

## Material Safety Data Sheet

Date Printed: 12/MAY/2005

Date Updated: 22/MAR/2005

Version 1.6

According to 91/155/EEC

## 1 - Product and Company Information

Product Name PYRIDOXINE HYDROCHLORIDE  
 Product Number P9755

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

## 2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
PYRIDOXINE HYDROCHLORIDE	58-56-0	200-386-2	None

Formula C<sub>8</sub>H<sub>11</sub>NO<sub>3</sub> · HCl

Molecular Weight 205.64 AMU

Synonyms Adermine hydrochloride \* Becilan \* Benadon \*  
 Campoviton 6 \* Hexabetalin \* Hexabione  
 hydrochloride \* Hexavibex \* Hexermin \* Hexobion  
 \* 3-Hydroxy-4,5-dimethylol-alpha-picoline  
 hydrochloride \*  
 5-Hydroxy-6-methyl-3,4-pyridinedicarbinol  
 hydrochloride \*  
 5-Hydroxy-6-methyl-3,4-pyridinedimethanol  
 hydrochloride \*  
 2-Methyl-3-hydroxy-4,5-bis(hydroxymethyl)pyridine  
 hydrochloride \* 3,4-Pyridinedimethanol,  
 5-hydroxy-6-methyl-, hydrochloride \* Pyridipca \*  
 Pyridoxine, hydrochloride \* Pyridoxinium  
 chloride \* Pyridoxinum hydrochloricum  
 (Hungarian) \* Vitamin B6 hydrochloride

## 3 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT

Not hazardous according to Directive 67/548/EC.

## 4 - First Aid Measures

## AFTER INHALATION

If inhaled, remove to fresh air. If breathing becomes difficult,  
 call a physician.

## AFTER SKIN CONTACT

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

#### 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.

---

### 5 - Fire Fighting Measures

---

#### 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.

---

### 6 - Accidental Release Measures

---

#### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation of dust.

#### 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.

---

### 7 - Handling and Storage

---

#### HANDLING

Directions for Safe Handling: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

#### STORAGE

Conditions of Storage: Keep tightly closed.

---

### 8 - Exposure Controls / Personal Protection

---

#### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

#### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Wear dust mask.

Hand Protection: Protective gloves.

Eye Protection: Chemical safety goggles.

---

### 9 - Physical and Chemical Properties

---

#### Appearance

Color: White  
Form: Powder

Property	Value	At Temperature or Pressure
pH	2 - 3.5	
BP/BP Range	N/A	
MP/MP Range	214 °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	Solubility in Water:0.1 g/ml H2O, 20°C complete, colorless	

---

## 10 - Stability and Reactivity

---

### STABILITY

Stable: Stable.

Conditions of Instability: May decompose on exposure to light.

Materials to Avoid: Strong oxidizing agents.

### HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide, Nitrogen oxides, Hydrogen chloride gas.

### HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

---

## 11 - Toxicological Information

---

RTECS NUMBER: UV1350000

### ACUTE TOXICITY

LD50 LD50

Oral Oral

Rat Rat

4000 mg/kg 4000 mg/kg

Remarks: Behavioral:Convulsions or effect on seizure threshold.

Behavioral:Excitement. Behavioral:Convulsions or effect on seizure threshold. Behavioral:Excitement.

LD50 LD50

Subcutaneous Subcutaneous

Rat Rat

3 GM/KG 3 GM/KG

Remarks: Behavioral:Convulsions or effect on seizure threshold.

Behavioral:Excitement. Behavioral:Convulsions or effect on

seizure threshold. Behavioral:Excitement.

LD50 LD50

Intravenous Intravenous

Rat Rat

530 MG/KG 530 MG/KG

Remarks: Behavioral:Convulsions or effect on seizure threshold.  
Behavioral:Excitement. Behavioral:Convulsions or effect on  
seizure threshold. Behavioral:Excitement.

LD50 LD50

Oral Oral

Mouse Mouse

5500 mg/kg 5500 mg/kg

Remarks: Behavioral:Convulsions or effect on seizure threshold.  
Lungs, Thorax, or Respiration:Dyspnea. Behavioral:Convulsions or  
effect on seizure threshold. Lungs, Thorax, or  
Respiration:Dyspnea.

LD50 LD50

Subcutaneous Subcutaneous

Mouse Mouse

2450 MG/KG 2450 MG/KG

Remarks: Behavioral:Convulsions or effect on seizure threshold.  
Lungs, Thorax, or Respiration:Dyspnea. Behavioral:Convulsions or  
effect on seizure threshold. Lungs, Thorax, or  
Respiration:Dyspnea.

LD50 LD50

Intravenous Intravenous

Mouse Mouse

660 MG/KG 660 MG/KG

Remarks: Behavioral:Convulsions or effect on seizure threshold.  
Lungs, Thorax, or Respiration:Dyspnea. Behavioral:Convulsions or  
effect on seizure threshold. Lungs, Thorax, or  
Respiration:Dyspnea.

LD50 LD50

Oral Oral

Dog Dog

> 500 mg/kg > 500 mg/kg

LD50 LD50

Oral Oral

Cat Cat

1000 mg/kg 1000 mg/kg

Remarks: Behavioral:Convulsions or effect on seizure threshold.  
Gastrointestinal:Changes in structure or function of salivary  
glands. Gastrointestinal:Hypermotility, diarrhea.  
Behavioral:Convulsions or effect on seizure threshold.  
Gastrointestinal:Changes in structure or function of salivary  
glands. Gastrointestinal:Hypermotility, diarrhea.

