

MATERIAL SAFETY DATA SHEET**ALANINE**

PRODUCT CODE NUMBER(S): 0790-5, 0810-5, 0811-5

PRODUCT IDENTIFICATION**Chemical Name and Synonyms:** *Alanine; Aminopropionic acid***Chemical Family:** *Amino acids***Chemical Formula:** $C_3H_7NO_2$ **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>L-Alanine</i>	<i>99</i>	<i>Not available</i>	<i>56-41-7</i>
<i>OR</i>			
<i>DL-Alanine</i>	<i>99</i>	<i>Not available</i>	<i>302-72-7</i>
<i>OR</i>			
<i>Alanine</i>	<i>99</i>	<i>Not available</i>	<i>107-95-9</i>

PHYSICAL DATA**Physical State:** *Solid***Odour and Appearance:** *White or colourless 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):** *Not available***Melting Point (degrees C):** *>200°C***pH:** *Not available***Specific Gravity:** *Not available***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. Sensitive to light and moisture.***Incompatibility with other substances:** *May react vigorously or violently with strong oxidizers.***Reactivity:** *Avoid excessive heat, incompatible materials, exposure to light and moisture, generation of dust.***Hazardous Decomposition Products:** CO_x , NO_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 which is burning. Use water as spray or fog to minimize dust, absorb heat, cool containers, and disperse vapours. Fight fire from upwind, from a safe distance. Firefighters should wear protective equipment, full face-piece positive-pressure self-contained breathing apparatus, and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes.***Flash Point (Method Used):** *Not applicable***Autoignition Temperature:** *Not applicable***Upper Flammable Limit (% by volume):** *Not applicable***Lower Flammable Limit (% by volume):** *Not applicable***Hazardous Combustion Products:** CO_x , NO_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:****LD₅₀:** *Not available***LC₅₀:** *Not available***Effects of Acute Exposure to Product:***To the best of our knowledge, the physical, chemical, and toxicological properties of these substances have not yet been thoroughly investigated. They are naturally occurring non-essential amino acids, not expected to be a health hazard.***Inhaled:** *May cause mechanical irritation, with coughing, choking. Inhalation of large amounts may be harmful.***In contact with skin:** *Dust may cause mechanical skin irritation. Concentrated solutions may be irritating, causing redness, itching, temporary pain. Probably not absorbed through skin.***In contact with eyes:** *May cause temporary mechanical irritation, with redness, tearing, itching and pain.***Ingested:** *May be irritating. Ingestion of large amounts may be harmful.***Effects of Chronic Exposure to Product:****Carcinogenicity:** *Not listed as a carcinogen***Teratogenicity:** *No human or animal information available.*

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Reproductive Effects: No human or animal information available.

Mutagenicity: No information available

Synergistic Products: None known

PREVENTIVE MEASURES

Engineering Controls: Local exhaust ventilation recommended.

Respiratory Protection: Dust/mist mask. For conditions where dust or mist is present, to the maximum use specified by the respirator supplier, NIOSH/OSHA approved half-face high-efficiency dust/mist filter respirator, or NIOSH/OSHA approved full face-piece high-efficiency dust/mist filter respirator. 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 glasses

Skin Protection: Resistant gloves. Other clean body-covering clothing sufficient to prevent contact.

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

Leak and Spill Procedure: Ventilate area. Eliminate ignition sources. Cleanup personnel should wear protective equipment and clothing sufficient to prevent inhalation of dust or mist, and contact with skin and eyes. Gather up in a manner that does not raise dust. Transfer into containers and arrange 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: MAY BE COMBUSTIBLE DUST. Workers using this chemical must be properly trained in its hazards and its safe use. Avoid generating dust. If there is dust, keep away from heat, sparks, and all sources of ignition; avoid the accumulation of static charge, use anti-sparking tools and ground and bond equipment and containers. Use the smallest amount possible for the purpose, in a designated area with adequate ventilation. Use good housekeeping to prevent accumulations of dust. Avoid contact with skin and eyes. Avoid inhalation. Wash thoroughly after handling.

Storage Requirements: Store in suitable, labelled containers, in a cool, dry, well-ventilated area, out of direct sunlight. Keep containers tightly closed when not in use and when empty. Protect from damage. Store away from incompatible materials.

FIRST AID MEASURES

Specific Measures:

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

Skin: Remove contaminated clothing. Brush or wipe off dry material. Flush skin with plenty of running water until no evidence of chemical remains. If irritation develops get medical attention.

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

Ingestion: If victim is alert and NOT convulsing, rinse mouth, give several glasses of water to drink to dilute. If victim feels unwell, or if a very large amount has been ingested, get medical attention.

REFERENCES USED

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 16, 1990

Revision: June 2011

MSDS: 0790-5, 0810-5, 0811-5

Proposed WHMIS Designation: Not a controlled product. 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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