

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## 4-Aminophenol ≥98 %, for synthesis

article number: **0950**  
Version: **2.0 en**  
Replaces version of: 2018-09-06  
Version: (1)

date of compilation: 2018-09-06  
Revision: 2022-07-01

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

### 1.1 Product identifier

|                                 |   |
|---------------------------------|---|
| Identification of the substance | <b>4-Aminophenol</b> ≥98 %, for synthesis |
| Article number                  | 0950                                      |
| EC number                       | 204-616-2                                 |
| CAS number                      | 123-30-8                                  |

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

|                           |   |
|---------------------------|---|
| Relevant identified uses: | Laboratory and analytical use<br>Laboratory chemical  |
| Uses advised against:     | Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). |

### 1.3 Details of the supplier of the safety data sheet

Carl Roth GmbH + Co KG  
Schoemperlenstr. 3-5  
D-76185 Karlsruhe  
Germany

**Telephone:**+49 (0) 721 - 56 06 0  
**Telefax:** +49 (0) 721 - 56 06 149  
**e-mail:** sicherheit@carlroth.de  
**Website:** www.carlroth.de

Competent person responsible for the safety data sheet: :Department Health, Safety and Environment

**e-mail (competent person):** **sicherheit@carlroth.de**

### 1.4 Emergency telephone number

| Name  | Street    | Postal code/city     | Telephone    | Website |
|---|-----------|----------------------|--------------|---------|
| National Poisons Information Service<br>City Hospital | Dudley Rd | B187QH<br>Birmingham | 844 892 0111 |         |

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Classification acc. to GHS

| Section | Hazard class            | Cat-egory | Hazard class and category | Hazard statement |
|---------|-------------------------|-----------|---------------------------|------------------|
| 3.10    | Acute toxicity (oral)   | 4         | Acute Tox. 4              | H302             |
| 3.1I    | Acute toxicity (inhal.) | 4         | Acute Tox. 4              | H332             |
| 3.5     | Germ cell mutagenicity  | 2         | Muta. 2                   | H341             |

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| Section | Hazard class  | Cat-egory | Hazard class and category | Hazard statement |
|---------|---|-----------|---------------------------|------------------|
| 4.1A    | Hazardous to the aquatic environment - acute hazard   | 1         | Aquatic Acute 1           | H400             |
| 4.1C    | Hazardous to the aquatic environment - chronic hazard | 1         | Aquatic Chronic 1         | H410             |

For full text of abbreviations: see SECTION 16

### The most important adverse physicochemical, human health and environmental effects

Spillage and fire water can cause pollution of watercourses.

## 2.2 Label elements

### Labelling

#### Signal word

Warning

#### Pictograms

GHS07, GHS08,  
GHS09



#### Hazard statements

H302+H332 Harmful if swallowed or if inhaled  
H341 Suspected of causing genetic defects  
H410 Very toxic to aquatic life with long lasting effects

#### Precautionary statements

##### Precautionary statements - prevention

P261 Avoid breathing dust/fume/gas/mist/vapours/spray  
P273 Avoid release to the environment  
P280 Wear protective gloves/protective clothing

##### Precautionary statements - response

P308+P313 IF exposed or concerned: Get medical advice/attention

For professional users only

## 2.3 Other hazards

### Results of PBT and vPvB assessment

According to the results of its assessment, this substance is not a PBT or a vPvB.

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

|                   |                                  |
|-------------------|----------------------------------|
| Name of substance | 4-Aminophenol                    |
| Molecular formula | C <sub>6</sub> H <sub>7</sub> NO |
| Molar mass        | 109,1 g/mol                      |
| CAS No            | 123-30-8                         |

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| Substance, Specific Conc. Limits, M-factors, ATE |                       |                            |                                   |
|--|-----------------------|----------------------------|-----------------------------------|
| Specific Conc. Limits                            | M-Factors             | ATE                        | Exposure route                    |
| -  | M-factor (acute) = 10 | 671 mg/kg<br>>3,42 mg/l/4h | oral<br>inhalation: dust/<br>mist |

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off contaminated clothing.

#### Following inhalation

Provide fresh air. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following skin contact

Rinse skin with water/shower.

