

**MSDS****Material Safety Data Sheet**

From: Mallinckrodt Baker, Inc.  
222 Red School Lane  
Phillipsburg, NJ 08865



24 Hour Emergency Telephone: 908-859-2151  
CHEMTREC: 1-800-424-9300

National Response in Canada  
CANUTEC: 613-996-6666

Outside U.S. and Canada  
Chemtec: 703-527-3887

NOTE: CHEMTREC, CANUTEC and National Response Center emergency numbers to be used only in the event of chemical emergencies involving a spill, leak, fire, exposure or accident involving chemicals.

All non-emergency questions should be directed to Customer Service (1-800-562-2537) for assistance.

## BAKER PRS-1000® Positive Photoresist Stripper

### 1. Product Identification

Synonyms: BAKER PRS-1000® Positive Photoresist Stripper, Patented  
CAS No: Not applicable to mixtures.  
Molecular Weight: Not applicable to mixtures.  
Chemical Formula: Not applicable to mixtures.  
Product Codes: 6373, 6383

### 2. Composition/Information on Ingredients

Ingredient	CAS No.	Percent	Hazardous
Diethylene Glycol Monoethylether	111-90-0	10 - 20%	Yes
Thiophene, Tetrahydro-, 1,1-dioxide	126-33-0	25 - 45%	Yes
1-Methyl-2-pyrrolidinone	872-50-4	35 - 55%	Yes
Tetraethylene Glycol	112-60-7	1 - 10%	Yes

### 3. Hazards Identification

#### Emergency Overview

**WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS KIDNEYS.**

#### J.T. Baker SAF-T-DATA™ Ratings

(Provided here for your convenience)

Health:	Flammability:	Reactivity:	Contact:
2 - Moderate	1 - Slight	1 - Slight	2 - Moderate
Lab Protection Equip:	GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES		
Storage Color Code:	Orange (General Storage)		

#### Potential Health Effects

##### Inhalation:

Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath. Inhalation of high concentrations of vapor or mist may cause kidney damage. Higher exposure may affect the blood and

central nervous system.

**Ingestion:**

Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea. Other symptoms may parallel those from inhalation. May affect the liver and lung. Ingestion may cause kidney damage, nervous system and respiratory depression.

**Skin Contact:**

Mild irritant, may cause some discomfort if in contact with the skin for several hours.

**Eye Contact:**

Causes irritation, redness, and pain. May possibly cause corneal clouding.

**Chronic Exposure:**

For thiophene, tetrahydro-, 1,1-dioxide: Repeated or prolonged aerosol exposures in test animals produced blood changes, lung damage, tremors and convulsions.

**Aggravation of Pre-existing Conditions:**

Persons with pre-existing skin disorders or eye problems or impaired respiratory function may be more susceptible to the effects of the substance.

---

## 4. First Aid Measures

**Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**Ingestion:**

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.

**Skin Contact:**

Immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.

**Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

---

## 5. Fire Fighting Measures

**Fire:**

Flash point: 96°C (205°F) CC

Contact with strong oxidizers may cause fire.

**Explosion:**

Sealed containers may rupture when heated. Above the flash point, explosive vapor-air mixtures may be formed.

**Fire Extinguishing Media:**

Use alcohol foam, dry chemical or carbon dioxide. (Water may be ineffective.) Water spray may be used to keep fire exposed containers cool.

**Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

---

## 6. Accidental Release Measures

Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer!

## 7. Handling and Storage

Keep in a tightly closed container. Store in a cool, dry, ventilated area away from sources of heat or ignition. Protect against physical damage. Store separately from reactive or combustible materials, and out of direct sunlight. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid); observe all warnings and precautions listed for the product.

## 8. Exposure Controls/Personal Protection

### Airborne Exposure Limits:

1-Methyl-2-pyrrolidinone:

AIHA Workplace Environmental Exposure Level (WEEL): 10 ppm, 8-hour, TWA

Diethylene glycol monoethylether:

AIHA Workplace Environmental Exposure Level (WEEL): TWA: 25ppm.

### Ventilation System:

A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details.

### Personal Respirator (NIOSH Approved)

For conditions of use where exposure to the substance is apparent and engineering controls are not feasible, consult an industrial hygienist. For emergencies, or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in oxygen-deficient atmospheres.

### Skin Protection:

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

### Eye Protection:

Use chemical safety goggles and/or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

## 9. Physical and Chemical Properties

### Appearance:

Clear, light yellow liquid.

### Odor:

Amine-like odor.

### Solubility:

Complete (100%)

### Specific Gravity:

1.07

### pH:

9.2 - 10

### % Volatiles by volume @ 21°C (70°F):

100

### Boiling Point:

195°C (383°F)

### Melting Point:

- 35°C (-31°F)

### Vapor Density (Air=1):

4.5

### Vapor Pressure (mm Hg):

< 1 @ 20°C (68°F)

### Evaporation Rate (BuAc=1):

< .02

## 10. Stability and Reactivity

### Stability:

Stable under ordinary conditions of use and storage.

