

4-Chloronitrobenzene-d₄

Section 1. Chemical product and company identifications

Product code: D-5469

Chemical formula: C₆D₄ClNO₂

CAS: 68239-23-6

CAS (unlabelled): 100-00-5

Synonyms: *p*-Chloronitrobenzene, 1-Chloro-4-nitrobenzene

Supplier / Manufacturer:

C/D/N Isotopes Inc.

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Website: www.cdnisotopes.com

In case of emergency:

TOXYSKAN HOTLINE: 1-855-780-0599

Section 2. Hazards identifications

GHS (Globally Harmonized System of Classification and Labelling of Chemicals):

GHS Classification:

- Acute toxicity, Oral (Category 3)
- Acute toxicity, Dermal (Category 3)
- Acute toxicity, Inhalation (Category 3)
- Germ cell mutagenicity (Category 2)
- Carcinogenicity (Category 2)
- Specific target organ toxicity - repeated exposure (Category 2)

GHS Label elements:

- Pictograms:   
- Signal word: Danger

Hazards statement:

- H301 + H311 + H331 Toxic if swallowed, in contact with skin or inhaled.
- H341 Suspected of causing genetic defects.
- H351 Suspected of causing cancer.
- H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statement:

- P201 Obtain special instructions before use.
- P202 Do not handle until all safety precautions have been read and understood.
- P260 Do not breathe dust/fume/gas/mist/vapours/spray.
- 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.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- P302 + P350 IF ON SKIN: Wash with plenty of soap and water
- P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P361 Remove/Take off immediately all contaminated clothing.
- P403 + P235 Store in a well-ventilated place. Keep cool.
- P405 Store locked up.
- P501 Dispose of contents/ container to an approved waste disposal plant.

Section 3. Composition and information on ingredients

<u>Name</u>	<u>CAS</u>	<u>Concentration %</u>
4-Chloronitrobenzene-d ₄	68239-23-6	> 98

Section 4. First aid measures

Eye contact: Flush eyes with water as a precaution.

Skin contact: Wash off with soap and plenty of water. Consult a physician.

Inhalation: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

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

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Indication of immediate medical attention and special treatment needed, if necessary: No data available.

Most important symptoms and effects, both acute and delayed: No data available.

Section 5. Firefighting measures

Flammability of the product: Combustible at high temperature.

Products of combustion: Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides, hydrogen chloride gas.

Firefighting media and instructions: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Section 6. Accidental release measures

Personal precautions: Use personal protective equipment. Avoid dust formation. Ensure adequate ventilation. Avoid breathing dust.

Environmental precautions: Do not let product enter drains. Discharge into the environment must be avoided.

Methods for cleaning up: Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

Section 7. Handling and storage

Handling: Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation.

Storage: Store at room temperature. Adequate ventilation.

Section 8. Exposure Controls, Personal Protections

Engineering controls: Use mechanical exhaust or laboratory fumehood to avoid exposure.

Eyes: Safety glasses with side-shields conforming to NIOSH (US) or EN 166 (EU).

Respiratory: Where risk assessment shows air-purifying respirators are appropriate use a full-face 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).

Hands: Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Skin/body: Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Section 9. Physical and chemical properties (unlabelled)

Molecular weight: 157.55 g/mol

Physical status: Solid

Color: Light yellow

Odour: No data available

Density: No data available

Melting point: 83 - 84 °C (181 - 183 °F)

Boiling point: 242 °C (468 °F)

Vapour pressure: No data available

Vapour density: No data available

Partition coefficient (octanol/water): log Pow: 2.39

Water solubility: 225 mg/L

Lower explosion limit: No data available.

Upper explosion limit: No data available.

Auto-ignition temperature: 510 °C (950 °F)

Flash point: 127 °C (261 °F)

Section 10. Stability and reactivity

Stability and reactivity: Stable under recommended storage conditions.

Incompatibility: Strong oxidizing agents.

Products of combustion: Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides, hydrogen chloride gas.

Reactivity conditions: No data available.

Section 11. Toxicological information (unlabelled)

Toxicological data: 1-Chloro-4-nitrobenzene

Information on ingredients:

<u>Name</u>	<u>CAS</u>	<u>LD₅₀</u>	<u>LC₅₀</u>
1-Chloro-4-nitrobenzene	100-00-5	Oral - Rat - 294 mg/kg Dermal - Rabbit - 750 mg/kg	No data available

Potential acute effects

- **Eyes:** No data available.
- **Skin:** Toxic if absorbed through skin.
- **Inhalation:** Toxic if inhaled.
- **Ingestion:** Toxic if swallowed.

Potential chronic effects

- **Carcinogenic effects:** 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. IARC: 3 - Group 3: Not classifiable as to its carcinogenicity to humans (1-Chloro-4-nitrobenzene). ACGIH: A3 - Animal carcinogen.
- **Mutagenic effects:** Suspected of causing genetic defects.
- **Teratogenic effects:** No data available.
- **Medical conditions aggravated by overexposure:** May cause damage to organs through prolonged or repeated exposure.

Section 12. Ecological information

Ecological data:

<u>Name</u>	<u>Results</u>	<u>Species</u>	<u>Period</u>
1-Chloro-4-nitrobenzene	14.36 mg/l LC50	Brachydanio rerio	96 h
	2.7 mg/l EC50	Daphnia magna	48 h
	4.9 mg/l EC50	Chlorella pyrenoidosa	96 h

Effects on environment: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Mobility: No data available.

Environmental precautions: No data available.

Persistence and degradability: No data available.

Bioaccumulative potential: Oncorhynchus mykiss- 36 d - 0.78 µg/l. Bioconcentration factor (BCF): 108.

Section 13. Disposal considerations

Waste disposal: Contact a licensed professional waste disposal service to dispose of this material.

Section 14. Transportation information

Classification DOT/IMDG/IATA label:

Shipping name: Chloronitrobenzenes, solid

UN number: UN1578

Class: 6.1

Packaging group: II

Additional information: None

Section 15. Regulatory information

UNITED STATES: NFPA classification



Health: 3
Flammable: 1
Reactivity: 0
Special conditions: None

Legend: 4: Severe, 3: High, 2: Moderate, 1: Slightly, 0: Not hazardous

U.S. Federal regulations:

California proposition 65 requirements : Not listed
SARA section 313 (specific toxic chemical listings) : Not listed
CERCLA reportable quantity : Not listed
Sections 302-304 reportable quantity : Not listed
Community Right-to-Know (Sections 311 and 312) : Not Listed

Section 16. Additional information

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Elaborated by: Toxyscan Inc., 1-866-780-0599

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This safety data sheet has been prepared in accordance with the OSHA (USA), WHMIS (Canada) / GHS classification rules in effect at the time of writing.