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| Infosafe No™ | 1CH08 | Issue Date : July 2019 | RE-ISSUED by CHEMSUPP |
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Product Name : **PARADICHLOROBENZENE**

Classified as hazardous

1. Identification

GHS Product Identifier PARADICHLOROBENZENE

Company Name CHEM-SUPPLY PTY LTD (ABN 19 008 264 211)

Address 38 - 50 Bedford Street GILLMAN
SA 5013 Australia

Telephone/Fax Number Tel: (08) 8440-2000
Fax: (08) 8440-2001

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

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.

Other Names**Name****Product Code**

PARADICHLOROBENZENE LR

PL099

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

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>

Other Information

Chem-Supply 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 Chem-Supply 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 Chem-Supply 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.

2. Hazard Identification

GHS classification of the substance/mixture Hazardous to the Aquatic Environment - Acute Hazard: Category 1
Hazardous to the Aquatic Environment - Long-Term Hazard: Category 1
Carcinogenicity: Category 2
Eye Damage/Irritation: Category 2A

Signal Word (s) WARNING

Hazard Statement (s) H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H410 Very toxic to aquatic life with long lasting effects.

Pictogram (s) Environment, Health hazard

**Precautionary statement – Prevention**

P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P264 Wash thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P273 Avoid release to the environment.

Precautionary statement – Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313 If eye irritation persists: Get medical advice/attention.

Precautionary statement – Storage

P308+P313 IF exposed or concerned: Get medical advice/attention.
P405 Store locked up.



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| Precautionary statement – Disposal | P501 Dispose of contents/container to an approved waste disposal plant. |
| Other Information | Absorbed into the body by inhalation or ingestion. Not absorbed through skin. Eliminated in the urine as dichlorophenol. |

3. Composition/information on ingredients

| | | | | | |
|----------------------------------|-------------------|------------|-------------------|----------------------|--------------------|
| Chemical Characterization | Solid | | | | |
| Ingredients | <u>Name</u> | <u>CAS</u> | <u>Proportion</u> | <u>Hazard Symbol</u> | <u>Risk Phrase</u> |
| | p-Dichlorobenzene | 106-46-7 | 100 % | | |

4. First-aid measures

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| Inhalation | 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. |
| Ingestion | 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. |
| Skin | Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. If symptoms develop seek medical attention. |
| 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. |
| First Aid Facilities | Maintain eyewash fountain and safety shower in work area. |
| Advice to Doctor | Treat symptomatically based on judgement of doctor and individual reactions of the patient. |
| Other Information | For advice, contact the National Poisons Information Centre (Phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor. |

5. Fire-fighting measures

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| Hazards from Combustion Products | May liberate toxic fumes in fire (oxides of carbon, hydrogen chloride, chlorine and phosgene). |
| Specific Methods | No limitations to the type of extinguishing media. Small fire: Use dry chemical, CO ₂ , 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 | 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. |
| Hazchem Code | 2Z |
| Precautions in connection with Fire | Wear SCBA and structural firefighter's uniform. |

6. Accidental release measures

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| Spills & Disposal | 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. |
| Personal Precautions | 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. |
| Personal Protection | Wear protective clothing specified for normal operations (see Section 8) |
| Clean-up Methods - Small Spillages | Sweep up (avoid generating dust) and remove to a suitable, clearly labelled container for disposal in accordance with local regulations. |
| Environmental Precautions | Prevent further leakage or spillage and prevent from entering drains |

7. Handling and storage

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| 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, |
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Conditions for safe storage, including any incompatibilities wear suitable respiratory equipment. Wash hands and face thoroughly after working with material. Store in a cool, dry place. Store in well ventilated area. Keep containers closed at all times. Store away from oxidizing agents.

8. Exposure controls/personal protection

| Occupational exposure limit values | <u>Name</u> | STEL | | TWA | | <u>Footnote</u> |
|---|--|-------------------------|------------|-------------------------|------------|-----------------|
| | | <u>mg/m³</u> | <u>ppm</u> | <u>mg/m³</u> | <u>ppm</u> | |
| | p-Dichlorobenzene | 300 | 50 | 150 | 25 | |
| Other Exposure Information | These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity. A time weighted average (TWA) has been established for Paradichlorobenzene (Safe Work Australia) of 150 mg/m ³ , (25 ppm). The corresponding STEL level is 300 mg/m ³ , (50 ppm). The STEL (Short Term Exposure Limit) is an exposure value that should not be exceeded for more than 15 minutes and should not be repeated for more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. | | | | | |
| 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. | | | | | |
| 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. | | | | | |
| Eye 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. | | | | | |
| Hand Protection | Wear gloves of impervious material conforming to AS/NZS 2161: Occupational protective gloves - Selection, use and maintenance. Final choice of appropriate glove type will vary according to individual circumstances. This can include methods of handling, and engineering controls as determined by appropriate risk assessments. | | | | | |
| Personal Protective Equipment | Personal protective equipment should not solely be relied upon to control risk and should only be used when all other reasonably practicable control measures do not eliminate or sufficiently minimise risk. Guidance in selecting personal protective equipment can be obtained from Australian, Australian/New Zealand or other approved standards. | | | | | |
| Footwear | Safety boots in industrial situations is advisory, foot protection should comply with AS 2210, Occupational protective footwear - Guide to selection, care and use. | | | | | |
| 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. | | | | | |
| Hygiene Measures | Always wash hands before smoking, eating or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using. | | | | | |

