



Section 1: Identification of the Material and Supplier

Product Name: Deodorant Buttons

Other Names: 1,4-Dichlorobenzene; p-Dichlorobenzene

Proper shipping name (ADG Code): None assigned in Australia.

Recommended use: As a deodorant and air freshener in washrooms, toilets and urinals. To destroy moths, silverfish and their larvae in wardrobes, linen chests and drawers.

Supplier: Hunters Products (TAS) Pty. Ltd.,
A.C.N. 004 601 263

HEAD OFFICE

60 Gleadow Street,
INVERMAY TAS 7248
Tel: 03 6331 4755
Fax: 03 6334 1065

HOBART OFFICE

105 Albert Road,
MOONAH TAS 7009
Tel: 03 6228 7955
Fax: 03 6228 7988

BURNIE OFFICE

22 Pearl Street,
WIVENHOE TAS 7320
Tel: 03 6431 9627
Fax: 03 6432 2083

Emergency Phone Numbers:

Transport/Fire Emergency: 000 (Emergency services)
Medical Emergency: 131126 (Poisons Information Centre)

Section 2: Hazards Identification

Classified as hazardous according to criteria of Worksafe Australia.

Non-dangerous goods.

Risk Phrases: R: 50/53 Very toxic to aquatic organisms.
May cause long term adverse effects in the aquatic environment.

Safety Phrases: S: 23 Do not breathe vapour.
S: 24/25 Avoid contact with eyes and skin.
S: 51 Use only in well-ventilated areas.

Section 3: Composition/Information on Ingredients

Ingredients:

1,4-Dichlorobenzene [106-46-7] 99 %
Other ingredients deemed not to be hazardous to 100 %

Section 4: First Aid Measures

For advice, contact a Poisons Information Centre (Phone 131126) or a doctor.

Swallowed: If swallowed, do NOT induce vomiting.

Skin: If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water.

Eyes: If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes.

Inhaled: Remove from exposure, rest and keep warm. Seek medical advice.

First Aid facilities:

Recommended: Eye wash. Hand wash basin.

Advice to Doctor:

Product is p-dichorobenzene. May be irritating to skin and eyes. May be harmful if swallowed in large quantities. Contact Poisons Information Centre.

Aggravated medical conditions:

No data found.

Section 5: Fire Fighting Measures

HAZCHEM Code: None assigned.

Evacuate: No.

Extinguishant: Water fog or fine water spray.

Risk of violent reaction or explosion: No.
Combustible solid.
Vapours are heavier than air - possible risk of remote ignition.

Products of combustion: Oxides of carbon, hydrogen chloride, traces of phosgene, water vapour.

Protective Equipment: Full protective clothing including breathing apparatus and protective gloves.

Section 6: Accidental Release Measures

Emergency Procedures:

Contain.
Shut off all sources of ignition.
Increase ventilation.

For large spills:

Recover intact tablets or blocks. Transfer broken or damaged blocks to suitable closed container(s). Treat residues as for small spills.

For small spills:

Wash site of spillage thoroughly with water and detergent.
Ventilate area to dispel any residual vapours.

Section 7: Handling and Storage

Precautions for safe handling:

Avoid contact with skin and eyes.
Avoid breathing concentrated vapours.
Combustible solid: keep away from naked flames and other sources of ignition.
Keep away from oxidising agents.

Conditions for safe storage:

Store in a cool, well ventilated place, out of reach of children.
Store in original container. Keep container tightly closed and out of direct sunlight. Keep away from naked flames and other sources of ignition. Prevent vapours from collecting in enclosed or low lying spaces. Keep away from oxidising agents. Protect from physical damage. Clean up all spills promptly; avoid secondary accidents.

Incompatibles:

Oxidising agents, strong acids, aluminium and its alloys.

Section 8: Exposure Controls/Personal Protection

National Exposure Standards:

ES-TWA: 1,4-Dichlorobenzene 25 ppm, 150 mg/m³

ES-STEL: 1,4-Dichlorobenzene 50 ppm, 300 mg/m³

ES-PEAK: None assigned.

Notations: None assigned by NOHSC, but see:

1,4-Dichlorobenzene	[Skin]	[Finland]
	[Carcinogen]	[Austria, Japan]

[Skin] indicates that this material may be absorbed via unbroken skin, and any such contact may invalidate the TLV.

Biological Limit Values: No data found.

