

1-24-05



**SIGMA-ALDRICH**

**Material Safety Data Sheet**

Date Printed: 01/14/2006  
Date Updated: 04/06/2004  
Version 1.30

**Section 1 - Product and Company Information**

**Product Name** Concanavalin A, From Canavalia ensiformis (Jack Bean), type VI  
**Product Number** L7647  
**Brand** Sigma Chemical  
**Company** Sigma-Aldrich  
**Street Address** 3050 Spruce Street  
**City, State, Zip, Country** SAINT LOUIS, MO 63103 US  
**Technical Phone:** 314 771 5765  
**Fax:** 800 325 5052  
**Emergency Phone:** 414 273 3850 Ext. 5996

**Section 2 - Composition/Information on Ingredient**

Substance Name	CAS #	SARA 313	EC no	Annex I Index Number
CONCAVALIN A	11028-71-0	No	234-258-2	

**Formula**  
**Synonyms**

**Section 3 - Hazards Identification**

**Emergency Overview**  
Harmful.  
May cause sensitization by inhalation and skin contact.

**HMIS Rating**  
Health: 3\*      Flammability: 0      Reactivity: 0

**NFPA Rating**  
Health: 3      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 breathing becomes difficult, call a physician.

**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**

**Autoignition Temp:** 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(s) of Personal Precaution(s)**  
Wear respirator, chemical safety goggles, 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**  
Avoid breathing 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**  
Mechanical exhaust required.

**Personal Protective Equipment**  
**Other**  
Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

**General Hygiene Measures**  
Wash thoroughly after handling. Wash contaminated clothing before reuse.

**Section 9 - Physical/Chemical Properties**

**Appearance**  
**Physical State**  
Solid

Molecular Weight: N/A

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  
Partition Coefficient N/A  
Decomposition Temp. N/A  
Flash Point °F N/A  
Flash Point °C N/A  
Explosion Limits N/A

Flammability N/A  
Autolgnition Temp N/A  
Solubility N/A

N/A = not available

## Section 10 - Stability and Reactivity

### Stability

Stable

Stable.

### Materials to Avoid

Oxidizing agents.

### Hazardous Decomposition Products

#### Hazardous Decomposition Products

Carbon monoxide, Carbon dioxide.

### 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

May be harmful if swallowed.

### Sensitization

#### Respiratory

May cause allergic respiratory reaction.

#### Skin

May cause allergic skin reaction.

### Signs and Symptoms of Exposure

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

### RTECS Number:

### Toxicity Data

Intraperitoneal - Mouse: 41500 UG/KG (LD50)

Intravenous - Mouse: 50 MG/KG (LD50)

Remarks: Tumorigenic:Active as anti-cancer agent.

### Chronic Exposure - Teratogen

<u>Species</u>	<u>Dose</u>	<u>Route of Application</u>	<u>Exposure Time</u>
Result:Laboratory experiments have shown teratogenic effects.			
Rat	5 MG/KG	Intravenous	(8D PREG)
Result:Effects on Embryo or Fetus: Fetal death.			
Rat	10 MG/KG	Intravenous	(8D PREG)
Result:Specific Developmental Abnormalities: Central nervous system.			
Rat	10 MG/KG	Intravenous	(8D PREG)
Result:Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Musculoskeletal system. Specific Developmental Abnormalities: Cardiovascular (circulatory) system.			
Mouse	5 MG/KG	Intravenous	(7D PREG)
Result:Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Eye, ear.			
Mouse	2500 UG/KG	Intravenous	(7D PREG)
Result:Specific Developmental Abnormalities: Musculoskeletal system.			
Mouse	5 MG/KG	Intravenous	(7D PREG)
Result:Effects on Embryo or Fetus: Cytological changes (including somatic cell genetic material). Specific Developmental Abnormalities: Central nervous system.			
Mouse	5 MG/KG	Intravenous	(7D PREG)
Result:Effects on Embryo or Fetus: Cytological changes (including somatic cell genetic material).			
Mouse	5 MG/KG	Intravenous	(7D PREG)
Result:Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Skin and skin appendages. Specific Developmental Abnormalities: Musculoskeletal system.			
Rabbit	80 UG/KG	Intrauterine	(13D PREG)
Result:Specific Developmental Abnormalities: Musculoskeletal system.			

### Chronic Exposure - Mutagen

<u>Species</u>	<u>Dose</u>	<u>Route</u>	<u>Mutation test</u>
Result: Laboratory experiments have shown mutagenic effects.			
Mouse	400 UG/KG	Intravenous	Unscheduled DNA synthesis
Mouse	1 MG/L		Other cell types Unscheduled DNA synthesis

### Chronic Exposure - Reproductive Hazard

<u>Species</u>	<u>Dose</u>	<u>Route of Application</u>	<u>Exposure Time</u>
Result: Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.			
Rat	20 MG/KG	Intravenous	(8D PREG)
Result: Effects on Fertility: Post-implantation mortality (e.g., dead and/or resorbed implants per total number of implants). Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).			
Rat	1 MG/KG	Intrauterine	(5D PREG)
Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).			

Mouse	1200 UG/KG	Unreported	(4D PREG)
Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).			
Hamster	800 UG/KG	Parenteral	(3D PREG)
Result: Effects on Fertility: Pre-implantation mortality (e.g., reduction in number of implants per female; total number of implants per corpora lutea).			

## 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: None

Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

### IATA

Non-Hazardous for Air Transport: Non-hazardous for air transport.

## Section 15 - Regulatory Information

### EU Additional Classification

Symbol of Danger: Xn

Indication of Danger

Harmful.

Risk Statements R: 42/43

May cause sensitization by inhalation and skin contact.

Safety Statements S: 24/25 36

Avoid contact with skin and eyes. Wear suitable protective clothing.

### US Classification and Label Text

Indication of Danger

Harmful.

Risk Statements

May cause sensitization by inhalation and skin contact.

Safety Statements

Avoid contact with skin and eyes. Wear suitable protective clothing.

### 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.

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Sigma-Aldrich Corporation  
www.sigma-aldrich.com

### 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.

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