

## Chemical Safety Data Sheet MSDS / SDS

## 4-Aminophenol

Revision Date:2024-12-21 Revision Number:1

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

## Product identifier

Product name : 4-Aminophenol  
CBnumber : CB5852965  
CAS : 123-30-8  
EINECS Number : 204-616-2  
Synonyms : 4-aminophenol, PARA AMINO PHENOL

## Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 400-158-6606

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Warning

## Precautionary statements

P501 Dispose of contents/container to....  
P405 Store locked up.  
P391 Collect spillage. Hazardous to the aquatic environment  
P307+P311 IF exposed: call a POISON CENTER or doctor/physician.  
P302+P352 IF ON SKIN: wash with plenty of soap and water.  
P284 Wear respiratory protection.  
P281 Use personal protective equipment as required.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P273 Avoid release to the environment.  
P272 Contaminated work clothing should not be allowed out of the workplace.

P271 Use only outdoors or in a well-ventilated area.  
P270 Do not eat, drink or smoke when using this product.  
P264 Wash skin thoroughly after handling.  
P264 Wash hands thoroughly after handling.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P202 Do not handle until all safety precautions have been read and understood.  
P201 Obtain special instructions before use.

#### **Hazard statements**

H410 Very toxic to aquatic life with long lasting effects  
H400 Very toxic to aquatic life  
H372 Causes damage to organs through prolonged or repeated exposure  
H370 Causes damage to organs  
H361 Suspected of damaging fertility or the unborn child  
H341 Suspected of causing genetic defects  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled  
H332 Harmful if inhaled  
H320 Causes eye irritation  
H317 May cause an allergic skin reaction  
H302 Harmful if swallowed

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## SECTION 3: Composition/information on ingredients

### **Substance**

|              |                                    |
|--------------|------------------------------------|
| Product name | : 4-Aminophenol                    |
| Synonyms     | : 4-aminophenol, PARA AMINO PHENOL |
| CAS          | : 123-30-8                         |
| EC number    | : 204-616-2                        |
| MF           | : C6H7NO                           |
| MW           | : 109.13                           |

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## SECTION 4: First aid measures

### **Description of first aid measures**

#### **General advice**

Show this material safety data sheet to the doctor in attendance.

#### **If inhaled**

If breathing stops: immediately apply artificial respiration, if necessary also oxygen. After inhalation: fresh air. Immediately call in physician. If breathing stops: immediately apply artificial respiration, if necessary also oxygen.

#### **In case of skin contact**

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Consult a physician.

#### **In case of eye contact**

After eye contact: rinse out with plenty of water. Call in ophthalmologist. Remove contact lenses.

#### If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

#### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### Indication of any immediate medical attention and special treatment needed

No data available

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## SECTION 5: Firefighting measures

### Extinguishing media

#### Suitable extinguishing media

Water Foam Carbon dioxide (CO<sub>2</sub>) Dry powder

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

### Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NO<sub>x</sub>) Combustible.

Risk of dust explosion.

Development of hazardous combustion gases or vapours possible in the event of fire.

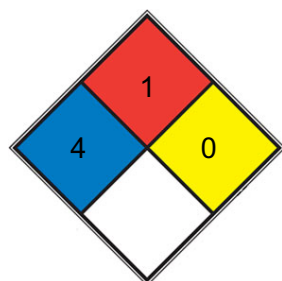
### Advice for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

### Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

### NFPA 704



**HEALTH** 4 Very short exposure could cause death or major residual injury (e.g. hydrogen cyanide, phosgene, methyl isocyanate, [hydrofluoric acid](#))

**FIRE** 1 Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. [mineral oil](#), ammonia)

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REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N2](#))

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SPEC.

HAZ.

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### Environmental precautions

Do not let product enter drains.

### Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### Reference to other sections

For disposal see section 13.

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## SECTION 7: Handling and storage

### Precautions for safe handling

#### Advice on safe handling

Work under hood. Do not inhale substance/mixture.

#### Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

For precautions see section 2.2.

#### Conditions for safe storage, including any incompatibilities

#### Storage conditions

Tightly closed. Dry. Keep in a well-ventilated place. Keep locked up or in an area accessible only to qualified or authorized persons.

Handle and store under inert gas. Air, light, and moisture sensitive.

#### Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## SECTION 8: Exposure controls/personal protection

### control parameter

#### Hazard composition and occupational exposure limits

Does not contain substances with occupational exposure limits.

### Exposure controls

#### Personal protective equipment

##### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

##### Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested:KCL 741 Dermatril? L

Splash contact Material: Nitrile rubber

Minimum layer thickness: 0,11 mm Break through time: 480 min

Material tested:KCL 741 Dermatril? L

##### Body Protection

protective clothing

##### Respiratory protection

Recommended Filter type: Filter A-(P3)

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

##### Control of environmental exposure

Do not let product enter drains.

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

|   |  |
|---|--|
| Appearance                              | beige powder                             |
| Odour                                   | phenol-like                              |
| Odour Threshold                         | No data available                        |
| pH                                      | No data available                        |
| Melting point/freezing point            | Melting point/range: 185 - 189 °C - lit. |
| Initial boiling point and boiling range | 284 °C at 1.013 hPa                      |
| Flash point                             | Not applicable                           |

|  |   |
|--|---|
| Evaporation rate                             | No data available   |
| Flammability (solid, gas)                    | No data available   |
| Upper/lower flammability or explosive limits | No data available   |
| Vapour pressure                              | 0.4 hPa (110 °C)  |
| Vapour density                               | No data available   |
| Relative density                             | 1,287 at 20 °C - OECD Test Guideline 109                                      |
| Water solubility                             | 1.000 g/l at 25 °C - soluble  |
| Partition coefficient: n-octanol/water       | log Pow: ca.-0,09 at 25 °C - Bioaccumulation is not expected.                 |
| Autoignition temperature                     | >400 °C - Regulation (EC) No. 440/2008, Annex, A.16                           |
| Decomposition temperature                    | 284 °C  |
| Viscosity                                    | Viscosity, kinematic: No data available Viscosity, dynamic: No data available |
| Explosive properties                         | No data available   |
| Oxidizing properties                         | No data available   |

