

## Material Safety Data Sheet

Version 4.0  
Revision Date 03/13/2010  
Print Date 01/16/2012

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 1,5-Bis(4-allyldimethylammoniumphenyl)pentan-3-one dibromide  
Product Number : A9013  
Brand : Sigma  
Company : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA  
Telephone : +1 800-325-5832  
Fax : +1 800-325-5052  
Emergency Phone # : (314) 776-6555

## 2. HAZARDS IDENTIFICATION

## Emergency Overview

## OSHA Hazards

Target Organ Effect, Highly toxic by inhalation, Highly toxic by ingestion, Highly toxic by skin absorption

## Target Organs

Central nervous system, Heart, Blood, Eyes

## GHS Label elements, including precautionary statements

Pictogram



Signal word : Danger

Hazard statement(s)

H300 + H310 : Fatal if swallowed or in contact with skin.  
H330 : Fatal if inhaled.

Precautionary statement(s)

P260 : Do not breathe dust/fume/gas/mist/vapours/spray.  
P264 : Wash hands thoroughly after handling.  
P280 : Wear protective gloves/protective clothing.  
P284 : Wear respiratory protection.  
P302 + P350 : IF ON SKIN: Gently wash with plenty of soap and water.  
P310 : Immediately call a POISON CENTER or doctor/physician.

## HMIS Classification

Health hazard: 4  
Chronic Health Hazard: \*  
Flammability: 0  
Physical hazards: 0

## NFPA Rating

Health hazard: 4  
Fire: 0  
Reactivity Hazard: 0

## Potential Health Effects

Inhalation : May be fatal if inhaled. May cause respiratory tract irritation.  
Skin : May cause skin irritation. May be fatal if absorbed through skin.

Eyes  
Ingestion

May cause eye irritation.  
May be fatal if swallowed.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : BW 284c51  
Formula : C<sub>27</sub>H<sub>38</sub>Br<sub>2</sub>N<sub>2</sub>O  
Molecular Weight : 566.41 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
1,5-Bis(4-allyldimethylammoniumphenyl)pentan-3-one dibromide			
402-40-4	-	-	-

## 4. FIRST AID MEASURES

## General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

## If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

## In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

## In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

## If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

## 5. FIRE-FIGHTING MEASURES

## Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

## Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

## 6. ACCIDENTAL RELEASE MEASURES

## Personal precautions

Wear respiratory protection. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

## Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

## 7. HANDLING AND STORAGE

## Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

## Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

### Personal protective equipment

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Hand protection

Handle with gloves.

#### Eye protection

Face shield and safety glasses

#### Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

#### Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form solid

### Safety data

pH	no data available
Melting point	no data available
Boiling point	no data available
Flash point	no data available
Ignition temperature	no data available
Lower explosion limit	no data available
Upper explosion limit	no data available
Water solubility	no data available

## 10. STABILITY AND REACTIVITY

### Chemical stability

Stable under recommended storage conditions.

### Conditions to avoid

no data available

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen bromide gas

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/eye irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### Reproductive toxicity

no data available

### Specific target organ toxicity - single exposure (GHS)

no data available

### Specific target organ toxicity - repeated exposure (GHS)

no data available

### Aspiration hazard

no data available

### Potential health effects

<b>Inhalation</b>	May be fatal if inhaled. May cause respiratory tract irritation.
<b>Ingestion</b>	May be fatal if swallowed.
<b>Skin</b>	May cause skin irritation. May be fatal if absorbed through skin.
<b>Eyes</b>	May cause eye irritation.

### Signs and Symptoms of Exposure

Cholinesterase inhibitor

Cholinesterase inhibitors can cause heavy salivation and secretion in the lungs, lachrymation, blurred vision, involuntary defecation, diarrhea, tremor, ataxia, sweating, hypothermia, lowered heart rate, and/or a fall in blood pressure as a result of their action at cholinergic nerve sites., Headache, Nausea, Vomiting, Dizziness, Drowsiness, Confusion., Weakness, Muscle cramps/spasms., Change in pupil size., Fever, Seizures., Incoordination.

### Additional Information

## 12. ECOLOGICAL INFORMATION

### Toxicity

no data available

### Persistence and degradability

no data available

### Bioaccumulative potential

no data available

### Mobility in soil

no data available

### PBT and vPvB assessment

no data available

### Other adverse effects

no data available

### 13. DISPOSAL CONSIDERATIONS

#### Product

Observe all federal, state, and local environmental regulations. 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.

#### Contaminated packaging

Dispose of as unused product.

### 14. TRANSPORT INFORMATION

#### DOT (US)

UN-Number: 2811 Class: 6.1 Packing group: I  
Proper shipping name: Toxic solids, organic, n.o.s. (1,5-Bis(4-allyldimethylammoniumphenyl)pentan-3-one dibromide)  
Marine pollutant: No  
Poison Inhalation Hazard: No

#### IMDG

UN-Number: 2811 Class: 6.1 Packing group: I EMS-No: F-A, S-A  
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (1,5-Bis(4-allyldimethylammoniumphenyl)pentan-3-one dibromide)  
Marine pollutant: No

#### IATA

UN-Number: 2811 Class: 6.1 Packing group: I  
Proper shipping name: Toxic solid, organic, n.o.s. (1,5-Bis(4-allyldimethylammoniumphenyl)pentan-3-one dibromide)

### 15. REGULATORY INFORMATION

#### OSHA Hazards

Target Organ Effect, Highly toxic by inhalation, Highly toxic by ingestion, Highly toxic by skin absorption

#### DSL Status

This product contains the following components that are not on the Canadian DSL nor NDSL lists.

	CAS-No.
1,5-Bis(4-allyldimethylammoniumphenyl)pentan-3-one dibromide	402-40-4

#### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

#### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

#### Pennsylvania Right To Know Components

	CAS-No.	Revision Date
1,5-Bis(4-allyldimethylammoniumphenyl)pentan-3-one dibromide	402-40-4	

#### New Jersey Right To Know Components

	CAS-No.	Revision Date
1,5-Bis(4-allyldimethylammoniumphenyl)pentan-3-one dibromide	402-40-4	

#### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

### 16. OTHER INFORMATION

Sigma - A9013  
Delivery 0840704148-000010 Purchase Order 8020390

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### Further information

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Delivery 0840704148-000010 Purchase Order 8020390

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