#### Following eye contact

Rinse cautiously with water for several minutes. In all cases of doubt, or when symptoms persist, seek medical advice.

#### Following ingestion

Rinse mouth with water (only if the person is conscious). In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Call a doctor.

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

Following inhalation: Cough, pain, choking, and breathing difficulties,

Following skin contact: Irritant effects,

After eye contact: Irritant,

Following ingestion: Nausea, Vomiting

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

none

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media



#### Suitable extinguishing media

co-ordinate firefighting measures to the fire surroundings  
water, foam, alcohol resistant foam, dry extinguishing powder, ABC-powder

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### Unsuitable extinguishing media

water jet

### 5.2 Special hazards arising from the substance or mixture

Combustible.

### Hazardous combustion products

In case of fire may be liberated: Nitrogen oxides (NO<sub>x</sub>), Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>)

### 5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes. Do not allow firefighting water to enter drains or water courses. Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus.

## SECTION 6: Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures



#### For non-emergency personnel

Use personal protective equipment as required. Avoid contact with skin, eyes and clothes. Do not breathe dust.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. Retain contaminated washing water and dispose of it.

### 6.3 Methods and material for containment and cleaning up

#### Advice on how to contain a spill

Covering of drains. Take up mechanically.

#### Advice on how to clean up a spill

Take up mechanically. Control of dust.

#### Other information relating to spills and releases

Place in appropriate containers for disposal. Ventilate affected area.

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8. Incompatible materials: see section 10. Disposal considerations: see section 13.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Provision of sufficient ventilation. Avoid exposure. Avoid dust formation.

#### Measures to prevent fire as well as aerosol and dust generation

Removal of dust deposits.

#### Measures to protect the environment

Avoid release to the environment.

#### Advice on general occupational hygiene

Wash hands before breaks and after work. Keep away from food, drink and animal feedingstuffs.

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

Store in a dry place.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Consideration of other advice:

#### Ventilation requirements

Keep any substance that emits harmful vapours or gases in a place that allows these to be permanently extracted. Use local and general ventilation.

#### Specific designs for storage rooms or vessels

Recommended storage temperature: 15 – 25 °C

### 7.3 Specific end use(s)

No information available.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

| Country | Name of agent | CAS No | Identifier | TWA [mg/m <sup>3</sup> ] | STEL [mg/m <sup>3</sup> ] | Ceiling-C [mg/m <sup>3</sup> ] | Notation | Source    |
|---------|---------------|--------|------------|--------------------------|---------------------------|--------------------------------|----------|-----------|
| GB      | dust          |        | WEL        | 10                       |                           |                                | i        | EH40/2005 |
| GB      | dust          |        | WEL        | 4                        |                           |                                | r        | EH40/2005 |

#### Notation

Ceiling-C Ceiling value is a limit value above which exposure should not occur

i Inhalable fraction

r Respirable fraction

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period (unless otherwise specified)

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average (unless otherwise specified)

#### Human health values

| Relevant DNELs and other threshold levels |                       |                                    |                   |                            |
|---|-----------------------|------------------------------------|-------------------|----------------------------|
| Endpoint                                  | Threshold level       | Protection goal, route of exposure | Used in           | Exposure time              |
| DNEL                                      | 2,1 mg/m <sup>3</sup> | human, inhalatory                  | worker (industry) | chronic - systemic effects |
| DNEL                                      | 1 mg/kg bw/day        | human, dermal                      | worker (industry) | chronic - systemic effects |

#### Environmental values

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| Relevant PNECs and other threshold levels |                 |                       |                              |                              |
|---|-----------------|-----------------------|------------------------------|------------------------------|
| End-point                                 | Threshold level | Organism              | Environmental compartment    | Exposure time                |
| PNEC                                      | 0,005 mg/l      | aquatic organisms     | freshwater                   | short-term (single instance) |
| PNEC                                      | 0 mg/l          | aquatic organisms     | marine water                 | short-term (single instance) |
| PNEC                                      | 0,265 mg/l      | aquatic organisms     | sewage treatment plant (STP) | short-term (single instance) |
| PNEC                                      | 0,019 mg/kg     | aquatic organisms     | freshwater sediment          | short-term (single instance) |
| PNEC                                      | 0 mg/kg         | aquatic organisms     | marine sediment              | short-term (single instance) |
| PNEC                                      | 0,001 mg/kg     | terrestrial organisms | soil                         | short-term (single instance) |

## 8.2 Exposure controls

### Individual protection measures (personal protective equipment)

#### Eye/face protection



Use safety goggle with side protection.

