MSDS Number: **T2080** * * * * * *Effective Date:* ***05/26/09*** * * * * * *Supercedes:* ***08/17/06***

MSDS **Material Safety Data Sheet**

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
Chemtrec: 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.

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

J.T.Baker®

All non-emergency questions should be directed to Customer Service (1-800-582-2537) for assistance.

TEMED

1. Product Identification

Synonyms: N,N,N',N'-Tetramethylethylenediamine; N,N,N',N'-Di-(dimethylamino)ethane; N,N,N',N'-Tetramethyl-1-,2-diaminomethane
CAS No.: 110-18-9
Molecular Weight: 116.21
Chemical Formula: C6H16N2
Product Codes: 4098

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Tetramethylethylenediamine	110-18-9	90 - 100%	Yes

3. Hazards Identification

Emergency Overview

DANGER! MAY BE FATAL IF INHALED. CAUSES BURNS TO ANY AREA OF CONTACT. HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN. COMBUSTIBLE LIQUID AND VAPOR.

SAF-T-DATA(tm) Ratings (Provided here for your convenience)

Health Rating: 3 - Severe
Flammability Rating: 3 - Severe (Flammable)
Reactivity Rating: 1 - Slight
Contact Rating: 3 - Severe
Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES; CLASS B EXTINGUISHER
Storage Color Code: Red (Flammable)

Potential Health Effects

Inhalation:
Corrosive. Extremely destructive to tissues of the mucous membranes and upper respiratory tract. Symptoms may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. Inhalation may be fatal as a result of spasm inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema.
Ingestion:
Corrosive. Swallowing can cause severe burns of the mouth, throat, and stomach. Can cause sore throat, vomiting, diarrhea.
Skin Contact:
Corrosive. Symptoms of redness, pain, and severe burn can occur. May be absorbed through the skin with possible systemic effects.
Eye Contact:
Corrosive. Contact can cause blurred vision, redness, pain and severe tissue burns.
Chronic Exposure:
No information found.
Aggravation of Pre-existing Conditions:
No information found.

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4. First Aid Measures

Inhalation:
Remove to fresh air. If not breathing, give artificial respiration. If breathing is

difficult, give oxygen. Get medical attention immediately.
Ingestion:
If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. Get medical attention immediately.
Skin Contact:
Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. 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.

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5. Fire Fighting Measures

Fire:
Flash point: 10C (50F)
Flammable. Contact with oxidizable substances may cause extremely violent combustion.
Explosion:
Above the flash point, explosive vapor-air mixtures may be formed. Sealed containers may rupture when heated. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.
Fire Extinguishing Media:
Dry chemical, foam or carbon dioxide. Water may be ineffective.
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.

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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! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.

J. T. Baker SOLUSORB® solvent adsorbent is recommended for spills of this product.

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7. Handling and Storage

Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. 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. Do Not attempt to clean empty containers since residue is difficult to remove. Do not pressurize, cut, weld, braze, solder, drill, grind or expose such containers to heat, sparks, flame, static electricity or other sources of ignition: they may explode and cause injury or death.

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8. Exposure Controls/Personal Protection

Airborne Exposure Limits:
None established.
Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. 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 Respirators (NIOSH Approved):
For conditions of use where exposure to the substance is apparent, 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.

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9. Physical and Chemical Properties

Appearance:
Clear, colorless liquid.
Odor:
Slight ammonia odor.
Solubility:
Soluble in water.
Specific Gravity:
0.78 @ 20C/4C
pH:
No information found.
% Volatiles by volume @ 21C (70F):
100
Boiling Point:
120 - 122C (248 - 252F)
Melting Point:
-55C (-67F)
Vapor Density (Air=1):
No information found.
Vapor Pressure (mm Hg):
No information found.
Evaporation Rate (BuAc=1):
No information found.