9. Physical and chemical properties

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| Form | Solid |
| Appearance | Volatile, white crystals. |
| Odour | Moth-powder odour. |
| Melting Point | 52 - 54 °C |
| Boiling Point | 173 - 175 °C |
| Solubility in Water | Insoluble. |
| Solubility in Organic Solvents | Soluble in ethanol, benzene, ether, chloroform, carbon disulfide and acetone. |



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| Specific Gravity | ~1.23 |
| Vapour Pressure | 0.8 hPa (20 °C) |
| Vapour Density (Air=1) | 5.07 (air=1) |
| Odour Threshold | Penetrating aromatic odour. |
| Partition Coefficient: n-octanol/water | Log P(o/w): 3.44 |
| Flash Point | 66 °C (closed cup) |
| Flammability | Combustible. |
| Auto-Ignition Temperature | >500 °C |
| Flammable Limits - Lower | 1.7 Vol% |
| Flammable Limits - Upper | 5.9 Vol% |
| Molecular Weight | 147.01 |
| Other Information | Refractive index: 1.5267 (589 nm, 70 °C). Saturation concentration: 5 g/m ³ (20 °C). Sublimes readily. |

10. Stability and reactivity

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| Chemical Stability | Stable under normal use conditons. |
| 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. |
| 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. |

11. Toxicological Information

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| Acute Toxicity - Oral | LD50 (rats): 500 mg/kg (RTECS) |
| Acute Toxicity - Dermal | LD50 (rabbit): >2000 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 | Irritating to skin. May cause a burning sensation and jaundice. Not absorbed through skin. |
| Eye | Causes eye irritation. Exposure to high vapor concentrations may cause irritation. May cause periorbital swelling. |
| Carcinogenicity | Paradichlorobenzene [106-46-7] is evaluated in the IARC Monographs as Group 2B: Possibly carcinogenic to humans. |
| 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. |
| Mutagenicity | No evidence of mutagenic properties. |



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Other Information NICNAS has published a Priority Existing Report #13 on this chemical.**12. Ecological information**

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| Persistence and degradability | Biodegradation: 20%/20 d - Not readily biodegradable. |
| Mobility | Moderately mobile in soil, log Koc: 2.79. |
| Bioaccumulative Potential | Log Pow: 3.44 bioaccumulation is not expected. |
| Environmental Protection | Do not allow product to enter drains, waterways or sewers. Very toxic to aquatic organisms. May cause long-term adverse effects in the aquatic organisms. 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 |

13. Disposal considerations**Disposal Considerations** Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.**14. Transport information**

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| Transport Information | 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. |
| U.N. Number | 3077 |
| UN proper shipping name | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. |
| Transport hazard class(es) | 9 |
| Hazchem Code | 2Z |
| Packing Group | III |
| EPG Number | 9C1 |
| IERG Number | 47 |
| Other Information | SPECIAL SPECIAL PROVISION AU01 States: Environmentally Hazardous Substances meeting the descriptions of UN 3077 or UN 3082 not subject to this Code when transported by road or rail; (a) packagings; (b) IBCs; or (c) any other receptacle not exceeding 500 kg(L). |

15. Regulatory information

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| Regulatory Information | Listed in the Australian Inventory of Chemical Substances (AICS). Not listed under WHS Regulation 2011, Schedule 10 - Prohibited carcinogens, restricted carcinogens and restricted hazardous chemicals. |
| Poisons Schedule | S5 |

16. Other Information

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|------------------------------|---|
| Literature References | 'Standard for the Uniform Scheduling of Medicines and Poisons .', Commonwealth of Australia. Lewis, Richard J. Sr. 'Hawley's Condensed Chemical Dictionary 13th. Ed.', Rev., John Wiley and Sons, Inc., NY, 1997. National Road Transport Commission, 'Australian Code for the Transport of Dangerous Goods by Road and Rail 7th. Ed.', 2007. Safe Work Australia, 'National Code of Practice for the Preparation of Safety Data Sheets for Hazardous Chemicals', 2011. Standards Australia, 'SAA/SNZ HB 76:2010 Dangerous Goods - Initial Emergency Response Guide', Standards Australia/Standards New Zealand, 2010. Safe Work Australia, 'Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]'. Safe Work Australia, 'Hazardous Chemical Information System, 2005'. Safe Work Australia, 'National Code of Practice for the Labelling of Safe Work Hazardous Substances (2011)'. |
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Safety Data Sheet

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**Contact
Person/Point**

Safe Work Australia, 'National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995) 3rd Edition]'.
Paul McCarthy Ph. (08) 8440 2000

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**Empirical Formula &
Structural Formula**

C6 H4 Cl2

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