

**MATERIAL SAFETY DATA SHEET****GLYCINE**

PRODUCT CODE NUMBER(S): 3880-5

**PRODUCT IDENTIFICATION****Chemical Name and Synonyms:** *Glycine; Aminoacetic acid; Aminoethanoic acid***Chemical Family:** *Amino acid***Chemical Formula:**  $NH_2CH_2COOH$ **Product Use:** *Laboratory reagent***Manufacturer's Name and Address:***Caledon Laboratories Ltd.  
40 Armstrong Avenue  
Georgetown, Ontario L7G 4R9***Telephone No:** (905) 877-0101**Fax No:** (905) 877-6666**Emergency Telephone No:** CANUTEC (613) 996-6666**HAZARDOUS INGREDIENTS OF MATERIALS**

| <i>Ingredients</i> | <i>%</i>      | <i>TLV Units</i>       | <i>CAS No.</i> |
|--------------------|---------------|------------------------|----------------|
| <i>Glycine</i>     | <i>&gt;99</i> | <i>Not established</i> | <i>56-40-6</i> |

**PHYSICAL DATA****Physical State:** *Solid***Odour and Appearance:** *White crystals, odourless***Odour Threshold (ppm):** *Not applicable***Vapour Pressure (mm Hg):** *Not available***Vapour Density (Air = 1):** *Not available***Evaporation Rate:** *Not available***Boiling Point (degrees C):** *450°C***Melting Point (degrees C):** *290°C***pH:** *5.9-6.3 (5% solution)***Specific Gravity:** *1.161***Coefficient of Water/Oil distribution:** *Not available***SHIPPING DESCRIPTION****UN:** *Not regulated***T.D.G. Class:** *Not regulated***Pkg. Group:** *Not regulated***REACTIVITY DATA****Chemical Stability:** *Stable***Incompatibility with other substances:** *May react vigorously or violently with strong oxidizing agents.***Reactivity:** *Avoid excessive heat, which causes decomposition and charring. Avoid generation of dust, all incompatible materials.***Hazardous Decomposition Products:**  $NO_x$ ,  $NH_3$ ,  $CO_x$ **FIRE AND EXPLOSION DATA****Flammability:** *May be combustible if strongly heated. As with most organic compounds, fine dust dispersed in air in the presence of an ignition source is a potential dust explosion hazard.***Extinguishing Media:** *Use an extinguisher appropriate to the surrounding material that is burning. Water fog or spray can also be used to cool containers, prevent dust formation, flush chemical away from fire. Fight fire from upwind, from a safe distance. Firefighters must wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes.***Flash Point (Method Used):** *Not available***Autoignition Temperature:** *Not available***Upper Flammable Limit (% by volume):** *Not available***Lower Flammable Limit (% by volume):** *Not available***Hazardous Combustion Products:**  $NO_x$ ,  $NH_3$ ,  $CO_x$ **Sensitivity to Impact:** *None identified***Sensitivity to Static discharge:** *As with most organic powders, mixtures of dust with air may be sensitive under certain conditions, when ignited by an electrostatic or other high-voltage spark, or other ignition source.***TOXICOLOGICAL PROPERTIES AND HEALTH DATA****Toxicological Data:****LD<sub>50</sub>:** (oral, rat) 7,930 mg/kg; (sc, rat) 5,200 mg/kg**LC<sub>50</sub>:** *Not available***Effects of Acute Exposure to Product:****Inhaled:** *No known toxic effects associated with inhalation of this material. High concentrations of dust may irritate causing coughing, sneezing.***In contact with skin:** *May cause mild mechanical irritation, redness, itching. May be absorbed through skin.***In contact with eyes:** *May cause mild mechanical irritation, with temporary redness, itching, tearing, pain.***Ingested:** *Large doses may cause gastrointestinal irritation with nausea and vomiting.***Effects of Chronic Exposure to Product:****Carcinogenicity:** *Not listed as carcinogen by ACGIH, IARC, NTP.***Teratogenicity:** *No information available***Reproductive Effects:** *No information available***Mutagenicity:** *No information available***Synergistic Products:** *None known***PREVENTIVE MEASURES****Engineering Controls:** *Local exhaust ventilation recommended.*

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**Respiratory Protection:** *Dust mask. Up to maximum use specified by the respirator supplier, NIOSH/OSHA approved half-face or full face-piece dust/mist respirator, depending on concentration present. Higher or unknown concentrations, or for fire or spill conditions, self-contained breathing apparatus, or full face-piece, positive-pressure supplied-air respirator.*

**Eye Protection:** *Chemical safety goggles.*

**Skin Protection:** *Rubber, nitrile or plastic gloves. Other protective clothing, apron, sleeves and boots sufficient to limit contact.*

**Other Personal Protective Equipment:** *Safety shower and eye-wash fountain in work area.*

**Leak and Spill Procedure:** *Ventilate area. Cleanup personnel should wear protective equipment and clothing sufficient to prevent inhalation of dust and fumes and contact with skin and eyes. Small spills may be run to waste, diluting with large amounts of running water. Large spills, mix with sand or inert absorbent, collect in a manner that does not raise dust, and transfer carefully into labelled, covered container(s) for removal by disposal company. Wash site of spillage thoroughly with water and detergent.*

**Waste Disposal:** *Follow all federal, provincial and local regulations for disposal.*

**Handling Procedures and Equipment:** *Workers using this chemical must be trained in its hazards and its safe use, and should wear appropriate protective equipment and clothing. Follow routine safe handling procedures and good house-keeping procedures. Avoid generating dust. Avoid contact with skin and eyes. Use the smallest amount possible for the purpose, in designated areas with adequate ventilation. Keep containers closed when not in use and when empty. Wash thoroughly after handling.*

**Storage Requirements:** *Store in suitable, labelled containers in a cool, dry, well ventilated area, out of direct sunlight and away from incompatible materials. Keep containers tightly closed. Protect from damage.*

## FIRST AID MEASURES

### **Specific Measures:**

**Eyes:** *Flush eyes thoroughly with running water for five to ten (5-10) minutes, or until no trace of chemical remains, holding eyelids open while flushing. Get medical attention if irritation persists.*

**Skin:** *Brush or wipe off dry material. Flush skin thoroughly with running water until no trace of chemical remains. Get medical attention if irritation develops.*

**Inhalation:** *Remove to fresh air. Give oxygen and get medical attention for breathing difficulty.*

**Ingestion:** *If victim is alert and not convulsing, give 2 to 4 glasses of water to drink to dilute material. If vomiting occurs, rinse mouth and give more water to drink. If victim feels unwell, or if a large amount has been ingested, get medical attention.*

## REFERENCES USED

CCINFO disc

Budavari: *The Merck Index*, 12th ed., 1997

Sax, Lewis: *Hawley's Condensed Chemical Dictionary*, 11th ed., 1987

Sax: *Dangerous Properties of Industrial Materials*, 5th ed., 1979

Suppliers' Material Safety Data Sheets

## ADDITIONAL INFORMATION

**Date Issued:** *June 10, 1991*

**Revision:** *December 2009*

**MSDS:** *3880-5*

**Proposed WHMIS Designation:** *Not controlled. Not required to be updated every three years (WHMIS 1992, B-40, Section 29,2)*

*Prepared by: Caledon Laboratories Ltd. (905) 877-0101  
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