

Safety Data Sheet PARADICHLOROBENZENE

SDS no. F8AJ7GL7 • Version 1.0 • Date of issue: 2024-06-30

SECTION 1: Identification

GHS Product identifier

Product name PARADICHLOROBENZENE

Other means of identification

Name Product Code

PARADICHLOROBENZENE LR
p-Dichlorobenzene,
1,4-Dichlorobenzene,
Paracide, PDB

PL099

Recommended use of the chemical and restrictions on use

Moth repellent, general insecticide, germicide, space odourant, manufacture of 2,5-dichloroaniline, dyes, intermediates, pharmacy, agriculture (fumigating soil) and laboratory reagent.

Additional information: This material has been the subject of a PEC report by NICNAS. For further information see the National Industrial Chemicals Notification and Assessment Scheme, Priority Existing Chemical Assessment Report. This can be downloaded at:
<http://www.nicnas.gov.au/Publications/CAR/PEC/PEC13.asp>

Supplier's details

Name ChemSupply Australia Pty Ltd
Address 38-50 Bedford Street
5013 Gillman South Australia
Australia

Telephone 08 8440 2000
email www.chemsupply.com.au

Emergency phone number

CHEMCALL 1800 127 406 (Australia) / +64-4-917-9888 (International)

SECTION 2: Hazard identification

General hazard statement

Dangerous goods of Class 9 (Miscellaneous Dangerous Goods) are incompatible in a placard load with any of the following:
Class 1, Class 5, if the Class 9 dangerous goods are fire risk substances.

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Carcinogenicity, Cat. 2
- Serious eye damage/eye irritation, Cat. 2A
- Hazardous to the aquatic environment, short-term (acute), Cat. 1
- Hazardous to the aquatic environment, long-term (chronic), Cat. 1

GHS label elements, including precautionary statements

Pictograms



Signal word

Warning

Hazard statement(s)

H319	Causes serious eye irritation
H351	Suspected of causing cancer
H410	Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/container to an approved waste disposal facility

SECTION 3: Composition/information on ingredients

Mixtures

Molecular weight: 147.01

Components

Component	CAS no.	Concentration
1,4-DICHLOROBENZENE (EC no.: 203-400-5; Index no.: 602-035-00-2)	106-46-7	100 - 100 % (weight)
CLASSIFICATIONS: Carcinogenicity, Cat. 2; Serious eye damage/eye irritation, Cat. 2A; Hazardous to the aquatic environment, short-term (acute), Cat. 1; Hazardous to the aquatic environment, long-term (chronic), Cat. 1. HAZARDS: H319 - Causes serious eye irritation; H351 - Suspected of causing cancer [route]; H400 - Very toxic to aquatic life; H410 - Very toxic to aquatic life with long lasting effects.		

SECTION 4: First-aid measures

Description of necessary first-aid measures

General advice

For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor (at once).

First Aid Facilities: Maintain eyewash fountain in work area.

If inhaled	If inhaled, remove from contaminated area to fresh air immediately. Apply artificial respiration if not breathing. If breathing is difficult, give oxygen. Immediately obtain medical aid if cough or other symptoms appear.
In case of skin contact	Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. If symptoms develop seek medical attention.
In case of eye contact	Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. In all cases of eye contamination it is a sensible precaution to seek medical advice.
If swallowed	Rinse mouth thoroughly with water immediately, repeat until all traces of product have been removed. DO NOT INDUCE VOMITING. Seek medical advice if effects persist.

Most important symptoms/effects, acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

Indication of immediate medical attention and special treatment needed, if necessary

For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

SECTION 5: Fire-fighting measures

Suitable extinguishing media

Small fire: Use dry chemical, CO₂, water spray or foam.

Large fire: Use water spray, fog or foam.

If safe to do so, move undamaged containers from the fire area. Cool containers with flooding quantities of water until well after the fire is out.

Specific hazards arising from the chemical

Hazards from Combustion Products: May liberate toxic fumes in fire (oxides of carbon, hydrogen chloride, chlorine and phosgene).

May burn but do not ignite readily. Containers may explode when heated. Runoff may pollute waterways. Fire or heat may produce irritating, poisonous and/or corrosive gases.

Special protective actions for fire-fighters

Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) operated in positive pressure mode. Fight fire from safe location.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Evacuate the area of all non-essential personnel. Avoid substance contact. Avoid generation of dusts: do not inhale dusts. Ensure supply of fresh air in enclosed rooms.