#### Skin protection



#### • hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. The times are approximate values from measurements at 22 °C and permanent contact. Increased temperatures due to heated substances, body heat etc. and a reduction of the effective layer thickness by stretching can lead to a considerable reduction of the breakthrough time. If in doubt, contact manufacturer. At an approx. 1.5 times larger / smaller layer thickness, the respective breakthrough time is doubled / halved. The data apply only to the pure substance. When transferred to substance mixtures, they may only be considered as a guide.

#### • type of material

NBR (Nitrile rubber)

#### • material thickness

>0,11 mm

#### • breakthrough times of the glove material

>480 minutes (permeation: level 6)

#### • other protection measures

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

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### Respiratory protection



Respiratory protection necessary at: Dust formation. Particulate filter device (EN 143). P2 (filters at least 94 % of airborne particles, colour code: White).

### Environmental exposure controls

Keep away from drains, surface and ground water.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|  |  |
|--|--|
| Physical state   | solid  |
| Colour   | white - light brown  |
| Odour  | characteristic   |
| Melting point/freezing point                             | 189,6 – 190,2 °C at 1.333 hPa (ECHA)                           |
| Boiling point or initial boiling point and boiling range | 284 °C at 1.013 hPa (ECHA)                                     |
| Flammability   | this material is combustible, but will not ignite readily      |
| Lower and upper explosion limit                          | not determined   |
| Flash point  | 195 °C (c.c.)  |
| Auto-ignition temperature                                | >400 °C (ECHA) (relative self-ignition temperature for solids) |
| Decomposition temperature                                | 306 °C at 1.333 hPa  |
| pH (value)   | not applicable   |
| Kinematic viscosity                                      | not relevant   |
| <u>Solubility(ies)</u>                                   |  |
| Water solubility   | 16 g/l at 20 °C  |
| <u>Partition coefficient</u>                             |  |
| Partition coefficient n-octanol/water (log value):       | -0,09 (pH value: ~7,5, 25 °C) (ECHA)                           |
| Vapour pressure  | 0 hPa at 25 °C   |
| <u>Density and/or relative density</u>                   |  |
| Density  | 1,29 g/cm <sup>3</sup> at 20 °C                                |
| Relative vapour density                                  | information on this property is not available                  |
| Particle characteristics                                 | No data available.   |

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### Other safety parameters

Oxidising properties none

### 9.2 Other information

Information with regard to physical hazard classes: hazard classes acc. to GHS (physical hazards): not relevant

Other safety characteristics:

Surface tension 61,13 mN/m (20 °C) (ECHA)

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

The product in the delivered form is not dust explosion capable; the enrichment of fine dust however leads to the danger of dust explosion.

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

**Violent reaction with:** strong oxidiser

### 10.4 Conditions to avoid

Keep away from heat. Decomposition takes place from temperatures above: 306 °C at 1.333 hPa. Direct light irradiation. Protect from moisture.

### 10.5 Incompatible materials

There is no additional information.

### 10.6 Hazardous decomposition products

Hazardous combustion products: see section 5.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Classification acc. to GHS

#### Acute toxicity

Harmful if swallowed. Harmful if inhaled.

| Acute toxicity        |          |               |         |        |        |
|-----------------------|----------|---------------|---------|--------|--------|
| Exposure route        | Endpoint | Value         | Species | Method | Source |
| inhalation: dust/mist | LC50     | >3,42 mg/l/4h | rat     |        | ECHA   |
| oral                  | LD50     | 671 mg/kg     | rat     |        | ECHA   |
| dermal                | LD50     | >8.000 mg/kg  | rabbit  |        | ECHA   |

#### Skin corrosion/irritation

Shall not be classified as corrosive/irritant to skin.



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### Serious eye damage/eye irritation

Shall not be classified as seriously damaging to the eye or eye irritant.

### Respiratory or skin sensitisation

Shall not be classified as a respiratory or skin sensitiser.