LD50 LD50

Intravenous Intravenous

Cat Cat

560 MG/KG 560 MG/KG

Remarks: Behavioral:Convulsions or effect on seizure threshold.  
Gastrointestinal:Changes in structure or function of salivary  
glands. Gastrointestinal:Hypermotility, diarrhea.  
Behavioral:Convulsions or effect on seizure threshold.  
Gastrointestinal:Changes in structure or function of salivary

glands. Gastrointestinal:Hypermotility, diarrhea.

LD50 LD50

Intramuscular Intramuscular

Cat Cat

500 MG/KG 500 MG/KG

Remarks: Behavioral:Convulsions or effect on seizure threshold.

Gastrointestinal:Changes in structure or function of salivary glands. Gastrointestinal:Hypermotility, diarrhea.

Behavioral:Convulsions or effect on seizure threshold.

Gastrointestinal:Changes in structure or function of salivary glands. Gastrointestinal:Hypermotility, diarrhea.

LD50 LD50

Intravenous Intravenous

Rabbit Rabbit

464 MG/KG 464 MG/KG

Remarks: Peripheral Nerve and Sensation:Spastic paralysis with or without sensory change. Behavioral:Convulsions or effect on seizure threshold.

Peripheral Nerve and Sensation:Spastic paralysis with or without sensory change. Behavioral:Convulsions or effect on seizure threshold.

LD50 LD50

Intravenous Intravenous

Pigeon Pigeon

145 MG/KG 145 MG/KG

Remarks: Behavioral:Altered sleep time (including change in righting reflex). Behavioral:Convulsions or effect on seizure threshold. Behavioral:Altered sleep time (including change in righting reflex). Behavioral:Convulsions or effect on seizure threshold.

#### SIGNS AND SYMPTOMS OF EXPOSURE

Overexposure by ingestion may result in nervousness, tremors, and insomnia. 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: May be harmful if swallowed.

#### CHRONIC EXPOSURE - MUTAGEN

Human Human

2 MG/L 2 MG/L

Cell Type: lymphocyte lymphocyte

Sister chromatid exchange Sister chromatid exchange

#### CHRONIC EXPOSURE - TERATOGEN

Species: Rat Rat

Dose: 8040 UG/KG 8040 UG/KG

Route of Application: Oral Oral

Exposure Time: (14W PRE-12D POST) (14W PRE-12D POST)

Result: Specific Developmental Abnormalities: Central nervous system. Effects on Newborn: Biochemical and metabolic. Specific

Developmental Abnormalities: Central nervous system. Effects on Newborn: Biochemical and metabolic.

#### CHRONIC EXPOSURE - REPRODUCTIVE HAZARD

Species: Woman Woman  
Dose: 2 MG/KG 2 MG/KG  
Route of Application: Oral Oral  
Exposure Time: (38W PREG) (38W PREG)  
Result: Maternal Effects: Postpartum. Maternal Effects: Postpartum.

Species: Woman Woman  
Dose: 2 MG/KG 2 MG/KG  
Route of Application: Intramuscular Intramuscular  
Exposure Time: (38W PREG) (38W PREG)  
Result: Maternal Effects: Postpartum. Maternal Effects: Postpartum.

Species: Rat Rat  
Dose: 4 GM/KG 4 GM/KG  
Route of Application: Oral Oral  
Exposure Time: (6-15D PREG) (6-15D PREG)  
Result: Effects on Newborn: Growth statistics (e.g., reduced weight gain). Effects on Newborn: Growth statistics (e.g., reduced weight gain).

Species: Rat Rat  
Dose: 15 GM/KG 15 GM/KG  
Route of Application: Intraperitoneal Intraperitoneal  
Exposure Time: (2W MALE) (2W MALE)  
Result: Paternal Effects: Testes, epididymis, sperm duct. Paternal Effects: Testes, epididymis, sperm duct.

Species: Rat Rat  
Dose: 7500 MG/KG 7500 MG/KG  
Route of Application: Intraperitoneal Intraperitoneal  
Exposure Time: (6W MALE) (6W MALE)  
Result: Paternal Effects: Prostate, seminal vessicle, Cowper's gland, accessory glands. Paternal Effects: Prostate, seminal vessicle, Cowper's gland, accessory glands.

Species: Rat Rat  
Dose: 15 GM/KG 15 GM/KG  
Route of Application: Intraperitoneal Intraperitoneal  
Exposure Time: (6W MALE) (6W MALE)  
Result: Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count). Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).

---

#### 12 - Ecological Information

---

No data available.

---

#### 13 - Disposal Considerations

---

#### 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.

---

#### 14 - Transport Information

---

##### RID/ADR

Non-hazardous for road transport.

##### IMDG

Non-hazardous for sea transport.

##### IATA

Non-hazardous for air transport.

---

#### 15 - Regulatory Information

---

Not hazardous according to Directive 67/548/EC.

---

#### 16 - Other Information

---

##### 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 2005 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

##### DISCLAIMER

For R&D use only. Not for drug, household or other uses.