



SAFETY DATA SHEET PARA-DICHLOROBENZENE REVISION 4, DATE 04 MAR 2024

1. IDENTIFICATION

Product Name	para-Dichlorobenzene
Other Names	1,4-Dichlorobenzene; PDCB; p-Dichlorobenzene
Uses	Disinfectant and deodorant.
Chemical Family	No Data Available
Chemical Formula	C ₆ H ₄ Cl ₂
Chemical Name	Benzene, 1,4-dichloro-
Product Description	No Data Available

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Redox Ltd	2 Swettenham Road Minto NSW 2566 Australia	+61-2-97333000
Redox Ltd	11 Mayo Road Wiri Auckland 2104 New Zealand	+64-9-2506222
Redox Inc.	3960 Paramount Boulevard Suite 107 Lakewood CA 90712 USA	+1-424-675-3200
Redox Chemicals Sdn Bhd	Suite 13A.03, Menara Summit Persiaran Kewajipan USJ1 47600 UEP Subang Jaya Selangor, Malaysia	+60-3-5614-2111

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Poisons Information Centre	Australia – Westmead NSW	1800-251525 131126
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
National Poison Centre	Malaysia	+60-4-6536-999
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust)

Schedule 5



Globally Harmonised System

Hazard Classification		Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)	
Hazard Categories		Serious Eye Damage/Irritation - Category 2 Carcinogenicity - Category 2 Acute Hazard To The Aquatic Environment - Category 1 Long-term Hazard To The Aquatic Environment - Category 1	
Pictograms			
Signal Word		Warning	
Hazard Statements		H319	Causes serious eye irritation.
		H351	Suspected of causing cancer.
		H410	Very toxic to aquatic life with long lasting effects.
Precautionary Statements	Prevention	P201	Obtain special instructions before use.
		P273	Avoid release to the environment.
		P280	Wear protective gloves/protective clothing/eye protection/face protection and suitable respirator.
	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.
		P308 + P313	IF exposed or concerned: Get medical advice.
		P337 + P313	If eye irritation persists: Get medical advice.
		P391	Collect spillage.
	Storage	P405	Store locked up.
	Disposal	P501	Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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Safe Work Australia

National Guide for Classifying Hazardous Chemicals under the Model WHS Regulations

Hazard Classification	Hazardous according to the criteria of Safe Work Australia under Model WHS Regulations
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
p-Dichlorobenzene	C6H4Cl2	106-46-7	<=100 %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed	IF SWALLOWED: Rinse mouth, then drink plenty of water. Do not induce vomiting. Get medical advice/attention. Never give anything by mouth to an unconscious person.
Eye	IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.
Skin	IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse. If skin irritation occurs, get medical advice/attention.
Inhaled	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
Advice to Doctor	If exposed or concerned, get medical advice/attention. Treat symptomatically. Ensure that attending medical personnel are aware of the identity and nature of the product(s) involved, and take precautions to protect themselves. *Most important symptoms and effects, both acute and delayed: Causes serious eye irritation. Suspected of causing cancer.
Medical Conditions Aggravated by Exposure	No information available.

5. FIRE FIGHTING MEASURES

General Measures	If safe to do so, move undamaged containers from fire area. Cool containers with water spray until well after fire is out. Dike fire-control water for later disposal.
Flammability Conditions	Combustible solid; May burn but does not ignite readily.
Extinguishing Media	Use dry chemical, Carbon dioxide (CO2), foam or water spray for extinction. Do not scatter spilled material with high-pressure water streams. *Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal foam can be used.
Fire and Explosion Hazard	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Hazardous Products of Combustion	On combustion, forms toxic and corrosive fumes including hydrogen chloride and phosgene.
Special Fire Fighting Instructions	Contain runoff from fire control or dilution water - Runoff may cause pollution.
Personal Protective Equipment	Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.
Flash Point	No Data Available
Lower Explosion Limit	No Data Available
Upper Explosion Limit	No Data Available
Auto Ignition Temperature	>500 °C
Hazchem Code	No Data Available

