



MATERIAL SAFETY DATA SHEET

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SECTION 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name: Dr Deb's Permethrin Soak

Other Names: Permethrin

Use: A liquid insecticide concentrate for use in the treatment of fabric and bed-net impregnation for the purpose of pest control.

Company: The Travel Doctor (Qld) Pty Ltd

Address: 5/247 Adelaide St., Brisbane
Queensland 4000, Australia

Telephone Number: 1300 42 11 42 **Fax Number:** 07 3221 7076

Emergency Telephone Number: (07) 3221 9066

SECTION 2. HAZARDS IDENTIFICATION

Classified as hazardous according to criteria of NOHSC Australia
Classified as a Dangerous Good according to the ADG Code

Risk phrases: R65 Harmful: May cause lung damage if swallowed.
R22 Harmful if swallowed.

Safety Phrases: S2 Keep out of reach of children.
S23 Do not breathe vapour.
S24 Avoid contact with skin.
S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

ADG classification Under the 7th Edition of the Australian Code for the Transport of Dangerous Goods by Road & Rail, permethrin is classified as an "Environmentally Hazardous - Liquid". However due to the small container size (20 mL) of this product, it is not subject to the provisions of the ADG Code. See section 14.

SUSDP classification: Schedule 6

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients:

CHEMICAL	CAS NUMBER	CONCENTRATION (g/L)
Permethrin 25:75	52645-53-1	500
Hydrocarbon solvent	64742-94-5	335
Other ingredients	(Classified as non hazardous)	To 1 litre

SECTION 4 FIRST AID MEASURES

FIRST AID

- Swallowed:** If poisoning occurs, contact a doctor or Poisons Information Centre. Phone Australia 131126. Wash out mouth with water. Do not induce vomiting. Keep patient at rest.
- Eye:** Immediately rinse eyes thoroughly, including under eyelids, with running water for at least 15 minutes. Seek immediate medical advice.
- Skin:** Remove all contaminated clothing and shoes. Wash off skin immediately with soap and plenty of water. Apply vitamin E cream, toilet milks or local anaesthetic creams to reduce irritation if it occurs. Seek medical advice if irritation persists. Launder contaminated clothing before re-use.
- Inhaled:** Remove person to fresh air. Keep at rest. Seek medical advice if exposure has been more than trivial. Administer artificial respiration if breathing has stopped.

Advice to Doctors: There is no specific antidote. Treat symptoms. This product contains a hydrocarbon solvent. Small amounts of liquid aspirated into the respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.

Treatment

Basic aid, decontamination, symptomatic treatment and if necessary administration of antidote.

Symptoms

Burning sensations on the skin, irritation of the mucous membranes, coughing and sneezing may be experienced. Following severe intoxication, respiratory effects can include chest tightness, airway hyperreaction, and pulmonary oedema. Possible circulatory effects include tachycardia, hypotension, and palpitations. Gastrointestinal symptoms may include nausea, vomiting, diarrhoea, abdominal pain, and salivation. Potential Central Nervous System effects are dizziness, blurred vision, headache, listlessness, anorexia, somnolence/coma, seizures/convulsions, tremor, ataxia, and muscle fasciculations.

SECTION 5 FIRE FIGHTING MEASURES

This product is not flammable. It is a C1 combustible Liquid.

Extinguishing media: Foam, dry chemical or water spray. Do not use a water jet from a fire hose.

Hazards from combustion products: In the event of fire, hydrogen chloride, carbon monoxide and carbon dioxide may be released.

Precautions for fire-fighters and special protective equipment: Fire fighters should wear full protective gear, including self-contained breathing apparatus (AS/NZS 1716), as toxic and irritating decomposition products may be produced in a fire. If it can be done safely, remove intact containers from the fire. Otherwise, use water spray to cool them. Bund area to prevent contamination of water sources. Dispose of fire control extinguishing agent and spillage later in a safe manner. Do not release contaminated water into the environment.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Dealing with spills and disposals may result in the potential for increased personal exposure. Protective clothing and equipment as described in Section 8. PERSONAL PROTECTION should be worn. Avoid contact with spilled material or contaminated surfaces. Keep people and animals away. Prevent spill from entering drains, sewers or any body of water. Contain and absorb with sand, earth or inert absorbent. Scoop or shovel into sealable containers for disposal in accordance with applicable local, state and federal regulations.