Engineering Controls:

Use flame proof equipment where available.
Ensure adequate ventilation (same as outdoors) when using.
If handling industrial quantities, or if vapour risk exists, consider local mechanical exhaust/extraction to keep airborne contamination as low as possible and at least below the TLV.

Personal Protective Equipment:

Avoid contact with skin and eyes. Avoid breathing concentrated vapours. Personal protection to be selected from those recommended below, as appropriate to mode of use, quantity handled and degree of hazard:-

Normal Use:

Eye/face protection
Gloves, rubber or plastic.

Industrial Quantities:

Positive pressure air-hood or full face respirator
Face shield or safety glasses
Gloves, rubber or plastic
Plastic apron, sleeves and boots
Impervious overalls.

Section 9: Physical and Chemical Properties

Appearance:	Blue crystals or blocks.
Odour:	Characteristic odour.
pH:	Not applicable.
Vapour Pressure:	0.8 kPa @ 20 °C
Vapour Density:	5.08 (Air = 1)
Boiling Point:	174 °C
Melting Point:	54 °C
Volatiles:	100 %
Volatile Organic Compounds (VOC):	100 %
Evaporation Rate:	No data.
Solubilities:	Practically insoluble in water.
Specific Gravity/Density:	1.458 g/cc
Flash Point:	66 °C
Flammable Limits:	2.2 - 12.0 %
Dust Explosion:	May occur if very finely divided.
Auto-ignition Temperature:	640 °C

Other Information:

Sublimes slowly at normal temperatures, faster as the temperature increases.
Soluble in benzene, carbon disulphide, chloroform, diethyl ether, ethanol.
May react with oxidising agents, acids, aluminium, some plastics and rubbers. May attack painted surfaces.

Section 10: Stability and Reactivity

- Chemical Stability:** Stable under normal conditions.
- Conditions to Avoid:** Incompatible materials, heat.
- Incompatible Materials:** Oxidising agents, acids, aluminium and its alloys, plastics, rubber.
- Hazardous Decomposition Products:** Oxides of carbon, water vapour, hydrogen chloride, traces of phosgene.
- Hazardous Reactions:** Contact with strong oxidising agents may cause fire.

Section 11: Toxicological Information

Health Effects:

Harmful effects may be enhanced by the consumption of alcoholic beverages.

- Acute:**
- Swallowed:** Harmful if swallowed. May cause gastric upset, a burning sensation in the stomach, headache, nausea, vomiting, constipation or diarrhoea. May also cause convulsions, tremors, confusion, narcosis, and may affect the eyes and respiration. Very large doses may cause haemolytic anaemia, methaemoglobinuria. Extremely large doses may be fatal.
 - Skin:** May cause redness and irritation, and a slight burning sensation. The burning sensation may become more severe if held against the skin for a long period. May cause red blotching from an allergic reaction in some individuals. May be absorbed, slowly, through the skin.
 - Eyes:** Irritating to eyes at vapour levels at or above 50 ppm. May cause redness, irritation and pain. Exposure to high vapour levels may cause swelling around the eyes.
 - Inhaled:** May cause cough, shortness of breath, runny nose, a burning sensation in the chest, headache, dizziness, drowsiness, nausea and vomiting, loss of appetite. Vapours are irritating to the eyes and nose in the range 50 - 80 ppm, and severely irritating in the range 80 - 160 ppm. High doses may cause central nervous system depression.

Chronic: Over-exposure to 1,4-dichlorobenzene may lead to yellow atrophy of the liver, jaundice, persistent headache, nausea and vomiting. Other effects may include cirrhosis of the liver, weight loss, irregular bowel movements, slurred speech, weakness and unsteady gait, parasthesia (a tingling sensation) of the lower limbs. Most central nervous system effects are considered to be reversible.

Ingestion of 1,4-dichlorobenzene over a period of time may cause drowsiness, incoordination and anaemia, other symptoms similar to above.

1,4-Dichlorobenzene is not considered to be a sensitiser.

Although 1,4-dichlorobenzene is reported as a carcinogen in experimental animals, liver and kidney tumours in mice and rats **(1)(2)**, the mechanisms involved are not applicable to humans. Accordingly, 1,4-dichlorobenzene is NOT classified as a human carcinogen in Australia.