### Germ cell mutagenicity

Suspected of causing genetic defects.

### Carcinogenicity

Shall not be classified as carcinogenic.

### Reproductive toxicity

Shall not be classified as a reproductive toxicant.

### Specific target organ toxicity - single exposure

Shall not be classified as a specific target organ toxicant (single exposure).

### Specific target organ toxicity - repeated exposure

Shall not be classified as a specific target organ toxicant (repeated exposure).

### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

vomiting, nausea

#### • If in eyes

slightly irritant but not relevant for classification

#### • If inhaled

cough, pain, choking, and breathing difficulties

#### • If on skin

slightly irritant but not relevant for classification

#### • Other information

none

### 11.2 Endocrine disrupting properties

Not listed.

### 11.3 Information on other hazards

There is no additional information.

## SECTION 12: Ecological information

### 12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

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| Aquatic toxicity (acute) |            |                       |        |               |
|--------------------------|------------|-----------------------|--------|---------------|
| Endpoint                 | Value      | Species               | Source | Exposure time |
| LC50                     | 0,82 mg/l  | fish                  | ECHA   | 96 h          |
| EC50                     | 0,089 mg/l | aquatic invertebrates | ECHA   | 48 h          |
| ErC50                    | 0,25 mg/l  | algae                 | ECHA   | 72 h          |

| Aquatic toxicity (chronic) |             |                       |        |               |
|----------------------------|-------------|-----------------------|--------|---------------|
| Endpoint                   | Value       | Species               | Source | Exposure time |
| LC50                       | 0,57 mg/l   | fish                  | ECHA   | 41 d          |
| EC50                       | >0,171 mg/l | aquatic invertebrates | ECHA   | 21 d          |

### Biodegradation

Not readily biodegradable.

### 12.2 Process of degradability

Theoretical Oxygen Demand with nitrification: 2,419 mg/mg

Theoretical Oxygen Demand: 1,906 mg/mg

Theoretical Carbon Dioxide: 2,42 mg/mg

| Process of degradability  |                  |      |
|---------------------------|------------------|------|
| Process                   | Degradation rate | Time |
| carbon dioxide generation | 5 %              | 28 d |

### 12.3 Bioaccumulative potential

Does not significantly accumulate in organisms.

|                           |                                      |
|---------------------------|--------------------------------------|
| n-octanol/water (log KOW) | -0,09 (pH value: ~7,5, 25 °C) (ECHA) |
| BCF                       | 10 – 39 (ECHA)                       |

### 12.4 Mobility in soil

Data are not available.

### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Endocrine disrupting properties

Not listed.

### 12.7 Other adverse effects

Data are not available.

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### SECTION 13: Disposal considerations

#### 13.1 Waste treatment methods



This material and its container must be disposed of as hazardous waste. Dispose of contents/container in accordance with local/regional/national/international regulations.

##### Sewage disposal-relevant information

Do not empty into drains. Avoid release to the environment. Refer to special instructions/safety data sheets.

##### Waste treatment of containers/packagings

It is a dangerous waste; only packagings which are approved (e.g. acc. to ADR) may be used.

#### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Waste catalogue ordinance (Germany).

#### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

### SECTION 14: Transport information

#### 14.1 UN number or ID number

|           |         |
|-----------|---------|
| ADRRID    | UN 2512 |
| IMDG-Code | UN 2512 |
| ICAO-TI   | UN 2512 |

#### 14.2 UN proper shipping name

|           |              |
|-----------|--------------|
| ADRRID    | AMINOPHENOLS |
| IMDG-Code | AMINOPHENOLS |
| ICAO-TI   | Aminophenols |

#### 14.3 Transport hazard class(es)

|           |     |
|-----------|-----|
| ADRRID    | 6.1 |
| IMDG-Code | 6.1 |
| ICAO-TI   | 6.1 |

#### 14.4 Packing group

|           |     |
|-----------|-----|
| ADRRID    | III |
| IMDG-Code | III |
| ICAO-TI   | III |

#### 14.5 Environmental hazards

hazardous to the aquatic environment

#### 14.6 Special precautions for user

Provisions for dangerous goods (ADR) should be complied within the premises.