Wear protective clothing specified for normal operations (see Section 8)

Methods and materials for containment and cleaning up

Do NOT touch or walk through this product. Stop leak if safe to do so. Prevent entry into waterways, drains, confined areas. Prevent dust cloud. Use clean non-sparking tools to collect material and place it into loosely-covered plastic containers for later disposal.

SEEK EXPERT ADVICE ON HANDLING AND DISPOSAL.

SECTION 7: Handling and storage

Precautions for safe handling

Avoid generation or accumulation of dusts. Avoid prolonged or repeated contact with skin, eyes and clothing. Use in well ventilated areas away from all ignition sources. In case of insufficient ventilation, wear suitable respiratory equipment. Wash hands and face thoroughly after working with material.

Conditions for safe storage, including any incompatibilities

Store in a cool, dry place. Store in well ventilated area. Keep containers closed at all times. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 106-46-7

1,4-DICHLORO BENZENE

AU/SWA (Australia): 50 ppm; 300 mg/m³ STEL inhalation; 25 ppm; 150 mg/m³ TWA inhalation; NIOSH: Ca, See Appendix A REL inhalation;

Appropriate engineering controls

In industrial situations maintain the concentrations values below the TWA. This may be achieved by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

The use of a face shield, chemical goggles or safety glasses with side shield protection as appropriate. Must comply with Australian Standards AS 1337 and be selected and used in accordance with AS 1336.

Skin protection

Hand Protection: Ensure hand protection complies with AS 2161, Occupational protective gloves - Selection, use and maintenance.

Body protection

Clean clothing or protective clothing should be worn, preferably with an apron. Clothing for protection against chemicals should comply with AS 3765 Clothing for Protection Against Hazardous Chemicals.

Respiratory protection

Where ventilation is not adequate, respiratory protection may be required. Avoid breathing dust, vapours or mists. Respiratory protection should comply with AS 1716 - Respiratory Protective Devices and be selected in accordance with AS 1715 - Selection, Use and Maintenance of Respiratory Protective Devices. Filter capacity and respirator type depends on exposure levels. In event of emergency or planned entry into unknown concentrations a positive pressure, full-facepiece SCBA should be used. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state

Solid

Appearance

Volatile, white crystals.

Color

No data available.

Odor

Moth-powder odour.

Odor threshold

Penetrating aromatic odour.

Melting point/freezing point

52 - 54 °C

Boiling point or initial boiling point and boiling range

173 - 175 °C

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Flammability
Lower and upper explosion limit/flammability limit

No data available.

Flammable Limits - Lower: 1.7 Vol% Flammable Limits -
Upper: 5.9 Vol%

Flash point
Explosive properties
Auto-ignition temperature
Decomposition temperature
Oxidizing properties
pH
Kinematic viscosity
Solubility

66 °C (closed cup)

No data available.

>500 °C

No data available.

No data available.

No data available.

No data available.

Solubility in Water: Insoluble. Solubility in Organic Solvents:

Soluble in ethanol, benzene, ether, chloroform, carbon
disulfide and acetone.

Log P(o/w): 3.44

0.8 hPa (20 °C)

No data available.

Specific Gravity: ~1.23

5.07 (air=1)

No data available.

Partition coefficient n-octanol/water (log value)

Vapor pressure

Evaporation rate

Density and/or relative density

Relative vapor density

Particle characteristics

Supplemental information regarding physical hazard classes

No data available.

Further safety characteristics (supplemental)

Other Information: Refractive index: 1.5267 (589 nm, 70 °C).

Saturation concentration: 5 g/m³ (20 °C).

Sublimes readily.

SECTION 10: Stability and reactivity

Reactivity

Stable under normal conditions of storage and handling.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

Contact with strong oxidizing agents may increase risk of fire and explosion. Liquid paradichlorobenzene may attack some forms of plastics (e.g. styrene acrylonitrile, acrylonitrile-butadiene-styrene), rubber and coatings.

Hazardous Polymerization: Will not occur.

Conditions to avoid

Exposure to moisture. Incompatibles.

Incompatible materials

Strong oxidising agents, alkali metals, alkaline earth metals. Aluminium.

Hazardous decomposition products

Carbon oxides, hydrogen chloride, chlorine and phosgene.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

Acute Toxicity - Oral: LD50 (rats): 500 mg/kg (RTECS)

Ingestion: Harmful if swallowed. May cause gastrointestinal irritation. Symptoms of overexposure may include headache, nausea, vomiting, diarrhea, dizziness, tiredness, dyspnoea, loss of appetite, weight loss, anorexia, cardiovascular disorders and changes in the blood pressure. May cause liver, kidney and CNS damage.

