IDENTIFICATION

MSDS Record Number: 5618704
Product Name(s): TRIETHYLENE GLYCOL
Product Identification: MSDS NUMBER: T5382
PRODUCT CODE: W660, 2735
C.A.S. NUMBER: 112-27-6
Date of MSDS: 2006-11-09
Currency Note: This MSDS was acquired from the supplier on 2007-09-06.

MANUFACTURER/SUPPLIER INFORMATION

Company: MALLINCKRODT BAKER INC

MATERIAL SAFETY DATA

Effective Date: 11/09/06
Supersedes: 02/12/04

MSDS MATERIAL SAFETY DATA SHEET
CHEMTREC: 800-424-9300 (USA)
703-527-3887 (Outside USA & CANADA)
CANUTEC: 613-996-6666

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

Emergency Telephone Number: 908-859-2151
NOTE: Use CHEMTREC and CANUTEC phone numbers only in the event of a chemical emergency.

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

MALLINCKRODT J. T. BAKER

TRIETHYLENE GLYCOL

1. Product Identification
Synonyms: Ethanol, 2,2'-(1,2-ethanediylbis(oxy))bis-; triglycol; ethylene glycol dihydroxy-diethyl ether
CAS No: 112-27-6
Molecular Weight: 150.20
Chemical Formula: C6H14O4
Product Codes: J.T. Baker:
W660
Mallinckrodt:
2. Composition/Information on Ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No</th>
<th>Percent</th>
<th>Hazardous</th>
</tr>
</thead>
<tbody>
<tr>
<td>Triethylene Glycol</td>
<td>112-27-6</td>
<td>90 - 100%</td>
<td>Yes</td>
</tr>
</tbody>
</table>

3. Hazards Identification

Emergency Overview

WARNING! CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION.
SAF-T-DATA(tm) Ratings (Provided here for your convenience)

<table>
<thead>
<tr>
<th>Health Rating:</th>
<th>0 - None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flammability Rating:</td>
<td>1 - Slight</td>
</tr>
<tr>
<td>Reactivity Rating:</td>
<td>0 - None</td>
</tr>
<tr>
<td>Contact Rating:</td>
<td>2 - Moderate</td>
</tr>
<tr>
<td>Lab Protective Equip:</td>
<td>GOGGLES; LAB COAT; PROPER GLOVES</td>
</tr>
<tr>
<td>Storage Color Code:</td>
<td>Green (General Storage)</td>
</tr>
</tbody>
</table>

Potential Health Effects

Inhalation:
No adverse health effects expected from inhalation.

Ingestion:
No adverse effects expected.

Skin Contact:
Prolonged exposure may cause skin irritation.

Eye Contact:
Splashing in eyes causes irritation with transitory disturbances of corneal epithelium. However, these effects diminish and no permanent injury is expected. Vapors are non-irritating.

Chronic Exposure:
Possible skin irritation.

Aggravation of Pre-existing Conditions:
No information found.

4. First Aid Measures

Inhalation:
Remove to fresh air. Not expected to require first aid measures.

Ingestion:
If large amounts were swallowed, give water to drink and get medical advice.

Skin Contact:
In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Call a physician if irritation develops.

Eye Contact:
If splash occurs, immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Call a physician.

5. Fire Fighting Measures

Fire:
Flash point: 177°C (351°F) CC
Autoignition temperature: 371°C (700°F)
Flammable limits in air % by volume:
LeL: 0.9; UEL: 9.2
Slight fire hazard when exposed to heat or flame.
Explosion:
Above the flash point, explosive vapor-air mixtures may be formed.

Fire Extinguishing Media:
Water spray, dry chemical, alcohol foam, or carbon dioxide. Water or foam may cause frothing.

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.

Accidental Release Measures
Ventilate area of leak or spill. 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. 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.

Handling and Storage
Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from heat, ignition sources and oxidizing agents. Protect from freezing. 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.

Exposure Controls/Personal Protection
Airborne Exposure Limits:
None established.

Ventilation System:
Not expected to require any special ventilation.

Personal Respirators (NIOSH Approved):
Not expected to require personal respirator usage.

Skin Protection:
Wear protective gloves and clean body-covering clothing.

Eye Protection:
Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

Physical and Chemical Properties
Appearance:
Clear, colorless liquid.

Odor:
Odorless.

Solubility:
Soluble in water.

Specific Gravity:
1.1274 @ 15C/4C
pH:
No information found.

% Volatiles by volume @ 21C (70F):
100

Boiling Point:
285C (545F)

Melting Point:
-5C (23F)

Vapor Density (Air=1):
5.17

Vapor Pressure (mm Hg):
< 0.01 @ 20C (68F)

Evaporation Rate (BuAc=1):
0.01

Stability and Reactivity
Stability:
Stable under ordinary conditions of use and storage. Hygroscopic.

Hazardous Decomposition Products:
Carbon dioxide and carbon monoxide may form when heated to decomposition.

Hazardous Polymerization:
Will not occur.
Incompatibilities:
Strong oxidizers.
Conditions to Avoid:
Heat, flames, ignition sources and incompatibles.

11. Toxicological Information
Oral rat LD50: 17 gm/kg; investigated as a reproductive effector.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>NTP Carcinogen</th>
<th>Known</th>
<th>Anticipated</th>
<th>IARC Category</th>
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</thead>
<tbody>
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<td>No</td>
<td>No</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

12. Ecological Information
Environmental Fate:
When released into the soil, this material is expected to readily biodegrade. When released into the soil, this material is expected to leach into groundwater. When released into the soil, this material is not expected to evaporate significantly. When released into water, this material is expected to readily biodegrade. When released into water, this material is not expected to evaporate significantly. This material has a log octanol-water partition coefficient of less than 3.0. 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. When released into the air, this material is expected to have a half-life of less than 1 day.

Environmental Toxicity:
This material is expected to be slightly toxic to aquatic life. The LC50/96-hour values for fish are between 10 and 100 mg/l.

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

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>TSCA</th>
<th>EC</th>
<th>Japan</th>
<th>Australia</th>
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<td>Yes</td>
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</tbody>
</table>

---Canada---

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Korea</th>
<th>DSL</th>
<th>NDSL</th>
<th>Phil.</th>
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<td>No</td>
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</tbody>
</table>

---SARA 302---

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>RQ</th>
<th>TPQ</th>
<th>List Chemical Catg.</th>
</tr>
</thead>
</table>

16. Other Information

NFPA Ratings:
Health: 1 Flammability: 1 Reactivity: 0

Label Hazard Warning:
WARNING! CAUSES EYE IRRITATION. MAY CAUSE SKIN IRRITATION.

Label Precautions:
Avoid contact with eyes, skin and clothing.
Wash thoroughly after handling.

Label First Aid:
In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes. Call a physician.

Product Use:
Laboratory Reagent.

Revision Information:
MSDS Section(s) changed since last revision of document include: 3.

Disclaimer:

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T5382

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