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### 14.7 Maritime transport in bulk according to IMO instruments


The cargo is not intended to be carried in bulk.

### 14.8 Information for each of the UN Model Regulations

#### Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN) - Additional information

|   |  |
|---|--|
| Proper shipping name  | AMINOPHENOLS   |
| Particulars in the transport document   | UN2512, AMINOPHENOLS, 6.1, III, (E), environmentally hazardous |
| Classification code   | T2   |
| Danger label(s)   | 6.1, "Fish and tree"   |
|  |  |
| Environmental hazards   | yes (hazardous to the aquatic environment)                     |
| Special provisions (SP)   | 279, 802(ADN)  |
| Excepted quantities (EQ)  | E1   |
| Limited quantities (LQ)   | 5 kg   |
| Transport category (TC)   | 2  |
| Tunnel restriction code (TRC)   | E  |
| Hazard identification No  | 60   |
| <b>Emergency Action Code</b>  | 2X   |

#### Regulations concerning the International Carriage of Dangerous Goods by Rail (RID) Additional information

|   |                           |
|---|---------------------------|
| <b>Classification code</b>  | T2                        |
| <b>Danger label(s)</b>  | 6.1<br>Fish and tree      |
|  |                           |
| <b>Environmental hazards</b>  | Yes<br>Hazardous to water |
| <b>Special provisions (SP)</b>  | 279, 802(ADN)             |
| <b>Excepted quantities (EQ)</b>   | E1                        |
| <b>Limited quantities (LQ)</b>  | 5 kg                      |
| <b>Transport category (TC)</b>  | 2                         |
| <b>Hazard identification No</b>   | 60                        |

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### International Maritime Dangerous Goods Code (IMDG) - Additional information

|  |  |
|--|--|
| Proper shipping name                     | AMINOPHENOLS                                     |
| Particulars in the shipper's declaration | UN2512, AMINOPHENOLS, 6.1, III, MARINE POLLUTANT |
| Marine pollutant                         | YES (hazardous to the aquatic environment)       |
| Danger label(s)                          | 6.1, "Fish and tree"                             |
|  |  |
| Special provisions (SP)                  | 279  |
| Excepted quantities (EQ)                 | E1   |
| Limited quantities (LQ)                  | 5 kg   |
| EmS                                      | F-A, S-A   |
| Stowage category                         | A  |

### International Civil Aviation Organization (ICAO-IATA/DGR) - Additional information

|  |  |
|--|--|
| Proper shipping name                     | Aminophenols                               |
| Particulars in the shipper's declaration | UN2512, Aminophenols, 6.1, III             |
| Environmental hazards                    | YES (hazardous to the aquatic environment) |
| Danger label(s)                          | 6.1  |
|  |  |
| Special provisions (SP)                  | A113                                       |
| Excepted quantities (EQ)                 | E1   |
| Limited quantities (LQ)                  | 10 kg                                      |

## SECTION 15: Regulatory information

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

#### Relevant provisions of the European Union (EU)

##### Seveso Directive

| 2012/18/EU (Seveso III) |  |   |       |
|-------------------------|--|---|-------|
| No                      | Dangerous substance/hazard categories                                | Qualifying quantity (tonnes) for the application of lower and upper-tier requirements | Notes |
| E1                      | environmental hazards (hazardous to the aquatic environment, cat. 1) | 100                      200  | 56)   |

##### Notation

56) Hazardous to the Aquatic Environment in category Acute 1 or Chronic 1

##### Deco-Paint Directive

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|             |              |
|-------------|--------------|
| VOC content | 0 %<br>0 g/l |
|-------------|--------------|

### Industrial Emissions Directive (IED)

|             |       |
|-------------|-------|
| VOC content | 0 %   |
| VOC content | 0 g/l |

### Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)

not listed

### Regulation concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)

not listed

### Water Framework Directive (WFD)

| List of pollutants (WFD) |   |        |           |         |
|--------------------------|---|--------|-----------|---------|
| Name of substance        | Name acc. to inventory  | CAS No | Listed in | Remarks |
| 4-Aminophenol            | Substances and preparations, or the breakdown products of such, which have been proved to possess carcinogenic or mutagenic properties or properties which may affect steroidogenic, thyroid, reproduction or other endocrine-related functions in or via the aquatic environment |        | a)        |         |

