

---

**1. PRODUCT AND COMPANY IDENTIFICATION****1.1 Product identifiers**

Product name : 4-Nitrophenol

Product Number : 241326

Brand : Aldrich

Index-No. : 609-015-00-2

CAS-No. : 100-02-7

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

Identified uses : Laboratory chemicals, Synthesis of substances

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

Company : Sigma-Aldrich Canada Co.  
2149 Winston Park Drive  
OAKVILLE ON L6H 6J8  
CANADA

Telephone : +1 9058299500

Fax : +1 9058299292

**1.4 Emergency telephone number**

Emergency Phone # : +1-703-527-3887 (CHEMTREC)

---

**2. HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture****GHS Classification in accordance with Hazardous Products Regulations (HPR) (SOR/2015-17)**

Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Inhalation (Category 4), H332  
Acute toxicity, Dermal (Category 4), H312  
Specific target organ toxicity - repeated exposure (Category 2), H373

For the full text of the H-Statements mentioned in this Section, see Section 16.

**2.2 GHS Label elements, including precautionary statements**

Pictogram



Signal word

Warning

Hazard statement(s)

H302 + H312 + H332  
H373

Harmful if swallowed, in contact with skin or if inhaled.  
May cause damage to organs through prolonged or repeated exposure.

Precautionary statement(s)

P260  
P264  
P270  
P271  
P280  
P301 + P312 + P330

Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Wear protective gloves/ protective clothing.  
IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
Rinse mouth.

P302 + P352 + P312	IF ON SKIN: Wash with plenty of water.Call a POISON CENTER/doctor if you feel unwell.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
P314	Get medical advice/ attention if you feel unwell.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P501	Dispose of contents/ container to an approved waste disposal plant.

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS - none**

---

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

**3.1 Substances**

Synonyms	: p-Nitrophenol
Formula	: C <sub>6</sub> H <sub>5</sub> NO <sub>3</sub>
Molecular weight	: 139.11 g/mol
CAS-No.	: 100-02-7
EC-No.	: 202-811-7
Index-No.	: 609-015-00-2

**Hazardous components**

Component	Classification	Concentration*
<b>p-Nitrophenol</b>		
	Acute Tox. 4; STOT RE 2; H302 + H312 + H332, H373	90 - 100 %
* Weight percent		

For the full text of the H-Statements mentioned in this Section, see Section 16.

---

**4. FIRST AID MEASURES**

**4.1 Description of 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. Take victim immediately to hospital. Consult a physician.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 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

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

No data available

---

**5. FIREFIGHTING MEASURES**

**5.1 Extinguishing media**

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

## 5.2 Special hazards arising from the substance or mixture

No data available

## 5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

## 5.4 Further information

No data available

---

## 6. ACCIDENTAL RELEASE MEASURES

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

Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

### 6.2 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.

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

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal see section 13.

---

## 7. HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

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

Keep container tightly closed in a dry and well-ventilated place.

### 7.3 Specific end use(s)

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

---

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

### 8.2 Exposure controls

#### Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

#### Personal protective equipment

##### Eye/face protection

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

##### Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

##### Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

##### Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested: Dermatril® (KCL 740 / Aldrich Z677272, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

### Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

### Control of environmental exposure

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

---

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

- |   |  |
|---|--|
| a) Appearance                                   | Form: crystalline<br>Colour: light yellow  |
| b) Odour  | No data available  |
| c) Odour Threshold                              | No data available  |
| d) pH   | 4.4 at 5.00000 g/l at 24.0 °C (75.2 °F)  |
| e) Melting point/freezing point                 | Melting point/range: 110 - 115 °C (230 - 239 °F) - lit.                                |
| f) Initial boiling point and boiling range      | 279 °C (534 °F) - lit.   |
| g) Flash point                                  | 169.0 °C (336.2 °F) - closed cup   |
| h) Evaporation rate                             | No data available  |
| i) Flammability (solid, gas)                    | No data available  |
| j) Upper/lower flammability or explosive limits | No data available  |
| k) Vapour pressure                              | 9.2 hPa (6.9 mmHg) at 165.0 °C (329.0 °F)<br>0.8 hPa (0.6 mmHg) at 120.0 °C (248.0 °F) |
| l) Vapour density                               | No data available  |
| m) Relative density                             | 1.48 g/cm <sup>3</sup> at 20.00 °C (68.00 °F)  |
| n) Water solubility                             | 15 g/l   |
| o) Partition coefficient: n-octanol/water       | log Pow: 1.91  |
| p) Auto-ignition temperature                    | 283.0 °C (541.4 °F)  |
| q) Decomposition temperature                    | No data available  |
| r) Viscosity                                    | No data available  |
| s) Explosive properties                         | No data available  |

t) Oxidizing properties No data available

## 9.2 Other safety information

Bulk density 550 kg/m<sup>3</sup>  
760 kg/m<sup>3</sup>

---

## 10. STABILITY AND REACTIVITY

### 10.1 Reactivity

No data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

No data available

### 10.4 Conditions to avoid

No data available

### 10.5 Incompatible materials

Strong oxidizing agents, Strong bases

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO<sub>x</sub>)

Other decomposition products - No data available

In the event of fire: see section 5

---

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

No data available

Inhalation: No data available

LD50 Dermal - Rat - 1,024 mg/kg

No data available

#### Skin corrosion/irritation

No data available

#### Serious eye damage/eye irritation

No data available

#### Respiratory or skin sensitisation

No data available

#### Germ cell mutagenicity

No data available

#### Carcinogenicity

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.

#### Reproductive toxicity

No data available

No data available

#### Specific target organ toxicity - single exposure

No data available

#### Specific target organ toxicity - repeated exposure

The substance or mixture is classified as specific target organ toxicant, repeated exposure, category 2.

#### Aspiration hazard

No data available

## Additional Information

RTECS: SM2275000

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., Depending on the intensity and duration of exposure, effects may vary from mild irritation to severe destruction of tissue., Damage to the eyes.  
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Eyes -

---

## 12. ECOLOGICAL INFORMATION

### 12.1 Toxicity

No data available

Toxicity to daphnia and other aquatic invertebrates      EC50 - Daphnia magna (Water flea) - 3.10 - 24.00 mg/l - 48 h

### 12.2 Persistence and degradability

Biodegradability      aerobic - Exposure time 28 d  
Result: 90 % - Readily biodegradable.

### 12.3 Bioaccumulative potential

Bioaccumulation      Pimephales promelas (fathead minnow) - 28 d  
- 0.0441 mg/l

Bioconcentration factor (BCF): 280

### 12.4 Mobility in soil

No data available

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Toxic to aquatic life.

Do not empty into drains.

---

## 13. DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. 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

### TDG (Canada)

UN number: 1663      Class: 6.1      Packing group: III

Proper shipping name: NITROPHENOLS

Poison Inhalation Hazard: No

### IMDG

UN number: 1663      Class: 6.1      Packing group: III      EMS-No: F-A, S-A

Proper shipping name: NITROPHENOLS (o-, m-, p-)

### IATA

UN number: 1663      Class: 6.1      Packing group: III

Proper shipping name: Nitrophenols

---

## 15. REGULATORY INFORMATION

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.

---

## 16. OTHER INFORMATION

### Full text of H-Statements referred to under sections 2 and 3.

Acute Tox.	Acute toxicity
H302	Harmful if swallowed.
H302 + H312 + H332	Harmful if swallowed, in contact with skin or if inhaled.
H312	Harmful in contact with skin.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.

### Further information

Copyright 2016 Sigma-Aldrich Co. LLC. License granted to make unlimited paper copies for internal use only. 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 Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

Version: 4.8

Revision Date: 09/20/2017

Print Date: 11/10/2018