

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

1.1. Product identifier

Product name: * 1-CHLORO-2,4-DINITROBENZENE
CAS number: 97-00-7
EINECS number: 202-551-4
Index number: 610-003-00-4
Product code: OR1867
Synonyms: * 2,4-DINITROCHLOROBENZENE
1-CHLORO-2,4-DINITROBENZENE

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

1.3. Details of the supplier of the safety data sheet

Company name: Apollo Scientific Ltd
Units 3 & 4
Parkway
Denton
Manchester
M34 3SG
UK
Tel: 0161 337 9971
Fax: 0161 336 6932
Email: david.tideswell@apolloscientific.co.uk

1.4. Emergency telephone number

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Acute Tox. 4: H302; Acute Tox. 2: H310; Skin Irrit. 2: H315; STOT RE 1: H372; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Eye Dam. 1: H318; Skin Sens. 1A: H317

Most important adverse effects: Harmful if swallowed. Fatal in contact with skin. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Causes damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements:
Hazard statements: H302: Harmful if swallowed.

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H310: Fatal in contact with skin.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H318: Causes serious eye damage.

H372: Causes damage to organs through prolonged or repeated exposure.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

Signal words: Danger

Hazard pictograms: GHS06: Skull and crossbones

GHS08: Health hazard

GHS05: Corrosion

GHS09: Environmental



Precautionary statements: P333+313: If skin irritation or rash occurs: Get medical attention.

P309+311: IF exposed or if you feel unwell: Call a POISON CENTER.

P262: Do not get in eyes, on skin, or on clothing.

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.1. Substances

Chemical identity: 1-CHLORO-2,4-DINITROBENZENE

CAS number: 97-00-7

EINECS number: 202-551-4

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water. Consult a doctor.

Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion: Wash out mouth with water. Consult a doctor.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

[cont...]

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Inhalation: Exposure may cause coughing or wheezing.

Delayed / immediate effects: Delayed effects can be expected after long-term exposure.

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

Immediate / special treatment: Immediate medical attention is required. Show this safety data sheet to the doctor in attendance.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Carbon dioxide, dry chemical powder, foam. Suitable extinguishing media for the surrounding fire should be used.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes of carbon dioxide / carbon monoxide. Nitrogen oxides (NO_x). Hydrogen chloride (HCl).

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Do not attempt to take action without suitable protective clothing - see section 8 of SDS.
Do not create dust.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid direct contact with the substance. Avoid the formation or spread of dust in the air.
Only use in fume hood. Handle with care. Avoid jolting, friction and impact. Avoid shock and friction. Avoid all contact.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed. May explosively decompose on heating, shock, friction, etc.

[cont...]

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Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

DNEL / PNEC No data available.

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency. Respiratory protective device with particle filter.

Hand protection: Protective gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Crystals

Colour: Yellow

Odour: Almond-like

Evaporation rate: No data available.

Oxidising: No data available.

Solubility in water: Insoluble

Viscosity: No data available.

Boiling point/range °C: 315

Melting point/range °C: 50-54

Flammability limits %: lower: 2%

upper: 22%

Flash point °C: 194

Part.coeff. n-octanol/water: No data available.

Autoflammability °C: No data available.

Vapour pressure: No data available.

Relative density: 1.498

pH: No data available.

VOC g/l: No data available.

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

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10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.
Decomposition may occur on exposure to conditions or materials listed below. May explosively decompose on heating, friction, shock.

10.4. Conditions to avoid

Conditions to avoid: Heat. Shock. Sources of ignition.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes of carbon dioxide / carbon monoxide. Nitrogen oxides (NO_x). Hydrogen chloride (HCl).

Section 11: Toxicological information

11.1. Information on toxicological effects

Toxicity values:

Route	Species	Test	Value	Units
ORAL	RAT	LD50	640	mg/kg
DERMAL	RBT	LD50	130	mg/kg

Hazardous ingredients:

1-CHLORO-2,4-DINITROBENZENE

DERMAL	RBT	LD50	130	mg/kg
ORAL	RAT	LD50	640	mg/kg

Relevant hazards for product:

Hazard	Route	Basis
Acute toxicity (ac. tox. 4)	ING	Hazardous: calculated
Acute toxicity (ac. tox. 2)	DRM	Hazardous: calculated
Skin corrosion/irritation	DRM	Hazardous: calculated
Serious eye damage/irritation	OPT	Hazardous: calculated
STOT-repeated exposure	-	Hazardous: calculated

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

[cont...]

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Inhalation: Exposure may cause coughing or wheezing.

Delayed / immediate effects: Delayed effects can be expected after long-term exposure.

Other information: RTECS: CZ0525000

Section 12: Ecological information

12.1. Toxicity

Ecotoxicity values:

Species	Test	Value	Units
Daphnia magna	48H EC50	0.49	ml/l
ZEBRAFISH (Brachydanio rerio)	96H LC50	0.32	mg/l

Hazardous ingredients:

1-CHLORO-2,4-DINITROBENZENE

Daphnia magna	48H EC50	0.49	ml/l
ZEBRAFISH (Brachydanio rerio)	96H LC50	0.32	mg/l

12.2. Persistence and degradability

Persistence and degradability: No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: No data available.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: MATERIAL SHOULD BE DISPOSED OF IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS

Disposal of packaging: Dispose of as special waste in compliance with local and national regulations Observe all federal, state and local environmental regulations.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

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14.1. UN number

UN number: UN3441

14.2. UN proper shipping name

Shipping name: CHLORODINITROBENZENES, SOLID

14.3. Transport hazard class(es)

Transport class: 6.1

14.4. Packing group

Packing group: II

14.5. Environmental hazards

Environmentally hazardous: Yes

Marine pollutant: Yes

14.6. Special precautions for user

Special precautions: No special precautions.

Tunnel code: D/E

Transport category: 2

Section 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

* Data predicted using computational software. The OECD QSAR-Toolbox for grouping chemicals into categories. Developed by LMC bulgaria.

<http://echa.europa.eu/support/oeqd-qsar-toolbox>

~ Data predicted using computational software ACD/ToxSuite v 2.95.1 Copyright 1994-2009 ACD/labs, Copyright 2001-2009 Pharma Algorithms, Inc, Advanced Chemistry Development, Inc (ACD/Labs). http://www.acdlabs.com/products/pc_admet/tox/tox/

Phrases used in s.2 and s.3: H302: Harmful if swallowed.
H310: Fatal in contact with skin.
H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H318: Causes serious eye damage.

[cont...]

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H372: Causes damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

Legal disclaimer: The material is intended for research purposes only and should be handled exclusively by those who have been fully trained in safety, laboratory and chemical handling procedures. The above information is believed to be correct to the best of our knowledge. The above information is believed to be correct to the best of our knowledge at the date of its publication, but should not be considered to be all inclusive. It should be used only as a guide for safe handling, storage, transportation and disposal. We cannot guarantee that the hazards detailed in this document are the only hazards that exist for this product. This is not a warranty and Apollo Scientific Ltd shall not be held liable for any damage resulting from handling or from contact with the above product.