#### Legend

A) Indicative list of the main pollutants

### Regulation on the marketing and use of explosives precursors

not listed

### Regulation on drug precursors

not listed

### Regulation on substances that deplete the ozone layer (ODS)

not listed

### Regulation concerning the export and import of hazardous chemicals (PIC)

not listed

### Regulation on persistent organic pollutants (POP)

not listed

### National regulations(GB)

#### List of substances subject to authorisation (GB REACH, Annex 14) / SVHC - candidate list

not listed

#### Restrictions according to GB REACH, Annex 17

not listed

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### Other information

Directive 94/33/EC on the protection of young people at work. Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

### National inventories

| Country | Inventory  | Status              |
|---------|------------|---------------------|
| AU      | AIIC       | substance is listed |
| CA      | DSL        | substance is listed |
| CN      | IECSC      | substance is listed |
| EU      | ECSI       | substance is listed |
| EU      | REACH Reg. | substance is listed |
| JP      | CSCL-ENCS  | substance is listed |
| KR      | KECI       | substance is listed |
| MX      | INSQ       | substance is listed |
| NZ      | NZIoC      | substance is listed |
| PH      | PICCS      | substance is listed |
| TR      | CICR       | substance is listed |
| TW      | TCSI       | substance is listed |
| US      | TSCA       | substance is listed |

#### Legend

|            |   |
|------------|---|
| AIIC       | Australian Inventory of Industrial Chemicals                            |
| CICR       | Chemical Inventory and Control Regulation                               |
| CSCL-ENCS  | List of Existing and New Chemical Substances (CSCL-ENCS)                |
| DSL        | Domestic Substances List (DSL)  |
| ECSI       | EC Substance Inventory (EINECS, ELINCS, NLP)                            |
| IECSC      | Inventory of Existing Chemical Substances Produced or Imported in China |
| INSQ       | National Inventory of Chemical Substances                               |
| KECI       | Korea Existing Chemicals Inventory                                      |
| NZIoC      | New Zealand Inventory of Chemicals                                      |
| PICCS      | Philippine Inventory of Chemicals and Chemical Substances (PICCS)       |
| REACH Reg. | REACH registered substances   |
| TCSI       | Taiwan Chemical Substance Inventory                                     |
| TSCA       | Toxic Substance Control Act   |

### 15.2 Chemical Safety Assessment

No Chemical Safety Assessment has been carried out for this substance.

## SECTION 16: Other information

### Indication of changes (revised safety data sheet)

Alignment to regulation:

Restructuring: section 9, section 14

| Section | Former entry (text/value) | Actual entry (text/value)                                    | Safety-relevant |
|---------|---------------------------|--|-----------------|
| 2.1     |                           | Classification acc. to GHS:<br>change in the listing (table) | yes             |

# Safety data sheet Safety data sheet

acc. to Regulation (EC) No. 1907/2006 (REACH)



## 4-Aminophenol ≥98 %, for synthesis

article number: 0950

| Section | Former entry (text/value)  | Actual entry (text/value)   | Safety-relevant |
|---------|--|---|-----------------|
| 2.1     |  | The most important adverse physicochemical, human health and environmental effects:<br>Spillage and fire water can cause pollution of watercourses. | yes             |
| 2.2     |  | Pictograms:<br>change in the listing (table)  | yes             |
| 2.2     | Labelling of packages where the contents do not exceed 125 ml:<br>Signal word: Warning |   | yes             |
| 2.2     |  | Labelling of packages where the contents do not exceed 125 ml:<br>change in the listing (table)   | yes             |
| 2.2     |  | Labelling of packages where the contents do not exceed 125 ml:<br>change in the listing (table)   | yes             |
| 2.2     |  | Labelling of packages where the contents do not exceed 125 ml:<br>change in the listing (table)   | yes             |
| 2.3     | Other hazards:<br>There is no additional information.                                  | Other hazards   | yes             |
| 2.3     |  | Results of PBT and vPvB assessment:<br>According to the results of its assessment, this substance is not a PBT or a vPvB.                           | yes             |

