# Material Safety Data Sheet

Version 3.0
Revision Date 08/21/2009
Print Date 04/07/2010

## 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 4-Aminophenol

Product Number : A71328
Brand : Aldrich

Company : Sigma-Aldrich Canada, Ltd
2149 Winston Park Drive
OAKVILLE ON L6H 6J8
CANADA
Telephone : +19058299500
Fax : +19058299292
Emergency Phone # : 800-424-9300

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : 4-Hydroxyaniline

Formula : $C_6H_7NO$
Molecular Weight : 109.13 g/mol

| CAS-No. | EC-No. | Index-No. | Concentration |
|---|---|---|---|
| **4-Aminophenol** | | | |
| 123-30-8 | 204-616-2 | 612-128-00-X | - |

## 3. HAZARDS IDENTIFICATION

### Emergency Overview

#### Target Organs

Blood, Kidney, Central nervous system

### WHMIS Classification

| | | |
|---|---|---|
| D1A | Very Toxic Material Causing Immediate and | Highly toxic by inhalation |
| D1B | Serious Toxic Effects | Toxic by ingestion |

### HMIS Classification

**Health Hazard**: 4
**Chronic Health Hazard**: *
**Flammability**: 1
**Physical hazards**: 0

### Potential Health Effects

**Inhalation** May be fatal if inhaled. May cause respiratory tract irritation.
**Skin** May be harmful if absorbed through skin. May cause skin irritation.
**Eyes** May cause eye irritation.

**Ingestion** Toxic if swallowed.

## 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. 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

**Flammable properties**

| | |
|---|---|
| Flash point | 195 °C (383 °F) - closed cup |
| 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**
Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation.

**Environmental precautions**
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

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

## 7. HANDLING AND STORAGE

**Handling**
Avoid formation of dust and aerosols.
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.

## 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 dust mask type N95 (US) or type P1 (EN 143) 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**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**

| | |
|---|---|
| Form | powder |
| Colour | light brown |

**Safety data**

| | |
|---|---|
| pH | no data available |
| Melting point | 185 - 189 °C (365 - 372 °F) - lit. |
| Boiling point | no data available |
| Flash point | 195 °C (383 °F) - closed cup |
| Ignition temperature | no data available |
| Lower explosion limit | no data available |
| Upper explosion limit | no data available |
| Water solubility | slightly soluble |
| Partition coefficient: n-octanol/water | log Pow: 0.04 |

## 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, nitrogen oxides (NOx)

**Thermal decomposition**
284 °C (543 °F)

## 11. TOXICOLOGICAL INFORMATION

**Acute toxicity**

LD50 Oral - rat - 375 mg/kg
Remarks: Behavioral:Muscle weakness. Cyanosis Nutritional and Gross Metabolic:Changes in:Body temperature decrease.

LC50 Inhalation - rat - 1 h - > 5 mg/m3

LD50 Dermal - rabbit - > 10,000 mg/kg

**Irritation and corrosion**

Skin - rabbit - Mild skin irritation - 24 h

Eyes - rabbit - Mild eye irritation

**Sensitisation**

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.

Overexposure may cause reproductive disorder(s) based on tests with laboratory animals.

**Signs and Symptoms of Exposure**

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer., To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Potential Health Effects**

| | |
|---|---|
| **Inhalation** | May be fatal if inhaled. May cause respiratory tract irritation. |
| **Skin** | May be harmful if absorbed through skin. May cause skin irritation. |
| **Eyes** | May cause eye irritation. |
| **Ingestion** | Toxic if swallowed. |
| **Target Organs** | Blood, Kidney, Central nervous system, |

**Additional Information**
RTECS: SJ5075000

## 12. ECOLOGICAL INFORMATION

**Elimination information (persistence and degradability)**

no data available

**Ecotoxicity effects**

| | |
|---|---|
| Toxicity to fish | LC50 - Oncorhynchus mykiss (rainbow trout) - 1.2 mg/l - 96 h |
| Toxicity to daphnia and other aquatic | EC50 - Daphnia magna (Water flea) - 0.2 mg/l - 48 h |

invertebrates.

**Further information on ecology**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

## 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: 2512 Class: 6.1 Packing group: III
Proper shipping name: Aminophenols (o-; m-; p-)
Marine pollutant: No
Poison Inhalation Hazard: No

**IMDG**
UN-Number: 2512 Class: 6.1 Packing group: III EMS-No: F-A, S-A
Proper shipping name: AMINOPHENOLS
Marine pollutant: No

**IATA**
UN-Number: 2512 Class: 6.1 Packing group: III
Proper shipping name: Aminophenols

## 15. REGULATORY INFORMATION

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

**WHMIS Classification**

| | | |
|---|---|---|
| D1A | Very Toxic Material Causing Immediate and | Highly toxic by inhalation |
| D1B | Serious Toxic Effects | Toxic by ingestion |

## 16. OTHER INFORMATION

**Further information**

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 Co., 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.