

SAFETY DATA SHEET

Version: v1

Revision Date: 2025-09-19

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

1.1 Product identifiers

Product name : 4-Chloro-2-nitroaniline
Product Number : C103610
Brand : aladdin
CAS-No. : 89-63-4

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

Identified uses : Laboratory chemicals, Manufacture of substances.

1.3 Company

Company : ALADDIN SCIENTIFIC CORPORATION
Address : 14078 Meridian Parkway,
Riverside, CA. 92518
Telephone : +1 (833) 552-7181
Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA : 1-800-424-9300
CHEMTREC®, Outside the USA :

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 2), H300

Acute toxicity, Inhalation (Category 2), H330

Acute toxicity, Dermal (Category 1), H310

Specific target organ toxicity - repeated exposure (Category 2), H373

Short-term (acute) aquatic hazard (Category 2), H401

Long-term (chronic) aquatic hazard (Category 2), H411

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

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H373	Causes damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects
H300+H310+H330	Fatal if swallowed, in contact with skin or if inhaled
Precautionary statement(s)	
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P262	Do not get in eyes, on skin, or on clothing.
P264	Wash hands [and ...] 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/eye protection/face protection.
P284	[In case of inadequate ventilation] Wear respiratory protection.
P320	Specific treatment is urgent (see ... on this label).
P321	Specific treatment (see ... on this label).
P330	Rinse mouth.
P391	Collect spillage.
P302+P352	IF ON SKIN: wash with plenty of water.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P361+P364	Take off immediately all contaminated clothing and wash it before reuse.
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to an approved waste disposal plant.
P301+P316	IF SWALLOWED: Get emergency medical help immediately.
P316	Get emergency medical help immediately.
P319	Get medical help if you feel unwell.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms	: 1-Amino-4-chloro-2-nitrobenzene PCONA
Formula	: C6H5ClN2O2
Molecular weight	: 172.57
CAS No.	: 89-63-4
EC-NO.	: 201-925-4

Component	Classification	Concentration
4-Chloro-2-nitroaniline		

Component	Classification	Concentration
	Acute toxicity Category 2; Acute toxicity Category 1; Specific target organ toxicity - repeated exposure Category 2; Short-term (acute) aquatic hazard Category 2; Longterm (chronic) aquatic hazard Category 2; H300, H330, H310, H373, H401, H411	analytical standard, $\geq 99.7\%$ (HPLC)

SECTION 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

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

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

no data available

4.3 Indication of any immediate medical attention and special treatment needed

no data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing media

no data available

5.2 Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NO_x) Oxides of phosphorus Hydrogen chloride gas Combustible. Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air on intense heating. Development of hazardous combustion gases or vapours possible in the event of fire.

5.3 Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

5.4 Further information

no data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection.Avoid dust formation.Avoid breathing vapors, mist or gas.Ensure adequate ventilation.

Evacuate personnel to safe areas.Avoid breathing dust.

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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

no data available

SECTION 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.

7.2 Conditions for safe storage, including any incompatibilities

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

7.3 Specific end use(s)

no data available

SECTION 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

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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.

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
N100
(US) or type P3 (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

no data available

SECTION 9: Physical and chemical properties
9.1 Information on basic physical and chemical properties

a) Appearance	form: Powder, Crystals and/or Chunks color: Orange
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	116-117°C
f) Initial boiling point and boiling range	no data available
g) Flash point	191 °C
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	no data available
l) Vapour density	no data available
m) Relative density	no data available
n) Water solubility	Insoluble in water; Solubility in water: 0.5 g/l at 20 ° C; Soluble in ether, alcohol, benzene
o) Partition coefficient: n-octanol/water	no data available
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties N	no data available
t) Oxidizing properties N	no data available

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9.2 Other safety information

no data available

SECTION 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

Violent reactions possible with: Bases Strong oxidizing agents Acid anhydrides acid halides

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Oral: absorption

Inhalation: absorption

Acute toxicity estimate Inhalation - 0.051 mg/l - dust/mist
(Expert judgment)

Dermal: absorption

Skin corrosion/irritation

Skin - Rabbit Result: No skin irritation Remarks: (External MSDS)

Serious eye damage/eye irritation

Eyes - Rabbit Result: No eye irritation Remarks: (External MSDS)

Respiratory or skin sensitisation

Sensitisation test (Magnusson and Kligman): Result: negative Remarks: (External MSDS)

Germ cell mutagenicity

Test Type: Micronucleus test Method: OECD Test Guideline 474 Result: negative

Carcinogenicity

no data available

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Reproductive toxicity

no data available

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Additional Information

RTECS: BX1575000

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.

After absorption: Headache Dizziness Nausea Vomiting agitation Convulsions Cardiac irregularities Unconsciousness
Effect potentiated by: ethanol Danger of cumulative effects.

Other information: The following applies to aromatic nitro compounds in general: systemic effect: methaemoglobinaemia with headache, cardiac dysrhythmias, drop in blood pressure, dyspnoea, and spasms; principal sign: cyanosis (blue discolouration of the blood).

Further data: This substance should be handled with particular care.

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to fish

LC50 - *Oryzias latipes* (Orange-red killifish) - 17.4 mg/l - 48 h Remarks: (Lit.)

Toxicity to daphnia and other aquatic invertebrates

EC50 - *Daphnia magna* (Water flea) - 3.2 mg/l - 48 h Remarks: (Lit.)

Toxicity to algae

IC50 - algae - 1 - 10 mg/l - 72 h Remarks: (Lit.)

Toxicity to bacteria

EC50 - *E.coli* - 34 mg/l - 24 h Remarks: (Lit.)**12.2 Persistence and degradability**

Biodegradability Result: 0 % - Not readily biodegradable. (OECD Test Guideline 301C)

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12.3 Bioaccumulative potential

no data available

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

Aldrich - 101664 Page 6 of 7 An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Toxic to aquatic life.

12.6 Other adverse effects

no data available

SECTION 13:

13.1 Disposal considerations

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

no data available

SECTION 14: Transport information

DOT (US)

UN number: 2237

Packing group: III

Class: 6.1

Proper shipping name:

Reportable Quantity(RQ): no data available

Poison Inhalation Hazard: no data available

CHLORONITROANILINES

Environmental Hazards: YES

IMDG

UN number: 2237

Packing group: III

EMS-No: no data available

Proper shipping name: CHLORONITROANILINES

IATA

UN number: 2237

Packing group: III

Class: 6.1

Proper shipping name: CHLORONITROANILINES

SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

SECTION 16: Other information

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Revision Summary

SDS sections updated v1

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