### Abbreviations and acronyms

| Abbr.     | Descriptions of used abbreviations  |
|-----------|---|
| ADN       | Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways) |
| ADR       | Accord relatif au transport international des marchandises dangereuses par route (Agreement concerning the International Carriage of Dangerous Goods by Road)   |
| ATE       | Acute Toxicity Estimate   |
| BCF       | Bioconcentration factor   |
| CAS       | Chemical Abstracts Service (service that maintains the most comprehensive list of chemical substances)  |
| Ceiling-C | Ceiling value   |
| DGR       | Dangerous Goods Regulations (see IATA/DGR)  |
| DNEL      | Derived No-Effect Level   |
| EC50      | Effective Concentration 50 %. The EC50 corresponds to the concentration of a tested substance causing 50 % changes in response (e.g. on growth) during a specified time interval                                      |
| EC No     | The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)                                     |
| EH40/2005 | EH40/2005 Workplace exposure limits ( <a href="http://www.nationalarchives.gov.uk/doc/open-government-licence/">http://www.nationalarchives.gov.uk/doc/open-government-licence/</a> )                                 |
| EINECS    | European Inventory of Existing Commercial Chemical Substances   |
| ELINCS    | European List of Notified Chemical Substances   |
| EmS       | Emergency Schedule  |



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## 4-Aminophenol ≥98 %, for synthesis

article number: 0950

| Abbr.     | Descriptions of used abbreviations   |
|-----------|--|
| ErC50     | ≡ EC50: in this method, that concentration of test substance which results in a 50 % reduction in either growth (EbC50) or growth rate (ErC50) relative to the control   |
| GB REACH  | The REACH etc. (Amendment etc.) (EU Exit) Regulations 2019, SI 2019/758 (as amended)   |
| GHS       | "Globally Harmonized System of Classification and Labelling of Chemicals" developed by the United Nations  |
| IATA      | International Air Transport Association  |
| IATA/DGR  | Dangerous Goods Regulations (DGR) for the air transport (IATA)   |
| ICAO      | International Civil Aviation Organization  |
| ICAO-TI   | Technical instructions for the safe transport of dangerous goods by air  |
| IMDG      | International Maritime Dangerous Goods Code  |
| IMDG-Code | International Maritime Dangerous Goods Code  |
| LC50      | Lethal Concentration 50%: the LC50 corresponds to the concentration of a tested substance causing 50 % lethality during a specified time interval  |
| LD50      | Lethal Dose 50 %: the LD50 corresponds to the dose of a tested substance causing 50 % lethality during a specified time interval   |
| M-factor  | Means a multiplying factor. It is applied to the concentration of a substance classified as hazardous to the aquatic environment acute category 1 or chronic category 1, and is used to derive by the summation method the classification of a mixture in which the substance is present |
| NLP       | No-Longer Polymer  |
| PBT       | Persistent, Bioaccumulative and Toxic  |
| PNEC      | Predicted No-Effect Concentration  |
| REACH     | Registration, Evaluation, Authorisation and Restriction of Chemicals   |
| RID       | Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International carriage of Dangerous goods by Rail)  |
| STEL      | Short-term exposure limit  |
| TWA       | Time-weighted average  |
| VOC       | Volatile Organic Compounds   |
| vPvB      | Very Persistent and very Bioaccumulative   |
| WEL       | Workplace exposure limit   |

### Key literature references and sources for data

Agreement concerning the International Carriage of Dangerous Goods by Road (ADR). Regulations concerning the International Carriage of Dangerous Goods by Rail (RID). International Maritime Dangerous Goods Code (IMDG). Dangerous Goods Regulations (DGR) for the air transport (IATA).

### List of relevant phrases (code and full text as stated in section 2 and 3)

| Code | Text                                  |
|------|---------------------------------------|
| H302 | Harmful if swallowed.                 |
| H332 | Harmful if inhaled.                   |
| H341 | Suspected of causing genetic defects. |
| H400 | Very toxic to aquatic life.           |

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## 4-Aminophenol $\geq 98$ %, for synthesis

article number: **0950**

| Code | Text  |
|------|---|
| H410 | Very toxic to aquatic life with long lasting effects. |

### Disclaimer

This information is based upon the present state of our knowledge. This SDS has been compiled and is solely intended for this product.