### Hazardous Decomposition Products:

Burning may produce carbon monoxide, carbon dioxide, sulfur oxides, and nitrogen oxides.

MSDS Number: B0224

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

For 1-Methyl-2-Pyrrolidinone: Strong oxidants and acids. Reacts with chlorinating agents to form the amide. Reacts with sulfur or carbon disulfide at high temperatures and pressures. For Thiophene, Tetrahydro-, 1,1-dioxide: Oxygen and strong oxidizers. Potentially explosive with nitronium tetrafluoroborate. For Diethylene Glycol Monoethylether: Strong oxidizers and caustics. Tetraethylene glycol may attack some plastics.

**Conditions to Avoid:**

Heat, flames, ignition sources and incompatibles.

**11. Toxicological Information****1-Methyl-2-pyrrolidinone:**

Oral rat LD50: 3914 mg/kg;

Skin rabbit LD50: 8 gm/kg;

Investigated as a mutagen, reproductive effector. Investigated as a mutagen, reproductive effector.

**Thiophene, Tetrahydro-, 1,1-dioxide:**

LD50 oral rat 1941 mg/kg; LD50 skin rabbit 4009 mg/kg; Std Draize, eye rabbit, 253 mg - mild irritation.

**Diethylene glycol monoethylether:**

LD50 Oral Rat: 5500 mg/kg Investigated as a mutagen, reproductive effector.

**Tetraethylene Glycol:**

LD50 oral rat: 28900 µl/kg;

LD50 skin rabbit &gt; 20 g/kg;

Investigated as a mutagen.

**Cancer Lists****Ingredient**

Diethylene Glycol Monoethylether (111-90-0)

Thiophene, Tetrahydro-, 1,1-dioxide (126-33-0)

1-Methyl-2-pyrrolidinone (872-50-4)

Tetraethylene Glycol (112-60-7)

**—NTP Carcinogen—**

Known	Anticipated	IARC Category
No	No	None
No	No	None
No	No	None
No	No	None

**12. Ecological Information****Environmental Fate:**

When released into the soil, this material may biodegrade to a moderate extent. When released into water, this material is not expected to evaporate significantly. This material is not expected to significantly bioaccumulate. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals.

**Environmental Toxicity:**

No information found.

**13. Disposal Considerations**

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations.

Dispose of container and unused contents in accordance with federal, state and local requirements.

**14. Transport Information**

Not regulated.

## 15. Regulatory Information

Chemical Inventory Status				—Canada—				
Ingredient	TSCA	EC	Japan	Australia	Korea	DSL	NDSL	Phil.
Diethylene Glycol Monoethylether (111-90-0)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Thiophene, Tetrahydro-, 1,1-dioxide (126-33-0)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
1-Methyl-2-pyrrolidinone (872-50-4)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes
Tetraethylene Glycol (112-60-7)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes

Federal, State & International Regulations				—SARA 313—		RCRA	TSCA
Ingredient	RQ	TPQ	List	Chemical Catg.	CERCLA	261.33	8(d)
Diethylene Glycol Monoethylether (111-90-0)	No	No	No	Glycol ether compd.	No	No	No
Thiophene, Tetrahydro-, 1,1-dioxide (126-33-0)	No	No	No	No	No	No	No
1-Methyl-2-pyrrolidinone (872-50-4)	No	No	Yes	No	No	No	No
Tetraethylene Glycol (112-60-7)	No	No	No	No	No	No	No

Chemical Weapons Convention: No TSCA 12(b): Yes CDTA: Yes  
 SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No Reactivity: No (Mixture / Liquid)

### Warning:

**THIS PRODUCT CONTAINS A CHEMICAL(S) KNOWN TO THE STATE OF CALIFORNIA TO CAUSE BIRTH DEFECTS OR OTHER REPRODUCTIVE HARM.**

Australian Hazchem Code: None allocated.

Australian Poison Schedule: None allocated.

### WHMIS:

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

## 16. Other Information

### NFPA Ratings:

Health: 2 Flammability: 1 Reactivity: 0

### Label Hazard Warning:

WARNING! HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO SKIN, EYES AND RESPIRATORY TRACT. AFFECTS KIDNEYS.

### Label Precautions:

Avoid contact with eyes, skin and clothing.  
 Wash thoroughly after handling.  
 Avoid breathing vapor or mist.  
 Keep container closed.  
 Use only with adequate ventilation.

### Label First Aid:

If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. In all cases, get medical attention.

### Product Use:

Process Chemical

### Revision Information:

MSDS Section(s) changed since last revision of document include: 8, 15.



**Disclaimer:**

Mallinckrodt Baker, Inc. provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. MALLINCKRODT BAKER, INC. MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, MALLINCKRODT BAKER, INC. WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.

**Prepared By:** Environmental Health & Safety  
Phone Number: (314) 654-1600 (U.S.A.)