

SAFETY DATA SHEET

Version 6.11
Revision Date 08/05/2024
Print Date 08/06/2024

SECTION 1: Identification of the substance/mixture and of the company/undertaking**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
Uses advised against : The product is being supplied under the TSCA R&D Exemption (40 CFR Section 720.36). It is the recipient's responsibility to comply with the requirements of the R&D exemption. The product may not be used for a non-exempt commercial purpose under TSCA unless appropriate consent is granted in writing by MilliporeSigma.

1.3 Details of the supplier of the safety data sheet

Company : Sigma-Aldrich Inc.
3050 SPRUCE ST
ST. LOUIS MO 63103
UNITED STATES
Telephone : +1 314 771-5765
Fax : +1 800 325-5052

1.4 Emergency telephone

Emergency Phone # : 800-424-9300 CHEMTREC (USA) +1-703-527-3887 CHEMTREC (International) 24 Hours/day; 7 Days/week

SECTION 2: Hazards identification**2.1 Classification of the substance or mixture****GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Acute toxicity, Oral (Category 4), H302
Acute toxicity, Inhalation (Category 4), H332
Acute toxicity, Dermal (Category 4), H312

Specific target organ toxicity - repeated exposure, Oral (Category 2), Kidney, Liver, H373
Short-term (acute) aquatic hazard (Category 3), H402

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 Statements

H302 + H312 + H332
H373

Harmful if swallowed, in contact with skin or if inhaled.
May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure if swallowed.
Harmful to aquatic life.

H402

Precautionary Statements

P260

Do not breathe dust.

P264

Wash skin thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P271

Use only outdoors or in a well-ventilated area.

P273

Avoid release to the environment.

P280

Wear protective gloves/ protective clothing.

P301 + P312 + P330

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.

P363

Wash contaminated clothing 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

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : p-Nitrophenol

Formula : C₆H₅NO₃

Molecular weight : 139.11 g/mol

CAS-No. : 100-02-7

EC-No. : 202-811-7

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

Component	Classification	Concentration
4-Nitrophenol	Acute Tox. 4; STOT RE 2; Aquatic Acute 3; H302,	<= 100 %

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

SECTION 4: First aid measures**4.1 Description of first-aid measures**

No data available

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

SECTION 5: Firefighting measures**5.1 Extinguishing media**

No data available

5.2 Special hazards arising from the substance or mixture

Carbon oxides
Nitrogen oxides (NO_x)
Combustible.

5.3 Advice for firefighters

No data available

5.4 Further information

No data available

SECTION 6: Accidental release measures**6.1 Personal precautions, protective equipment and emergency procedures**

For personal protection see section 8.

6.2 Environmental precautions

No data available

6.3 Methods and materials for containment and cleaning up

No data available

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

No data available

7.3 Specific end use(s)

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Personal protective equipment

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 EN 16523-1 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: 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

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Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

Control of environmental exposure

Prevent product from entering drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: solid Color: yellow
b) Odor	characteristic
c) Odor Threshold	No data available
d) pH	4.4 at 5 g/l at 24 °C (75 °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 °C (336 °F)
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Density	1.48 g/cm ³ at 20 °C (68 °F)
Relative density	No data available
n) Water solubility	14.8 g/l at 25 °C (77 °F)
o) Partition coefficient: n-octanol/water	log Pow: 1.95 - Bioaccumulation is not expected.
p) Autoignition temperature	No data available
q) Decomposition temperature	> 280 °C (> 536 °F) -
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	none

9.2 Other safety information

No data available

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

No data available

10.3 Possibility of hazardous reactions

Risk of explosion with:

Reducing agents
conc. sulfuric acid

Risk of ignition or formation of inflammable gases or vapours with:
alkalines
alkali hydroxides

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

No data available

10.6 Hazardous decomposition products

In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 667 mg/kg

Remarks: (ECHA)

LC50 Inhalation - Rat - 4 h - 4.7 mg/l - dust/mist

Remarks: (External MSDS)

LD50 Dermal - Rat - 1,024 mg/kg

Remarks: (RTECS)

Skin corrosion/irritation

No data available

Serious eye damage/eye irritation

No data available

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Result: negative

Carcinogenicity

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- IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
- NTP: No ingredient of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
- OSHA: No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

No data available

Specific target organ toxicity - repeated exposure

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

- Kidney, Liver

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Aspiration hazard

No data available

11.2 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 -

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish	LC50 - Danio rerio (zebra fish) - 10.4 mg/l - 96 h (OECD Test Guideline 203)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 22 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to algae	EC50 - Desmodesmus subspicatus (green algae) - 23.7 mg/l - 96 h Remarks: (Lit.)
Toxicity to bacteria	EC5 - Pseudomonas putida - 0.9 mg/l - 16 h Remarks: (IUCLID)

12.2 Persistence and degradability

Biodegradability	Result: 97 % - Readily biodegradable. (OECD Test Guideline 301A)
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12.3 Bioaccumulative potential

Bioaccumulation Pimephales promelas (fathead minnow) - 28 d
- 0.0441 mg/l(4-Nitrophenol)

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 Endocrine disrupting properties

No data available

12.7 Other adverse effects

Do not empty into drains.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

No data available

SECTION 14: Transport information

DOT (US)

UN number: 1663 Class: 6.1 Packing group: III
Proper shipping name: Nitrophenols
Reportable Quantity (RQ): 100 lbs
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

SECTION 15: Regulatory information

CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
4-Nitrophenol	100-02-7	100	100

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SARA 304 Extremely Hazardous Substances Reportable Quantity

This material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards : Acute Health Hazard

SARA 313 : The following components are subject to reporting levels established by SARA Title III, Section 313:

4-Nitrophenol 100-02-7 >= 90 - <= 100 %

US State Regulations

Massachusetts Right To Know

4-Nitrophenol 100-02-7

Pennsylvania Right To Know

4-Nitrophenol 100-02-7

Maine Chemicals of High Concern

Product does not contain any listed chemicals

Vermont Chemicals of High Concern

Product does not contain any listed chemicals

Washington Chemicals of High Concern

Product does not contain any listed chemicals

The ingredients of this product are reported in the following inventories:

TSCA : All substances listed as active on the TSCA inventory

TSCA list

No substances are subject to a Significant New Use Rule.

No substances are subject to TSCA 12(b) export notification requirements.

SECTION 16: Other information

The branding on the header and/or footer of this document may temporarily not visually match the product purchased as we transition our branding. However, all of the information in the document regarding the product remains unchanged and matches the product ordered. For further information please contact mlsbranding@sial.com.

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