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Safety & Environmental  
Health

SIGMA-ALDRICH

Material Safety Data Sheet

Version 3.0  
Revision Date 04/29/2009  
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1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Adenosine 5'-triphosphate disodium salt  
Product Number : A7699  
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. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : ATPdisodium salt  
Formula : C<sub>10</sub>H<sub>14</sub>N<sub>5</sub>Na<sub>2</sub>O<sub>13</sub>P<sub>3</sub> · xH<sub>2</sub>O

CAS-No.	EC-No.	Index-No.	Concentration
<b>Ethanol</b>			
64-17-5	200-578-6	603-002-00-5	<= 4 %
<b>Methanol</b>			
67-56-1	200-659-6	603-001-00-X	<= 1 %
<b>Acetone</b>			
67-64-1	200-662-2	606-001-00-8	<= 1 %
<b>Adenosine 5'-(tetrahydrogen triphosphate), disodium salt</b>			
987-65-5	213-579-1	-	>= 99 %

3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant

Target Organs

Nerves., Liver, Heart, Eyes, Kidney, Central nervous system

HMIS Classification

Health Hazard: 3  
Chronic Health Hazard: +  
Flammability: 0

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Physical hazards: 1  
NFPA Rating  
Health Hazard: 3  
Fire: 0  
Reactivity Hazard: 0

Potential Health Effects

Inhalation Toxic if inhaled. Causes respiratory tract irritation.  
Skin Toxic if absorbed through skin. Causes skin irritation.  
Eyes Causes eye irritation.  
Ingestion Toxic if swallowed.

4. FIRST AID MEASURES

General advice

Move out of dangerous area.

If inhaled

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

In case of skin contact

Wash off with soap and plenty of water.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

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

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point no data available

Ignition temperature no data available

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

Avoid dust formation.

Environmental precautions

Do not let product enter drains.

Methods for cleaning up

Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage

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

Keep in a dry place.

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**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Components with workplace control parameters**

Components	CAS-No.	Value	Control parameters	Update	Basis
Ethanol	64-17-5	TWA	1,000 ppm	2008-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Adopted values or notations enclosed are those for which changes are proposed in the NIC 2008 Revision or addition to the notice of intended changes See Notice of Intended Changes (NIC) Not classifiable as a human carcinogen; Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.				
		TWA	1,000 ppm 1,900 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		TWA	1,000 ppm 1,900 mg/m3	1997-08-04	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value in mg/m3 is approximate.					
Methanol	67-56-1	TWA	200 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Headache Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption				
		STEL	250 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
Headache Eye damage Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Danger of cutaneous absorption					
		TWA	200 ppm 260 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
Skin notation					
		STEL	250 ppm 325 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
Skin notation					
		TWA	200 ppm 260 mg/m3	1997-08-04	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air

					Contaminants
The value in mg/m3 is approximate.					
Acetone	67-64-1	TWA	500 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
Remarks	Eye & Upper Respiratory Tract irritation Central Nervous System impairment Hematologic effects Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen; Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.				
		STEL	750 ppm	2007-01-01	USA. ACGIH Threshold Limit Values (TLV)
Eye & Upper Respiratory Tract irritation Central Nervous System impairment Hematologic effects Substances for which there is a Biological Exposure Index or Indices (see BEI® section) Not classifiable as a human carcinogen; Agents which cause concern that they could be carcinogenic for humans but which cannot be assessed conclusively because of a lack of data. In vitro or animal studies do not provide indications of carcinogenicity which are sufficient to classify the agent into one of the other categories.					
		TWA	750 ppm 1,800 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
		STEL	1,000 ppm 2,400 mg/m3	1989-01-19	USA. OSHA - TABLE Z-1 Limits for Air Contaminants - 1910.1000
The acetone STEL does not apply to the cellulose acetate fiber industry. It is in effect for all other sectors.					
		TWA	1,000 ppm 2,400 mg/m3	1997-08-04	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
The value in mg/m3 is approximate.					

**Personal protective equipment**

**Respiratory protection**

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. 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**

Safety glasses

**Hygiene measures**

General industrial hygiene practice.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Appearance

Form	powder
Colour	white

### 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

### Storage stability

Stable under recommended storage conditions.

### Materials to avoid

Strong oxidizing agents

### Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity

no data available

LD50 Oral - rat - > 2,000 mg/kg

### Irritation and corrosion

no data available

no data available

### Sensitisation

no data available

no data available

### Chronic exposure

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.

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.

## Signs and Symptoms of Exposure

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

## Potential Health Effects

<b>Inhalation</b>	Toxic if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	Toxic if absorbed through skin. Causes skin irritation.
<b>Eyes</b>	Causes eye irritation.
<b>Ingestion</b>	Toxic if swallowed.
<b>Target Organs</b>	Nerves., Liver, Heart, Eyes, Kidney, Central nervous system.

## 12. ECOLOGICAL INFORMATION

### Elimination information (persistence and degradability)

no data available

### Ecotoxicity effects

no data available

no data available

### Further information on ecology

no data available

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)

Not dangerous goods

### IMDG

Not dangerous goods

### IATA

Not dangerous goods

## 15. REGULATORY INFORMATION

### OSHA Hazards

Target Organ Effect, Toxic by inhalation., Toxic by ingestion, Toxic by skin absorption, Irritant

### DSL Status

All components of this product are on the Canadian DSL list.

### 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**

	CAS-No.	Revision Date
Methanol	67-56-1	2007-07-01

**SARA 311/312 Hazards**

Acute Health Hazard, Chronic Health Hazard

**Massachusetts Right To Know Components**

	CAS-No.	Revision Date
Ethanol	64-17-5	2007-03-01

**Pennsylvania Right To Know Components**

	CAS-No.	Revision Date
Methanol	67-56-1	2007-07-01
Acetone	67-64-1	2007-03-01
Ethanol	64-17-5	2007-03-01
Adenosine 5'-(tetrahydrogen triphosphate), disodium salt	987-65-5	

**New Jersey Right To Know Components**

	CAS-No.	Revision Date
Methanol	67-56-1	2007-07-01
Acetone	67-64-1	2007-03-01
Ethanol	64-17-5	2007-03-01
Adenosine 5'-(tetrahydrogen triphosphate), disodium salt	987-65-5	

**California Prop. 65 Components**

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

**16. OTHER INFORMATION****Further information**

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