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure	Ensure adequate ventilation. ELIMINATE all ignition sources. Do not touch or walk through spilled material. Avoid
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	generating dust. Avoid breathing dusts or mists and contact with eyes, skin and clothing.
Clean Up Procedures	With clean shovel, place material into clean, dry container and cover loosely; move containers from spill area.
Containment	Stop leak if you can do it without risk. Prevent dust cloud. Prevent entry into waterways, sewers, basements or confined areas.
Decontamination	No information available.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.
Personal Precautionary Measures	Wear protective gloves/protective clothing/eye protection/face protection and suitable respirator (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Obtain special instructions before use - Do not handle until all safety precautions have been read and understood. Minimise dust generation and accumulation. Avoid breathing dusts or mists and contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/protective clothing/eye protection/face protection and suitable respirator (see SECTION 8). WARNING: May form combustible dust concentrations in air! Keep away from heat and sources of ignition - No smoking. Take precautionary measures against static discharges. Avoid release to the environment - Collect spillage (see SECTION 6).
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep container tightly closed. Keep away from heat and sources of ignition - No smoking. Keep away from food/feedstuffs and incompatible materials (see SECTION 10). Store locked up.
Container	Keep in the original container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	For p-Dichlorobenzene (CAS No. 106-46-7): - Safe Work Australia Exposure Standard: TWA = 25 ppm (150 mg/m³); STEL = 50 ppm (300 mg/m³); Suspected human carcinogen (Carc. 2). - New Zealand Workplace Exposure Standard [Adopted 2019]: TWA = 2 ppm (12 mg/m³); STEL = 10 ppm (60 mg/m³); Suspected human carcinogen (carcinogen category 2); Skin absorption (skin). - NIOSH REL: None established; NIOSH considers p-dichlorobenzene to be a potential occupational carcinogen as defined by the OSHA carcinogen policy. NIOSH recommends as part of its carcinogen policy that the "most protective" respirators be worn for p-dichlorobenzene at any detectable concentration. - OSHA PEL: TWA = 75 ppm (450 mg/m³). *Immediately dangerous to life or health (IDLH) concentration: 150 ppm.
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Protection Equipment	- Respiratory protection: Wear respiratory protection at any detectable concentration. Recommended: Organic vapour/particulate filter respirator, supplied air respirator or self-contained breathing apparatus (SCBA). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Safety glasses with side-shields or chemical goggles. - Hand protection: Wear protective gloves. Recommended: Solvent-resistant gloves, e.g. Nitrile rubber. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: Impervious clothing.
Special Hazards Precautions	No information available.

Work Hygienic Practices

Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Wash hands before breaks and at the end of workday. Take off contaminated clothing and wash it before reuse. Routine housekeeping should be instituted to ensure that dusts do not accumulate on surfaces.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	Crystalline powder or flake
Odour	Characteristic, mothball-like
Colour	Colourless or white
pH	No Data Available
Vapour Pressure	170 Pa (@ 20 °C)
Relative Vapour Density	5.08 Air = 1
Boiling Point	174 °C
Melting Point	53 °C
Freezing Point	No Data Available
Solubility	Practically insoluble in water
Specific Gravity	1.2 - 1.46
Flash Point	No Data Available
Auto Ignition Temp	>500 °C
Evaporation Rate	No Data Available
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	1.2 - 1.46
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	log Pow = 3.37
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	No Data Available
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.
Fast or Intensely Burning Characteristics	No information available.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	Combustible solid; May burn but does not ignite readily.

Reactions That Release Gases or Vapours	On combustion, forms toxic and corrosive fumes including hydrogen chloride and phosgene.
Release of Invisible Flammable Vapours and Gases	No information available.

