

**FLASH POINT:**

200°F (93°C)

(Pensky-Martens Closed Cup ASTM D 93)

**VAPOR PRESSURE (mmHg):**

not available

**VAPOR DENSITY (AIR=1):**

not available

**SPECIFIC GRAVITY (H2O=1):**

1.1

**EVAPORATION RATE:**

not available

**SOLUBILITY IN WATER:**

insoluble

**VISCOSITY:**

1,100 ± 100 cP

**VOLATILE ORGANIC COMPOUNDS (VOC)**

**VOC:**

NA

**VOC less H2O & Exempt Solvent:**

NA

pH AS SUPPLIED: not available

**SECTION 10: STABILITY AND REACTIVITY**

**STABILITY:** Stable under recommended storage conditions. Hazardous polymerization may occur under the conditions listed below, including loss of inhibitor.

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

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

Free radical initiators, inert gases, 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. Uncontrolled polymerization may cause rapid production of heat and increase in pressure that could result in violent rupture of sealed storage containers.

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

Cumene Hydroperoxide

Acute oral LD50: >382 mg/kg (rat)

Acute dermal LD50: >500 mg/kg (rabbit)

Acute inhalation LC50: >220 ppm (rat)

Studies conducted on laboratory animals found this substance to be tumorigenic by RTECS criteria.

Corrosivity:

Cumene Hydroperoxide has been found to cause injury to the eyes, skin, mucous membranes, and upper respiratory tract.

**SECTION 12: ECOLOGICAL INFORMATION**

**ECOLOGICAL INFORMATION:** Not available.

**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:** none.

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

**PROPER SHIPPING NAME:** Not a DOT controlled material

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

**PROPER SHIPPING NAME:** Not subject to IATA regulations

**WATER TRANSPORTATION (IMO/IMDG)**

**PROPER SHIPPING NAME:** Not subject to IMDG code

**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))**

No products were found above de minimus levels

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

Cumene hydroperoxide      10 lbs. reportable quantity

**STATE REGULATIONS**

California Prop. 65:                      no products were found

**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>2</b>

**NFPA Rating**

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

**PREPARATION INFORMATION:**

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