### Other safety information

Surface tension 61,13 mN/m at 1 at 20 °C

- OECD Test Guideline 115 Dissociation constant 7,97 at 25 °C

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## SECTION 10: Stability and reactivity

### Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

### Possibility of hazardous reactions

Violent reactions possible with:

Oxidizing agents Bases

Acid anhydrides Acid chlorides acids

### Conditions to avoid

no information available

### Incompatible materials

No data available

### Hazardous decomposition products

In the event of fire: see section 5

## SECTION 11: Toxicological information

### Information on toxicological effects

#### Acute toxicity

LD50 Oral - Rat - male and female - 671 mg/kg (US-EPA)

Acute toxicity estimate Inhalation - 1,6 mg/l (Expert judgment)

LC50 Inhalation - 4 h - > 3,42 mg/l (OECD Test Guideline 403)

LD50 Dermal - Rabbit - male and female - > 8.000 mg/kg (US-EPA)

#### Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation Remarks: (ECHA)

#### Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation (US-EPA)

#### Respiratory or skin sensitization

Buehler Test - Guinea pig Result: positive

(OECD Test Guideline 406)

#### Germ cell mutagenicity

Suspected of causing genetic defects. Test Type: Ames test

Test system: S. typhimurium

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 471

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration. Test system: Chinese hamster lung cells

Metabolic activation: with and without metabolic activation Method: OECD Test Guideline 473

Result: Positive results were obtained in some in vitro tests.

Test Type: unscheduled DNA synthesis assay Species: Rat

Application Route: Oral

Method: OECD Test Guideline 486 Result: negative

Test Type: Chromosome aberration test Species: Mouse

Application Route: Oral

Method: OECD Test Guideline 474 Result: positive

#### Carcinogenicity

No data available

#### Reproductive toxicity

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

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

May cause damage to organs through prolonged or repeated exposure. - Kidney

#### Aspiration hazard

No data available

#### Toxicity

LD50 orally in Rabbit: 375 mg/kg LD50 dermal Rabbit > 10000 mg/kg

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## SECTION 12: Ecological information

### Toxicity

#### Toxicity to fish

flow-through test LC50 - *Oryzias latipes* (Orange-red killifish) - 0,82 mg/l - 96 h

(OECD Test Guideline 203)

#### Toxicity to daphnia and other aquatic invertebrates

semi-static test EC50 - *Daphnia magna* (Water flea) - 0,089 mg/l - 48 h

(OECD Test Guideline 202)

#### Toxicity to algae

static test ErC50 - *Pseudokirchneriella subcapitata* (algae) - 0,25 mg/l - 72 h

(OECD Test Guideline 201)

#### Toxicity to bacteria

static test EC50 - activated sludge - 29,9 mg/l - 3 h

(OECD Test Guideline 209)

### Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 6 % - Not readily biodegradable. (OECD Test Guideline 301C)

### Bioaccumulative potential

Bioaccumulation *Cyprinus carpio* (Carp) - 56 d

- 0,00015 mg/l(4-aminophenol)

Bioconcentration factor (BCF): 15 - 46 (OECD Test Guideline 305C)

### Mobility in soil

No data available

### Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### Other adverse effects

No data available

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## SECTION 13: Disposal considerations

### Waste treatment methods

#### Incompatibilities

These phenol/cresol materials can react with oxidizers; reaction may be violent. Incompatible with strong reducing substances such as alkali



metals, hydrides, nitrides, and sulfides. Heat may be generated by the acidbase reaction with bases; such heating may initiate polymerization of the organic compound. Reacts with boranes, alkalies, aliphatic amines, amides, nitric acid, sulfuric acid.

### **Product**

See [www.retrologistik.com](http://www.retrologistik.com) for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

### **Waste Disposal**

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. All federal, state, and local environmental regulations must be observed.

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## SECTION 14: Transport information

### **UN number**

ADR/RID: 2512 IMDG: 2512

### **UN proper shipping name**

ADR/RID: AMINOPHENOLS IMDG: AMINOPHENOLS IATA: Aminophenols

### **Transport hazard class(es)**

ADR/RID: 6.1 IMDG: 6.1 IATA: 6.1

### **Packaging group**

ADR/RID: III IMDG: III IATA: III

### **Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

### **Special precautions for user**

No data available

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## SECTION 15: Regulatory information

### **Safety, health and environmental regulations/legislation specific for the substance or mixture**

#### **Regulations on the Safety Management of Hazardous Chemicals**

China Catalog of Hazardous chemicals 2015:Listed. website: <https://www.mem.gov.cn/>

#### **Measures for Environmental Management of New Chemical Substances**

Vietnam National Chemical Inventory:Listed. website: <https://chemicaldata.gov.vn/>

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: <https://emb.gov.ph/>

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: <https://www.mee.gov.cn/>

EC Inventory:Listed.

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

Korea Existing Chemicals List (KECL):Listed. website: <http://ncis.nier.go.kr>

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: <https://www.epa.gov/>

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## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

- 【1】 CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- 【2】 ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- 【3】 ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>
- 【4】 eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)
- 【5】 ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- 【6】 Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- 【7】 HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- 【8】 IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- 【9】 IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- 【10】 Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

#### Disclaimer:

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.