10. STABILITY AND REACTIVITY

General Information	Reacts with strong oxidants; This generates fire and explosion hazard.
Chemical Stability	Stable under recommended storage conditions.
Conditions to Avoid	Avoid generating dust. Keep away from heat and sources of ignition.
Materials to Avoid	Incompatible/reactive with oxidising agents.
Hazardous Decomposition Products	Upon heating, toxic fumes are formed. On combustion, forms toxic and corrosive fumes including hydrogen chloride and phosgene.
Hazardous Polymerisation	No information available.

11. TOXICOLOGICAL INFORMATION

General Information	Information on toxicological effects: - Acute toxicity: Low acute toxicity. - Skin corrosion/irritation: No skin irritation (Rabbit) [OECD Test Guideline 404]. - Eye damage/irritation: Causes serious eye irritation. - Respiratory/skin sensitisation: Maximisation Test - Guinea pig: Negative [OECD Test Guideline 406]. - Germ cell mutagenicity: Ames test: negative [OECD Test Guideline 471]. - Carcinogenicity: Suspected of causing cancer. IARC Group 2B: Possibly carcinogenicity to humans. - Reproductive toxicity: No information available. - STOT (single exposure): The substance may cause effects on the blood. This may result in haemolytic anaemia. The substance may cause effects on the central nervous system. - STOT (repeated exposure): No information available. - Aspiration toxicity: No information available. Information on likely routes of exposure: - Ingestion: May cause diarrhoea. Ingestion over a long period may cause reversible neurological symptoms including unsteady gait, incoordination and tingling of the limbs. - Eye contact: The substance is irritating to the eyes; May cause redness, pain. - Skin contact: May cause irritation. - Inhalation: May cause irritation; Cough, sore throat, drowsiness, headache, nausea, shortness of breath, vomiting. Chronic effects: The substance may have effects on the liver, central nervous system, blood and lungs. This may result in liver function impairment, neuropathy and anaemia. This substance is possibly carcinogenic to humans.
Acute	
Ingestion	Acute toxicity (Oral): - LD50, Rat (male/female): >2,000 mg/kg bw. [ECHA].
Other	Acute toxicity (Dermal): - LD50, Rat (male/female): >2,000 mg/kg bw. [ECHA].
Inhalation	Acute toxicity (Inhalation): - LC50, Rat (male/female): >5.07 mg/L air [ECHA].
Carcinogen Category	Carc. 2

12. ECOLOGICAL INFORMATION

Ecotoxicity	Aquatic toxicity: - LC50, Fish (<i>Oncorhynchus mykiss</i>): 1.12 mg/l (96 h) [ECHA]. - EC50, Crustacea (<i>Daphnia magna</i>): 0.7 mg/l (48 h) [ECHA]. - NOEC, Algae: 0.57 mg/l (96 h) [ECHA].
Persistence/Degradability	Readily biodegradable (100 %, 28 d) [OECD Test Guideline 301C].
Mobility	No information available.
Environmental Fate	Very toxic to aquatic life with long lasting effects - Avoid release to the environment.
Bioaccumulation Potential	Bioconcentration factor (BCF): 296
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	Dispose of contents/container through a licensed disposal company and in accordance with local/regional/national regulations.
Special Precautions for Land Fill	No information available.

14. TRANSPORT INFORMATION

Land Transport (Australia)

ADG Code

Proper Shipping Name	para-Dichlorobenzene
Class	No Data Available
Subsidiary Risk(s)	No Data Available
EPG	171 Substances (Low to Moderate Hazard)
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	AU01
Comments	Not regulated as DG when transported by road or rail in packagings that do not incorporate a receptacle exceeding 500 kg(L) or IBCs.

