

SAFETY DATA SHEET

Version: v1

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

1.1 Product identifiers

Product name : 1-Chloro-4-nitrobenzene solution
Product Number : C108540
Brand : aladdin
CAS-No. : 100-00-5(Methanol)

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 :
Address :
Telephone :
Fax : no data available

1.4 Emergency telephone number

CHEMTREC®, Inside the USA :
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)

Flammable liquid: H225

Acute toxicity, Oral (Category 3), H301

Acute toxicity, Inhalation (Category 3), H331

Acute toxicity, Dermal (Category 3), H311

Skin corrosion/irritation (Category 3), H316

Germ cell mutagenicity (Category 2), H341

Carcinogenicity (Category 2), H351

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)

H225	Highly Flammable liquid and vapor
H316	Causes mild skin irritation
H341	Suspected of causing genetic defects
H351	Suspected of causing cancer
H370	Causes damage to organs
H373	Causes damage to organs through prolonged or repeated exposure
H411	Toxic to aquatic life with long lasting effects
H301+H311+H331	Toxic if swallowed, in contact with skin or if inhaled

Precautionary statement(s)

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surface, sparks, open flames and other ignition sources. - No smoking.
P202	Do not handle until all safety precautions have been read and understood.
P233	Keep container tightly closed.
P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/.../] equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
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.

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Synonyms	: 4-Nitrochlorobenzene; p-Chloronitrobenzene; 4-Chloronitrobenzene
Formula	: C ₆ H ₄ ClNO ₂
Molecular weight	: 157.55

Component	Classification	Concentration
Methanol		

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Component	Classification	Concentration
CAS-No. : 67-56-1 EC-No. :	Flam. Liq. 2; Acute Tox. 3; STOT SE 1; H225, H301, H331, H311, H370 Concentration limits: >= 10 %: STOT SE 1, H370; 3 - < 10 %: STOT SE 2, H371	
1-Chloro-4-nitrobenzene		
CAS-No. : 100-00-5 EC-No. : 202-809-6	Acute toxicity Category 3; Skin corrosion / prick Excitation Category 3; Germ cell mutagenicity Category 2; Carcinogenicity category 2; Specificity Target organ systemic toxicity (repeated exposure) Category 2; Acute (short-term) aquatic hazards Category 2; Long term aquatic hazard category 2; H301, H331, H311, H316, H341, H351, H373, H401, H411	

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

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

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

In case of eye contact

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

If swallowed

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

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

Water Foam Carbon dioxide (CO2) Dry powder

Unsuitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NOx) 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 firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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

6.2 Environmental precautions

Do not let product enter drains.

6.3 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 carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

no data available

7.2 Conditions for safe storage, including any incompatibilities

Store at 2-8 °C.

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

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

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 EN166(EU).

Skin protection

Gloves must be checked before use. Please use proper methods to remove the gloves (do not touch the outer surface of the gloves), and avoid any skin parts contacting the product. After use, please handle the contaminated gloves carefully according to relevant laws and regulations and effective laboratory rules and procedures. Please clean and blow dry the protective gloves selected for your hands must meet the specifications given in regulation (EU) 2016 / 425 and the en 374 standard derived from it.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., 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 fullface respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	no data available
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	no data available
f) Initial boiling point and boiling range	no data available
g) Flash point	no data available
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	1

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n) Water solubility	no data available
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

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

no data available

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

Strong oxidizing agents, Strong bases

10.6 Hazardous decomposition products

no data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 420 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity).

Liver:Fatty liver degeneration.

Blood:Methemoglobinemia-Carboxyhemoglobin.

LC50 Inhalation - 4 h - 0.51 mg/l - dust/mist LD50 Dermal - 300 mg/kg

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Skin corrosion/irritation

Skin - Rabbit Result: Mild skin irritation

Serious eye damage/eye irritation

Eyes - Rabbit Result: No eye irritation

Respiratory or skin sensitisation

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification. Limited evidence of carcinogenicity in animal studies

Reproductive toxicity

Laboratory experiments have shown mutagenic effects. In vitro tests showed mutagenic effects

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.

Aspiration hazard

no data available

Additional Information

May cause cyanosis.

SECTION 12: Ecological information**12.1 Toxicity**

Toxicity to daphnia and other aquatic EC50 - Daphnia magna (Water flea) - 2.7 mg/l - 48 h invertebrates Toxicity to algae Growth inhibition EC50 - Chlorella pyrenoidosa - 4.9 mg/l - 96 h

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

12.3 Bioaccumulative potential

Bioaccumulation Oncorhynchus mykiss (rainbow trout) - 36 d - 0.780 µg/l(1-Chloro-4-nitrobenzene)

Bioconcentration factor (BCF): 108

12.4 Mobility in soil

no data available

12.5 Results of PBT and vPvB assessment

no data available

12.6 Other adverse effects

no data available

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SECTION 13:**13.1 Disposal considerations****Product**

Recycle to process, if possible. Consult your local regional authorities and an expert of disposal. You may be able to dissolve or mix material with a combustible solvent and little by little burn in a chemical incinerator equipped with an afterburner and scrubber system. If a large amount of the substance is burned at a time, an explosion may occur. Observe all federal, state and local regulations when disposing of the substance.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information**DOT (US)**

UN number: 1230

Packing group: II

Class: 3(6.1)(8)

Proper shipping name: 1-Chloro-4-nitrobenzene solution

Reportable Quantity(RQ): no data available

Poison Inhalation Hazard: no data available

Environmental Hazards: NO

IMDG

UN number: 1230

Packing group: II

EMS-No: no data available

Proper shipping name: 1-Chloro-4-nitrobenzene solution

IATA

UN number: 1230

Packing group: II

Class: 3(6.1)(8)

Proper shipping name: 1-Chloro-4-nitrobenzene solution

SECTION 15: Regulatory information

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

SECTION 16: Other information**Prepared By**

Regulatory Affairs

Email: QualityAssurance@aladdinsci.com

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SDS sections updated v1

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