IDENTIFICATION

MSDS Record Number: 5617918
Product Name(s): GLYCINE
Product Identification: MSDS NUMBER: 5828
                      PRODUCT CODE: 0581, 0582, 4057, 4059, 5104, 7728
                      C.A.S. NUMBER: 56-40-6
Date of MSDS: 2005-12-03
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: 12/03/05
Supercedes: 05/14/03

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.

M A L L I N C K R O D T
J. T. B A K E R

GLYCINE

1. Product Identification

   Synonyms: Glycocol, Aminoacetic acid
   CAS No: 56-40-6
   Molecular Weight: 75.07
   Chemical Formula: CH2NH2-COOH
   Product Codes: J.T. Baker:
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>Glycine</td>
<td>56-40-6</td>
<td>90 - 100%</td>
<td>Yes</td>
</tr>
</tbody>
</table>

3. Hazards Identification

Emergency Overview

As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes, and clothing.

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

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

Potential Health Effects

Inhalation:
High concentrations of dust may cause coughing.

Ingestion:
Large oral doses may cause nausea.

Skin Contact:
No adverse effects expected.

Eye Contact:
May cause redness.

Chronic Exposure:
No information found.

Aggravation of Pre-existing Conditions:
No information found.

4. First Aid Measures

Inhalation:
Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:
Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

Skin Contact:
Wash exposed area with soap and water. Get medical advice if irritation develops.

Eye Contact:
Wash thoroughly with running water. Get medical advice if irritation develops.

5. Fire Fighting Measures

Fire:
Not considered to be a fire hazard.

Explosion:
Not considered to be an explosion hazard.

Fire Extinguishing Media:
Use any means suitable for extinguishing surrounding fire.

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

Non-hazardous material. Flush with water to sewer.

7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage.

8. Exposure Controls/Personal Protection

Airborne Exposure Limits:
None established.

Ventilation System:
In general, dilution ventilation is a satisfactory health hazard control for this substance. However, if conditions of use create discomfort to the worker, a local exhaust system should be considered.

Personal Respirators (NIOSH Approved):
For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

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

Eye Protection:
Safety glasses. Maintain eye wash fountain and quick-drench facilities in
9. Physical and Chemical Properties

Appearance: White crystals.
Boiling Point: Not applicable.

Odor: Odorless.
Melting Point: 182°C (360°F) Begins to decompose @ 238°C (460°F)

Solubility: 25g/100 ml water @ 25°C (77°F).
Vapor Density (Air=1): No information found.

Density: 1.16
Vapor Pressure (mm Hg): No information found.

pH: 4.0 (0.2 M solution)
Evaporation Rate (BuAc=1): No information found.

% Volatiles by volume @ 21°C (70°F): 0

10. Stability and Reactivity

Stability: Stable under ordinary conditions of use and storage.

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

Hazardous Polymerization: Will not occur.

Incompatibilities: No incompatibility data found.

Conditions to Avoid: No information found.

11. Toxicological Information

Oral rat LD50 7930 mg/kg, Investigated as a mutagen.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>NTP Known</th>
<th>Carcinogen Anticipated</th>
<th>IARC Category</th>
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</thead>
<tbody>
<tr>
<td>Glycine (56-40-6)</td>
<td>No</td>
<td>No</td>
<td>None</td>
</tr>
</tbody>
</table>

12. Ecological Information

Environmental Fate: No information found.

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 - Part 1\-------------------------------

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>TSCA</th>
<th>EC</th>
<th>Japan</th>
<th>Australia</th>
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<tbody>
<tr>
<td>Glycine (56-40-6)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
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---\Chemical Inventory Status - Part 2\-------------------------------

<table>
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<tr>
<th>Ingredient</th>
<th>Korea</th>
<th>DSL</th>
<th>NDSL</th>
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<tbody>
<tr>
<td>Glycine (56-40-6)</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
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</tbody>
</table>

---\Federal, State & International Regulations - Part 1\------------------

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>-SARA 302-</th>
<th>-----</th>
<th>SARA 313-----</th>
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<tbody>
<tr>
<td>Glycine (56-40-6)</td>
<td>RQ</td>
<td>TPQ</td>
<td>List Chemical Catg.</td>
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---\Federal, State & International Regulations - Part 2\------------------

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CERCLA</th>
<th>261.33</th>
<th>8(d)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycine (56-40-6)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

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

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: 0  Flammability: 1  Reactivity: 0

Label Hazard Warning:
As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

Label Precautions:
None.

Label First Aid:
Not applicable.

Product Use:
Laboratory Reagent.

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

Disclaimer:
******************************************************************************
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G552B

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