

## Material Safety Data Sheet

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Version 1.3

According to 91/155/EEC

Classified as Hazardous according to the criteria of EU Annex 1 and NOHSC.

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1 - Product and Company Information

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Product Name ADENINE FREE BASE SIGMA GRADE  
Product Number A8626

Company Sigma-Aldrich Pty, Ltd  
Unit 2, 14 Anella Avenue  
Castle Hill NSW 1765  
Australia

Technical Phone # +61 2 9841 0555  
Fax +61 2 9841 0500  
Emergency Phone # +61 2 9841 0566

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2 - Composition/Information on Ingredients

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Product Name	CAS #	EC no	Annex I Index Number
ADENINE FREE BASE	73-24-5	200-796-1	None

Formula C<sub>5</sub>H<sub>5</sub>N<sub>5</sub>  
Molecular Weight 135.13 AMU  
Synonyms ADE \* Adeninimine \* 6-Aminopurine \*  
6-Amino-1H-purine \* 6-Amino-3H-purine \*  
6-Amino-9H-purine \* 1,6-Dihydro-6-iminopurine \*  
3,6-Dihydro-6-iminopurine \* Leuco-4 \*  
1H-Purin-6-amine \* Purine, 6-amino- \* 1H-Purine,  
6-amino \* 9H-Purine, 1,6-dihydro-6-imino- \* USAF  
CB-18 \* Vitamin B4

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3 - Hazards Identification

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SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT  
Harmful if swallowed.

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4 - First Aid Measures

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## AFTER INHALATION

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

## AFTER SKIN CONTACT

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

## AFTER EYE CONTACT

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.

#### AFTER INGESTION

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

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### 5 - Fire Fighting Measures

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#### EXTINGUISHING MEDIA

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

#### SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

#### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

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

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### 6 - Accidental Release Measures

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PERSONAL PRECAUTION PROCEDURES 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.

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### 7 - Handling and Storage

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#### HANDLING

Directions for Safe Handling: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Conditions of Storage: Keep tightly closed.

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### 8 - Exposure Controls / Personal Protection

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#### ENGINEERING CONTROLS

Mechanical exhaust required. Safety shower and eye bath.

#### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.  
Hand Protection: Compatible chemical-resistant gloves.  
Eye Protection: Chemical safety goggles.

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### 9 - Physical and Chemical Properties

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#### Appearance

Physical State: Solid  
Color: Faintly yellow  
Form: Powder

#### Property

#### Value

At Temperature or Pressure

pH	N/A
BP/BP Range	N/A
MP/MP Range	360 °C
Flash Point	N/A
Flammability	N/A
Autoignition Temp	N/A
Oxidizing Properties	N/A
Explosive Properties	N/A
Explosion Limits	N/A
Vapor Pressure	N/A
SG/Density	N/A
Partition Coefficient	N/A
Viscosity	N/A
Vapor Density	N/A
Saturated Vapor Conc.	N/A
Evaporation Rate	N/A
Bulk Density	N/A
Decomposition Temp.	N/A
Solvent Content	N/A
Water Content	N/A
Surface Tension	N/A
Conductivity	N/A
Miscellaneous Data	N/A
Solubility	N/A

## 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

## 11 - Toxicological Information

RTECS NUMBER: AU6125000

### ACUTE TOXICITY

LD50

Oral

Rat

227 mg/kg

Remarks: Behavioral:Convulsions or effect on seizure threshold. Behavioral:Muscle weakness. Lungs, Thorax, or Respiration:Other changes.

LD50

Intraperitoneal

Rat

198 MG/KG

Remarks: Behavioral:Altered sleep time (including change in righting reflex). Behavioral:Muscle weakness. Lungs, Thorax, or Respiration:Cyanosis.

LD50

Oral  
Mouse  
783 mg/kg

LD50  
Intraperitoneal  
Mouse  
100 MG/KG

LD50  
Intravenous  
Mouse  
>30 MG/KG

#### SIGNS AND SYMPTOMS OF EXPOSURE

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

#### 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.

#### CHRONIC EXPOSURE - MUTAGEN

Human  
2500 UMOL/L  
Cell Type: lymphocyte  
SLN

Mouse  
250 MG/KG  
Oral  
Cytogenetic analysis

Mouse  
451 MG/KG  
Intraperitoneal  
Cytogenetic analysis

Mouse  
500 MG/KG  
Intraperitoneal  
5D  
sperm

#### CHRONIC EXPOSURE - TERATOGEN

Species: Rat  
Dose: 300 MG/KG  
Route of Application: Intraperitoneal  
Exposure Time: (10D PREG)  
Result: Specific Developmental Abnormalities: Eye, ear.

Species: Rat  
Dose: 300 MG/KG  
Route of Application: Intraperitoneal  
Exposure Time: (12D PREG)  
Result: Specific Developmental Abnormalities: Urogenital system.

Species: Mouse  
Dose: 200 MG/KG  
Route of Application: Intraperitoneal  
Exposure Time: (10D PREG)  
Result: Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Musculoskeletal system.

Species: Mouse  
Dose: 200 MG/KG  
Route of Application: Intraperitoneal  
Exposure Time: (9D PREG)  
Result: Specific Developmental Abnormalities: Gastrointestinal system.

#### CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Rat  
Dose: 5040 MG/KG  
Route of Application: Oral  
Exposure Time: (4W MALE)  
Result: Paternal Effects: Testes, epididymis, sperm duct.

Species: Mouse  
Dose: 200 MG/KG  
Route of Application: Intraperitoneal  
Exposure Time: (10D 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). Effects on Embryo or Fetus: Fetal death.

Species: Mouse  
Dose: 500 MG/KG  
Route of Application: Intraperitoneal  
Exposure Time: (5D MALE)  
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).

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#### 12 - Ecological Information

No data available.

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#### 13 - Disposal Considerations

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##### SUBSTANCE DISPOSAL

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.

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#### 14 - Transport Information

##### RID/ADR

Non-hazardous for road transport.

##### IMDG

Non-hazardous for sea transport.

IATA

Non-hazardous for air transport.

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## 15 - Regulatory Information

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### CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

INDICATION OF DANGER: Xn

Harmful.

R-PHRASES: 22

Harmful if swallowed.

S-PHRASES: 26 36

In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

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## 16 - Other Information

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### 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 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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