LD₅₀:	1,4-Dichlorobenzene	500 mg/kg oral, rat. 2,000 mg/kg skin, rat.
LDLo:	1,4-Dichlorobenzene	857 mg/kg oral, human. 357 mg/kg unreported route - human. 221 mg/kg unreported route - man.
TDLo:	1,4-Dichlorobenzene	300 mg/kg oral, human - eyes, respiration, gastrointestinal effects.
TCLo:	1,4-Dichlorobenzene	480 mg/m ³ human - eye irritation, sense of smell affected.

Section 12: Ecological Information

Ecotoxicity:		Very toxic to aquatic organisms.
EC₅₀:	0.7 mg/L	<i>Daphnia magna</i>
	1.99 mg/L	<i>Mysidopsis bahia</i>
LC₅₀:	2.1 mg/L	<i>Brachydanio rerio (zebra fish)</i>
	4.2 mg/L	<i>Pimephales promelas (fathead minnow)</i>
	1.12 mg/L	<i>Oncorhynchus mykiss (rainbow trout)</i>
Persistence and degradability:		Biodegradable in aerobic conditions.
Mobility:		Readily evaporates to atmosphere.
Environmental Fate:		Degrades in the atmosphere.
Bioaccumulative potential:		No data found.

Other adverse environmental effects: May cause long term adverse effects in the aquatic environment.

Section 13: Disposal Considerations

The generator of any wastes from this product is responsible for its proper classification, transport and disposal.

Consult appropriate local and State regulations.

Disposal methods and containers:

Avoid disposal to drains, natural waters or the environment. Do not use containers of aluminium or its alloys, plastic or rubber.

Special precautions for landfill or incineration:

High temperature incineration with exhaust gas scrubber. Unsuitable for landfill.

Section 14: Transport Information

UN Number:	None assigned.
UN Proper shipping name:	None assigned.
Class and subsidiary risk:	None assigned.
Packaging group:	None assigned.
Special precautions for user:	Contain spillages.
HAZCHEM Code:	None assigned.
Material for export:	Regulated. Refer to IMO/IMDG and IATA/ICAO .

Section 15: Regulatory Information

Poisons (SUSDP):	Schedule 5	<i>p-Dichlorobenzene</i>
Dangerous Goods:	No longer listed in the Australian Dangerous Goods Code. Listed overseas as:	
<i>UN 3077</i>	<i>Environmentally Hazardous Substances, Solid, n.o.s.</i>	
<i>Class:</i>	<i>9 Miscellaneous Dangerous Goods</i>	
<i>EPG:</i>	<i>CONTAIN SPILLAGE</i>	
Carcinogen:	Australia No.	IARC Yes.
		NTP Yes.
		RTECS Yes.
Agricultural and Veterinary Chemicals Act:	Not applicable.	
Australian Inventory of Chemical Substances (AICS):	Listed.	

Other National/International Regulations: No data.

Section 16: Other information

Date of MSDS update: May 2007
Minor description update in section 9.

Abbreviations:

NOHSC - National Occupational Health and Safety Commission.
ACGIH - American Conference of Governmental Industrial Hygienists.
MAK - Maximum workplace concentration - Germany,
(*maximale Arbeitsplatzkonzentration*)
IARC - International Agency for Research on Cancer (France).
NPT - National Toxicology Program (USA).
RTECS - Registry of Toxic Effects of Chemical Substances.

Literature references:

- (1) *National Toxicology Program Technical Report Series.*
(Research Triangle Park, NC 27709) NTP-TR-319, 1987
- (2) *National Technical Information Service.*
(Springfield, VA 22161) PB87-208617/AS

Other Available Sources of Data:

National Code of Practice for the Preparation of Material Safety Data Sheets 2nd Edition [2011(2003)] - NOHSC.
Australian Dangerous Goods Code.
Standard for the Uniform Scheduling of Drugs and Poisons - AHMAC.
Exposure Standards for Atmospheric Contaminants in the Occupational Environment [1003]- NOHSC.
List of Designated Hazardous Substances [10005] - NOHSC.
Merck Index - Merck Inc.
Sax's Dangerous Properties of Industrial Materials - Lewis.
Handbook of Toxic and Hazardous Chemicals and Carcinogens - Sittig.
Handbook of Reactive Chemical Hazards - Bretherick.
Hawley's Condensed Chemical Dictionary - Wiley Interscience.
AUSREG's Chemical Data Package for PCs - AUSREG Consultancy.