Inhalation: Inhalation of vapors causes irritation of eyes, throat, and skin. Exposure may cause nausea, vomiting, and hepatic necrosis with jaundice. Exposure may cause severe headache, runny nose, rhinitis (inflammation of the mucous membrane of the nose) and periorbital swelling. Causes respiratory tract irritation. May cause liver and kidney damage.

Skin corrosion/irritation

Acute Toxicity - Dermal: LD50 (rabbit): >2000 mg/kg (RTECS)

Irritating to skin. May cause a burning sensation and jaundice. Not absorbed through skin.

Serious eye damage/irritation

Causes eye irritation. Exposure to high vapor concentrations may cause irritation. May cause periorbital swelling.

Respiratory or skin sensitization

No data available

Germ cell mutagenicity

No data available.

Carcinogenicity

Paradichlorobenzene [106-46-7] is evaluated in the IARC Monographs as Group 2B: Possibly carcinogenic to humans.

Reproductive toxicity

No data available.

Summary of evaluation of the CMR properties

No data available.

Specific target organ toxicity (STOT) - single exposure

No data available.

Specific target organ toxicity (STOT) - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

Chronic Effects: Overexposure may cause delayed kidney injury. Possible cancer hazard based on tests with laboratory animals. Chronic ingestion may cause liver damage. May cause anemia and other blood cell abnormalities. Repeated or prolonged skin contact with concentrated vapours or solutions may cause skin irritation. Allergic reaction may develop and produce red blotching of skin.

Other Information: NICNAS has published a Priority Existing Report #13 on this chemical.

SECTION 12: Ecological information

Toxicity

Marine pollutant. Contain spillage.

Acute Toxicity - Fish: LC50(Danio rerio): 2.1 mg/l/24h

Acute Toxicity - Algae: IC50(desmodesmus subspicatus): 28 mg/l/48h

Persistence and degradability

Biodegradation: 20%/20 d - Not readily biodegradable.

Bioaccumulative potential

Log Pow: 3.44 bioaccumulation is not expected.

Mobility in soil

Moderately mobile in soil, log Koc: 2.79.

SECTION 13: Disposal considerations

Disposal methods

Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers.

Sewage disposal

Log Pow: 3.44 bioaccumulation is not expected.

Other disposal recommendations

Do not discharge this material into waterways, drains and sewers.

SECTION 14: Transport information

ADG (Road and Rail)

UN Number: 3077

Class: 9

Packing Group: III

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains 1,4-DICHLOROBENZENE)

Hazchem emergency action code (EAC)

2Z

IMDG

UN Number: 3077

Class: 9

Packing Group: III

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains 1,4-DICHLOROBENZENE)

IATA

UN Number: 3077

Class: 9

Packing Group: III

Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Contains 1,4-DICHLOROBENZENE)

SECTION 15: Regulatory information

Safety, health and environmental regulations specific for the product in question

Australia SUSMP

Poison Schedule: S5

SECTION 16: Other information

Further information/disclaimer

ChemSupply Australia Pty Ltd does not warrant that this product is suitable for any use or purpose. The user must ascertain the suitability of the product before use or application intended purpose. Preliminary testing of the product before use or application is recommended. Any reliance or purported reliance upon ChemSupply Australia Pty Ltd with respect to any skill or judgement or advice in relation to the suitability of this product of any purpose is disclaimed. Except to the extent prohibited at law, any condition implied by any statute as to the merchantable quality of this product or fitness for any purpose is hereby excluded. This product is not sold by description. Where the provisions of Part V, Division 2 of the Trade Practices Act apply, the liability of ChemSupply Australia Pty Ltd is limited to the replacement of supply of equivalent goods or payment of the cost of replacing the goods or acquiring equivalent goods.

Preparation information

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Standard for the Uniform Scheduling of Medicines and Poisons, Commonwealth of Australia

National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.'

Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', July 2020.

Safe Work Australia, 'National Guide for Classifying Hazardous Chemicals', July 2020.

Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants, December 2019

Safe Work Australia, Hazardous Chemical Information System (HCIS), hcis.safeworkaustralia.gov.au

IATA, Dangerous Goods Regulations (DGR)

IMO, International Maritime Dangerous Goods Code (IMDG)