



SIGMA-ALDRICH

## Material Safety Data Sheet

Date Printed: 08/16/2007  
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Version 1.60

### Section 1 - Product and Company Information

**Product Name** Calmodulin from bovine brain, crude  
**Product Number** P0809  
**Brand** Sigma Chemical  
**Company** Sigma-Aldrich  
**Street Address** 3050 Spruce Street  
**City, State, Zip, Country** SAINT LOUIS, MO 63103 US  
**Technical Phone:** 800-325-5832  
**Fax:** 800-325-5052  
**Emergency Phone:** 314-776-6555

### Section 2 - Composition/Information on Ingredient

| <u>Substance Name</u> | <u>CAS #</u> | <u>SARA 313</u> | <u>EC no</u> | <u>Annex I Index Number</u> |
|-----------------------|--------------|-----------------|--------------|-----------------------------|
| CALMODULIN            | 73298-54-1   | No              | 277-370-7    |                             |

**Formula**  
**Synonyms**

### Section 3 - Hazards Identification

#### Emergency Overview

Caution: Avoid contact and inhalation.

#### HMIS Rating

Health: 2 Flammability: 0 Reactivity: 0

#### NFPA Rating

Health: 2 Flammability: 0 Reactivity: 0

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 contact, immediately wash skin with soap and copious amounts of water.

#### 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

**Autolgnition Temp:** N/A

#### Extinguishing Media

##### Suitable

Use extinguishing media appropriate to surrounding fire conditions.

#### Firefighting

##### Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

### Section 6 - Accidental Release Measures

#### 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

Avoid contact with eyes, skin, and clothing. Avoid inhalation. Avoid prolonged or repeated exposure.

#### Storage

##### Suitable

Keep container closed. Store away from heat. Store at -20°C

### Section 8 - Exposure Controls / PPE

#### Engineering Controls

Safety shower and eye bath.

#### 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

Color  
White

Form  
Powder

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Safe

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  
Autoignition Temp N/A  
Solubility N/A

N/A = not available

## Section 10 - Stability and Reactivity

Stability  
Stable  
Stable.  
Conditions to Avoid  
Heat.  
Materials to Avoid  
Strong acids, Strong bases.

Hazardous Decomposition Products  
Hazardous Decomposition Products  
Nature of decomposition products not known.

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  
Sensitization  
Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.

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

RTECS Number: N/A

## 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

US Classification and Label Text  
US Statements  
Caution: Avoid contact and inhalation.

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  
NDL: 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 2007 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.