MATERIAL SAFETY DATA SHEET

I. PRODUCT IDENTIFICATION

TRADE NAME: Glycine

Chemical identity, common names: aminoacetic acid; aminoethanoic acid; glycocoll; Glycosthene
Catalog No.: 161-0717 & 161-0718
Formula: NH₂CH₂COOH

MANUFACTURER'S NAME:
BIO-RAD LABORATORIES
2000 ALFRED NOBEL DRIVE
HERCULES, CALIFORNIA 94547

DATE PREPARED OR REVISED:
July 28, 1993

EMERGENCY PHONE No:
510/232-7000

NAME OF PREPARER:
Roy Wood

II. HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>CHEMICAL NAMES</th>
<th>CAS NUMBERS</th>
<th>PERCENT</th>
<th>EXPOSURE LIMITS IN AIR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycine</td>
<td>56-40-6</td>
<td>100%</td>
<td>ACGIH TLY OSHA PEL OTHER</td>
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</tbody>
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III. PHYSICAL/CHEMICAL CHARACTERISTICS

BOILING POINT: 450° F
VAPOR PRESSURE: N/A
SPECIFIC GRAVITY (H₂O = 1): 1.16
MELTING POINT: 197-201° C
EVAPORATION RATE (BUTYL ACETATE = 1): N/A
VAPOR DENSITY (AIR = 1): Not determine
SOLUBILITY IN WATER: 250 g/ Liter of water at 25° C
APPEARANCE AND COLOR: White, crystalline, odorless solid.

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: N/A
METHOD USED: N/A
FLAMMABLE LIMITS: N/A
EXTINGUISHING MEDIA: Use any means suitable for extinguishing surrounding fire.
SPECIAL FIRE FIGHTING PROCEDURES: 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.
UNUSUAL FIRE AND EXPLOSION HAZARDS: Not considered a fire or explosion hazard.

V. HEALTH HAZARD INFORMATION

SYMPTOMS OF OVEREXPOSURE (for each potential route of exposure):
INHALED: High concentrations of dust may cause coughing.
CONTACT WITH SKIN OR EYES: May cause redness to eyes. No adverse effects expected with skin contact.
ABSORBED THROUGH SKIN: No adverse effects expected through this route of exposure.
SWALLOWED: Large oral doses may cause nausea.

HEALTH EFFECTS OR RISKS FROM EXPOSURE
ACUTE: No adverse effects expected. See above.
CHRONIC: No information found.
FIRST AID: EMERGENCY PROCEDURES
EYE CONTACT: Flush with large amounts of water for at least 15 minutes, lifting lower and upper lids occasionally. Get medical attention.
SKIN CONTACT: Wash off in soap and flowing water.
INHALED: Remove to fresh air. Get medical attention for any breathing difficulty.
SWALLOWED: Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

SUSPECTED CANCER AGENT
X NO: THIS PRODUCT'S INGREDIENTS ARE NOT FOUND IN THE LISTS BELOW.
YES: _____FEDERAL OSHA _____NTP _____IARC

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE
None known.

VI. REACTIVITY DATA

STABLE X
UNSTABLE _______

CONDITIONS TO AVOID: N/A
INCOMPATIBILITY (Materials to avoid): No information found.
HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon and nitrogen.
HAZARDOUS POLYMERIZATION MAY OCCUR____ WILL NOT OCCUR____ X

CONDITIONS TO AVOID: N/A

VII. SPILL, LEAK, AND DISPOSAL PROCEDURES

SPILL RESPONSE PROCEDURES: Sweep dry material or flush with water.
PREPARING WASTES FOR DISPOSAL: Approved landfill. Comply with all applicable federal, state, and local regulations on spill reporting, waste handling, and waste disposal.

VIII. SPECIAL HANDLING INFORMATION

VENTILATION AND ENGINEERING CONTROLS: 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.
RESPIRATORY CONTROLS: For conditions of use where exposure to the dust is apparent, a dust/mist respirator may be worn. For emergencies, a self-contained breathing apparatus may be necessary.
EYE PROTECTION: Safety glasses.
GLOVES: Use chemical resistant gloves such as neoprene.
OTHER CLOTHING AND EQUIPMENT: Clean body-covering clothing.
WORK PRACTICES, HYGIENIC PRACTICES: Use good laboratory practices. Wash hands after using and before eating. Do not eat, drink, or smoke in the work area.
OTHER HANDLING AND STORAGE REQUIREMENTS: Keep containers tightly closed to protect quality. Store in a cool, dry, well-ventilated place.
PROTECTIVE MEASURES DURING MAINTENANCE OF CONTAMINATED EQUIPMENT: Protective clothing, eye protection, and appropriate NIOSH-approved respiratory protection should be worn.

We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and conditions of use of the product are not within the control of Bio-Rad, it is the user's responsibility to handle the product under conditions of safe use.