

MATERIAL SAFETY DATA SHEET**STEARIC ACID**

PRODUCT CODE NUMBER(S): 8510-5

PRODUCT IDENTIFICATION

Chemical Name and Synonyms: *Stearic acid; Octadecanoic acid*
Chemical Family: *Saturated aliphatic carboxylic acid*
Chemical Formula: $C_{18}H_{36}O_2$
Product Use: *Laboratory reagent*
Manufacturer's Name and Address:
*Caledon Laboratories Ltd.
40 Armstrong Avenue
Georgetown, Ontario L7G 4R9*
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HAZARDOUS INGREDIENTS OF MATERIALS

<i>Ingredients</i>	<i>%</i>	<i>TLV Units</i>	<i>CAS No.</i>
<i>Stearic acid</i>	<i>>98</i>	<i>Not established</i>	<i>57-11-4</i>

PHYSICAL DATA

Physical State: *Solid*
Odour and Appearance: *White or slightly yellow crystals or powder, slight tallow-like odour*
Odour Threshold (ppm): *Not available*
Vapour Pressure (mm Hg): *1 mm Hg @ 173.7°C*
Vapour Density (Air = 1): *Not applicable*
Evaporation Rate: *Negligible*
Boiling Point (degrees C): *376.1°C (dec.)*
Melting Point (degrees C): *69.6°C*
pH: *Not available*
Specific Gravity: *0.847 @ 70°C*
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: *Moderately stable. Exposure to light or air may cause very slow breakdown, producing rancid odour and low levels of peroxides, which are not likely to be hazardous.*
Incompatibility with other substances: *Increased risk of fire with strong bases and reducing agents. Corrosive to brass. Presence of peroxides may cause violent or explosive reaction with active metals (e.g. aluminum)*
Reactivity: *Avoid exposure to light or air, excessive heat, ignition sources, generation of dust.*
Hazardous Decomposition Products: *Not known*

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 extinguishing media appropriate to the surrounding fire. 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 and clothing sufficient to prevent inhalation of dust or fumes, and contact with skin and eyes.*
Flash Point (Method Used): *195°C*
Autoignition Temperature: *395°C*
Upper Flammable Limit (% by volume): *Not available*
Lower Flammable Limit (% by volume): *Not available*
Hazardous Combustion Products: *CO_x toxic and irritating fumes and smoke*

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

To the best of our knowledge, the physical, chemical and toxicological properties of this substance have not yet been thoroughly investigated.

Toxicological Data:

LD₅₀: *(oral, rat) >5 g/kg; (dermal, rabbit) >5 g/kg*
LC₅₀: *Not available*

Effects of Acute Exposure to Product:

Inhaled: *Low toxicity. Inhalation of dust may cause mild transitory irritation of upper respiratory tract with wheezing, coughing, and shortness of breath.*

In contact with skin: *Not likely to cause irritation. Not expected to be absorbed in significant amounts.*

In contact with eyes: *No human or animal information available. Dusts or solutions may cause mild, temporary irritation, with redness, tearing, itching, pain.*

Ingested: *Very low in oral toxicity. May irritate gastrointestinal tract.*

Effects of Chronic Exposure to Product:

Stearates are consumed as part of a regular diet. No indication of adverse health effects.

Carcinogenicity: *No human information available. Not carcinogenic in animal studies.*

Teratogenicity: *No human or animal information available. Not expected to be a hazard.*

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Reproductive Effects: No human or animal information available. Not expected to be a hazard.

Mutagenicity: No specific information available. Probably not mutagenic.

Synergistic Products: None known

PREVENTIVE MEASURES

Engineering Controls: Local exhaust ventilation recommended.

Respiratory Protection: Dust mask. NIOSH-approved half-face dust/mist respirator for dusty conditions. For high or unknown concentrations, as in fire or spill conditions, positive-pressure, full face-piece self-contained breathing apparatus, or positive-pressure, full face-piece supplied-air respirator with auxiliary positive-pressure self-contained breathing apparatus.

Eye Protection: Chemical safety goggles

Skin Protection: Rubber or plastic gloves. Other protective 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 be trained in the handling of hazardous chemicals, and should wear protective equipment and clothing sufficient to prevent inhalation of dust or fumes and contact with skin and eyes. Gather up in a manner that does not raise dust. Prevent from entering sewers or waterways. Transfer carefully into container 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. Use routine safe handling procedures. Personnel working with this product should be trained in its hazards and its safe use, and should wear appropriate protective equipment and clothing. Avoid generating dust. Use the smallest amount possible for the purpose, in a designated area with appropriate ventilation. Keep work areas free of incompatible materials. Keep away from excessive heat, and all ignition sources. If dust is present, use non-sparking tools, post "No Smoking" signs. Avoid all contact and inhalation. Wash thoroughly after working with this chemical. Keep containers closed when not in use.

Storage Requirements: Store in suitable, labelled containers, in a cool, dry, well-ventilated area, out of direct sunlight. Store away from incompatible materials. Keep containers tightly closed when not in use and when empty. Protect from exposure to light and air. Protect from damage, and inspect frequently for signs of leaking.

FIRST AID MEASURES

Specific Measures:

Eyes: Flush eyes thoroughly with gently running water for five to ten (5-10) minutes, holding eyelids open while flushing. If irritation persists, get medical attention.

Skin: Remove contaminated clothing, including watches, rings, belts, and shoes. Flush skin with plenty of running water for five to ten (5-10) minutes. If irritation persists, get medical attention.

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

Ingestion: If the victim is alert and not convulsing, rinse mouth thoroughly with water and give 2 to 4 glasses of wa-

ter to drink to dilute. If victim feels unwell, or if a large amount has been ingested, get medical attention.

REFERENCES USED

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

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

Suppliers' Material Safety Data Sheets

ADDITIONAL INFORMATION

Date Issued: May 20, 1998

Revision: May 2010

MSDS: 8510-5

Proposed WHMIS Designation: Insufficient information available

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