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10. Stability and Reactivity

Stability:
Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products:
Burning may produce carbon monoxide, carbon dioxide, nitrogen oxides.
Hazardous Polymerization:
Will not occur.
Incompatibilities:
Acids, acid chlorides, acid anhydrides, strong oxidizing agents, carbon dioxide, copper and copper alloys.
Conditions to Avoid:
Heat, flames, ignition sources and incompatibles.

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11. Toxicological Information

Oral rat LD50: 268 mg/kg; inhalation rat LC50: 1318 ppm/4-hour; skin rabbit LD50: 5390 mg/kg; Irritation eye rabbit, standard Draize: 750 ug, severe.

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  --------\Cancer Lists\-----------------------------------------------------
-
                                          ---NTP Carcinogen---
  Ingredient                              Known    Anticipated    IARC
Category
  -------------------------------------   -----    -----------    ------------
-
  Tetramethylethylenediamine               No          No            None
  (110-18-9)
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12. Ecological Information

Environmental Fate:
No information found.
Environmental Toxicity:
No information found.

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13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved waste 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.

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14. Transport Information

Domestic (Land, D.O.T.)

Proper Shipping Name: 1,2-DI-(DIMETHYLAMINO)ETHANE
Hazard Class: 3
UN/NA: UN2372
Packing Group: II
Information reported for product/size: 50ML

International (Water, I.M.O.)

Proper Shipping Name: 1,2-DI-(DIMETHYLAMINO)ETHANE

Hazard Class: 3
UN/NA: UN2372
Packing Group: II
Information reported for product/size: 50ML

International (Air, I.C.A.O.)

Proper Shipping Name: 1,2-DI-(DIMETHYLAMINO)ETHANE
Hazard Class: 3
UN/NA: UN2372
Packing Group: II
Information reported for product/size: 50ML

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15. Regulatory Information

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  --------\Chemical Inventory Status - Part 1\--------------------------------
--
  Ingredient                                          TSCA  EC   Japan
Australia
  ------------------------------------------------  ----  ---  -----  --------
-
  Tetramethylethylenediamine (110-18-9)              Yes  Yes   Yes      Yes

  --------\Chemical Inventory Status - Part 2\--------------------------------
--
                                                                --Canada--
  Ingredient                                          Korea  DSL   NDSL  Phil.
  ------------------------------------------------  -----  ---   ----  -----
  Tetramethylethylenediamine (110-18-9)              Yes   Yes   No     Yes

  --------\Federal, State & International Regulations - Part 1\--------------
--
                                                -SARA 302-    ------SARA 313----
--
  Ingredient                                    RQ    TPQ     List  Chemical
Catg.
  ----------------------------------------  ---   -----   ----  ------------
--
  Tetramethylethylenediamine (110-18-9)      No    No      No         No

  --------\Federal, State & International Regulations - Part 2\--------------
--
                                                             -RCRA-    -TSCA-
  Ingredient                                    CERCLA     261.33     8(d)
  ----------------------------------------  ------     ------    ------
  Tetramethylethylenediamine (110-18-9)      No         No         Yes


Chemical Weapons Convention:  No     TSCA 12(b):  No     CDTA:  No
SARA 311/312:  Acute: Yes      Chronic: No   Fire: Yes Pressure: No
Reactivity: No          (Pure / Liquid)
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Australian Hazchem Code: 2YE
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.

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16. Other Information

NFPA Ratings: Health: **3** Flammability: **3** Reactivity: **0**
Label Hazard Warning:
DANGER! MAY BE FATAL IF INHALED. CAUSES BURNS TO ANY AREA OF CONTACT. HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN. COMBUSTIBLE LIQUID AND VAPOR.
Label Precautions:
Do not breathe vapor.
Do not get in eyes, on skin, or on clothing.
Keep container closed.
Use only with adequate ventilation.
Wash thoroughly after handling.
Keep away from heat, sparks and flame.
Label First Aid:
In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. If swallowed, DO NOT INDUCE VOMITING. Give large quantities of water. Never give anything by mouth to an unconscious person. In all cases get medical attention immediately.
Product Use:
Laboratory Reagent.
Revision Information:
No Changes.
Disclaimer:
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