

## MATERIAL SAFETY DATA SHEET

Date Printed: 02/20/2006

Date Updated: 01/29/2006

Version 1.5

---

Section 1 - Product and Company Information

---

Product Name	A-SOLANINE FROM POTATO SPROUTS
Product Number	S3757
Brand	SIGMA
Company	Sigma-Aldrich
Street Address	3050 Spruce Street
City, State, Zip, Country	SAINT LOUIS MO 63103 US
Technical Phone:	800-325-5832
Emergency Phone:	314-776-6555
Fax:	800-325-5052

---

Section 2 - Composition/Information on Ingredient

---

Substance Name	CAS #	SARA 313
A-SOLANINE FROM POTATO SPROUTS	20562-02-1	No
Formula	C45H73NO15	
Synonyms	Solanine * alpha-Solanin * alpha-Solanine	
RTECS Number:	WF0250000	

---

Section 3 - Hazards Identification

---

## EMERGENCY OVERVIEW

Harmful.  
Harmful if swallowed.  
Target organ(s): Nerves.

## HMIS RATING

HEALTH: 1\*  
FLAMMABILITY: 0  
REACTIVITY: 0

## NFPA RATING

HEALTH: 1  
FLAMMABILITY: 0  
REACTIVITY: 0

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

---

Section 4 - First Aid Measures

---

## ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

## INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

#### DERMAL EXPOSURE

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

#### EYE EXPOSURE

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

---

### Section 5 - Fire Fighting Measures

---

#### FLASH POINT

N/A

#### AUTOIGNITION TEMP

N/A

#### FLAMMABILITY

N/A

#### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

#### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
Specific Hazard(s): Emits toxic fumes under fire conditions.

---

### Section 6 - Accidental Release Measures

---

#### PROCEDURE TO BE FOLLOWED IN CASE OF LEAK OR SPILL

Evacuate area.

#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

#### METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

---

### Section 7 - Handling and Storage

---

#### HANDLING

User Exposure: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Suitable: Keep tightly closed.  
Store at -20°C

---

### Section 8 - Exposure Controls / PPE

---

#### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN

(EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

#### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

---

#### Section 9 - Physical/Chemical Properties

---

Appearance	Physical State: Solid Color: White	
Property	Value	At Temperature or Pressure
Molecular Weight	868.1 AMU	
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	N/A	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

---

#### Section 10 - Stability and Reactivity

---

##### STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

##### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides.

##### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

---

#### Section 11 - Toxicological Information

---

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.  
Skin Absorption: May be harmful if absorbed through the skin.  
Eye Contact: May cause eye irritation.  
Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.  
Ingestion: Harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S)

Nerves.

SIGNS AND SYMPTOMS OF EXPOSURE

This material is a cholinesterase inhibitor. Other symptoms include abdominal cramps, diarrhea, tight chest, and miosis. Nausea, dizziness, and headache.

TOXICITY DATA

Oral  
Rat  
590 mg/kg  
LD50

Intraperitoneal  
Rat  
67 MG/KG  
LD50

Intraperitoneal  
Mouse  
32 MG/KG  
LD50

Remarks: Peripheral Nerve and Sensation: Flaccid paralysis without anesthesia (usually neuromuscular blockage). Lungs, Thorax, or Respiration: Dyspnea. Gastrointestinal: Hypermotility, diarrhea.

CHRONIC EXPOSURE - TERATOGEN

Species: Rat  
Dose: 40 MG/KG  
Route of Application: Intraperitoneal  
Exposure Time: (5-12D PREG)  
Result: Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Urogenital system.

Species: Rat  
Dose: 40 MG/KG  
Route of Application: Intraperitoneal  
Exposure Time: (5-12D PREG)  
Result: Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Species: Hamster  
Dose: 200 MG/KG  
Route of Application: Oral  
Exposure Time: (8D PREG)  
Result: Specific Developmental Abnormalities: Central nervous system.

CHRONIC EXPOSURE - MUTAGEN

Species: Human  
Dose: 66600 UG/L  
Cell Type: fibroblast  
Mutation test: Other mutation test systems

Species: Mouse  
Route: Intraperitoneal  
Dose: 330 MG/KG  
Exposure Time: 3D  
Mutation test: Mutation in mammalian somatic cells.

---

#### CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat  
Dose: 80 MG/KG  
Route of Application: Intraperitoneal  
Exposure Time: (5-12D PREG)  
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants).

Species: Mouse  
Dose: 100 MG/KG  
Route of Application: Intraperitoneal  
Exposure Time: (7-11D PREG)  
Result: Effects on Fertility: Other measures of fertility

---

#### Section 12 - Ecological Information

---

No data available.

---

#### Section 13 - Disposal Considerations

---

##### APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

---

#### Section 14 - Transport Information

---

##### DOT

Proper Shipping Name: Alkaloids, solid, n.o.s. [or]  
Alkaloid salts, solid, n.o.s. [poisonous]  
UN#: 1544  
Class: 6.1  
Packing Group: Packing Group III  
Hazard Label: Toxic substances.  
PIH: Not PIH

##### IATA

Proper Shipping Name: Alkaloids, solid, n.o.s.  
IATA UN Number: 1544  
Hazard Class: 6.1  
Packing Group: III

---

#### Section 15 - Regulatory Information

---

##### EU ADDITIONAL CLASSIFICATION

Symbol of Danger: Xn  
Indication of Danger: Harmful.  
R: 22

Risk Statements: Harmful if swallowed.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Harmful.

Risk Statements: Harmful if swallowed.

US Statements: Target organ(s): Nerves.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: No

NDSL: No

---

Section 16 - Other Information

---

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2006 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.