Land Transport (Fiji)

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (para-Dichlorobenzene)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	171 Substances (Low to Moderate Hazard)
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available

Land Transport (Malaysia)

ADR Code

SAFETY DATA SHEET PARA-DICHLOROBENZENE REVISION 4, DATE 04 MAR 2024

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Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	171 Substances (Low to Moderate Hazard)
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (para-Dichlorobenzene)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	47 Low To Moderate Hazard Substances
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available

Land Transport (Papua New Guinea)

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (para-Dichlorobenzene)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	171 Substances (Low to Moderate Hazard)
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available

Land Transport (South Africa)

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (para-Dichlorobenzene)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
EPG	171 Substances (Low to Moderate Hazard)
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available

Land Transport (United States of America)
US DOT

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (para-Dichlorobenzene)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
ERG	171 Substances (Low to Moderate Hazard)

UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available

Sea Transport

IMDG Code

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (para-Dichlorobenzene)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available
EMS	F-A, S-F
Marine Pollutant	Yes

Air Transport

IATA DGR

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (para-Dichlorobenzene)
Class	9 Miscellaneous Dangerous Goods and Articles
Subsidiary Risk(s)	No Data Available
UN Number	3077
Hazchem	2Z
Pack Group	III
Special Provision	No Data Available

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
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15. REGULATORY INFORMATION

General Information	p-DICHLOROBENZENE
Poisons Schedule (Aust)	Schedule 5

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR002512
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National/Regional Inventories

Australia (AIIC)	Listed
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Canada (DSL)	Listed
Canada (NDSL)	Not Determined
China (IECSC)	Listed
Europe (EINECS)	203-400-5
Europe (REACH)	Not Determined
Japan (ENCS/METI)	Listed
Korea (KECI)	Listed
Malaysia (List of Classified Substances)	Not Determined
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Listed
Taiwan (TCSI)	Listed
USA (TSCA)	Listed
Mexico (INSQ)	Not Determined

16. OTHER INFORMATION

Related Product Codes	PADICH0200, PADICH0201, PADICH0202, PADICH0203, PADICH0204, PADICH0205, PADICH0206, PADICH0207, PADICH0208, PADICH0209, PADICH0210, PADICH0211, PADICH0212, PADICH0213, PADICH0214, PADICH0215, PADICH0300, PADICH1000, PADICH1001, PADICH1100, PADICH2000, PADICH3000, PADICH4400
Revision	4
Revision Date	04 Mar 2024
Reason for Issue	Updated SDS
Key/Legend	< Less Than > Greater Than AICS Australian Inventory of Chemical Substances atm Atmosphere CAS Chemical Abstracts Service (Registry Number) cm² Square Centimetres CO2 Carbon Dioxide COD Chemical Oxygen Demand deg C (°C) Degrees Celcius EPA (New Zealand) Environmental Protection Authority of New Zealand deg F (°F) Degrees Farenheit g Grams g/cm³ Grams per Cubic Centimetre g/l Grams per Litre HSNO Hazardous Substance and New Organism IDLH Immediately Dangerous to Life and Health immiscible Liquids are insoluable in each other. inHg Inch of Mercury inH2O Inch of Water K Kelvin kg Kilogram kg/m³ Kilograms per Cubic Metre lb Pound LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.

SAFETY DATA SHEET PARA-DICHLOROBENZENE REVISION 4, DATE 04 MAR 2024

LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.

ltr or **L** Litre

m³ Cubic Metre

mbar Millibar

mg Milligram

mg/24H Milligrams per 24 Hours

mg/kg Milligrams per Kilogram

mg/m³ Milligrams per Cubic Metre

Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.

mm Millimetre

mmH₂O Millimetres of Water

mPa.s Millipascals per Second

N/A Not Applicable

NIOSH National Institute for Occupational Safety and Health

NOHSC National Occupational Health and Safety Commission

OECD Organisation for Economic Co-operation and Development

Oz Ounce

PEL Permissible Exposure Limit

Pa Pascal

ppb Parts per Billion

ppm Parts per Million

ppm/2h Parts per Million per 2 Hours

ppm/6h Parts per Million per 6 Hours

psi Pounds per Square Inch

R Rankine

RCP Reciprocal Calculation Procedure

STEL Short Term Exposure Limit

TLV Threshold Limit Value

tne Tonne

TWA Time Weighted Average

ug/24H Micrograms per 24 Hours

UN United Nations

wt Weight