SECTION 7 | HANDLING AND STORAGE

Precautions for Safe Handling: Keep out of reach of children. Avoid contact with skin and eyes and do not inhale vapour. Use only in a well-ventilated area. Do not apply in the presence of naked flames, hot surfaces or unprotected electrical equipment. Use proper grounding procedures.

Conditions for Safe Storage: Store product in the closed, original container in a cool, well-ventilated area away from direct sunlight.

SECTION 8 | EXPOSURE CONTROLS / PERSONAL PROTECTION

National Exposure Standards: No exposure standard has been assigned by the National Occupational Health and Safety Commission (Worksafe Australia). The manufacturer of the hydrocarbon solvent recommends an occupational exposure limit of 100 ppm total hydrocarbons.

Biological Limit Values: Not applicable.

Engineering Controls: Control process conditions to avoid contact. Keep area ventilated. Keep product away from sources of ignition.

Personal Protective Equipment (PPE):

Eyes: Avoid contact with the eyes.

Clothing: Wear suitable protective clothing. Protective clothing must be stored separately from private clothing.

Gloves: Avoid contact with the skin. When opening container and preparing and using the dip, wear rubber gloves.

Respiratory: Do not inhale vapour.

Other: Do not eat, drink or smoke until after washing. Wash thoroughly after handling.

SECTION 9 | PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear yellow limpid liquid
Odour:	Aromatic solvent odour
pH:	Unknown
Chemical group:	Pyrethroid
Boiling point:	184°C
Freezing point:	Not available
Solubility:	Emulsifies
Density:	1.06 at 20°C
Flammability (explosive) limits:	0.6 - 7.0% (solvent)
Flashpoint (°C) :	72°C
Poisons Schedule:	Schedule 6
Auto-ignition temperature:	> 450°C (solvent)
Percent volatiles:	~38
Formulation:	Emulsifiable concentrate

SECTION 10 STABILITY AND REACTIVITY

Chemical stability:	Not available
Hazardous polymerisation:	Not available
Conditions to avoid:	Avoid extremes of temperature and direct sunlight.
Incompatible materials:	Incompatible with strong oxidising agents
Hazardous decomposition products:	In the event of fire, hydrogen chloride, carbon monoxide and carbon dioxide may be released.

SECTION 11 TOXICOLOGICAL INFORMATION***Potential Health Effects:***

Inhalation:	Avoid breathing vapour. Inhalation of vapour may produce respiratory irritation and can result in headaches, dizziness, drowsiness, and possibly nausea.
Skin contact:	Mild irritant and drying to the skin. The product should not be allowed to come into contact with the skin.
Eye contact:	Irritating. The product should not be allowed to contact the eyes.
Ingestion:	Harmful if swallowed.
Other:	None

Animal Toxicity Data – PRODUCT: No data available for the product.

Animal Toxicity Data – INDIVIDUAL INGREDIENTS:**Acute:**

Oral toxicity:	LD ₅₀ rat: 1479 mg/kg (permethrin 25:75 in corn oil)
Dermal toxicity:	LD ₅₀ rabbit: >2000 mg/kg (permethrin)
Inhalation toxicity:	Not available
Skin irritation:	Mild irritant – rabbit (permethrin)
Eye irritation:	Mild irritant – rabbit (permethrin)
Sensitisation:	Non-sensitiser

Chronic:

Permethrin is not mutagenic, teratogenic or carcinogenic. Skin sensitisation tests indicate that permethrin active ingredient was not a skin sensitiser. At high doses, the solvent caused reversible damage to the liver and kidney of male rats. These effects are not relevant to humans at occupational levels of exposure.

SECTION 12 ECOLOGICAL INFORMATION

No data available for the product. The following information is for the active constituent, permethrin.

Fish toxicity:	LC ₅₀ (96h): 2.5 µg/L rainbow trout (permethrin) LC ₅₀ (48h): 1.8 µg/L bluegill sunfish (permethrin)
Daphnia toxicity:	LC ₅₀ (48h): 0.6 µg/L (permethrin)
Toxicity to algae:	Data not available
Bird toxicity:	LD ₅₀ : >3000 mg/kg chickens (permethrin) LD ₅₀ : >9800 mg/kg mallard ducks (permethrin) LD ₅₀ : >13500 mg/kg Japanese quail (permethrin)
Bee toxicity:	LD ₅₀ (24h) (oral): 0.098 µg/bee; (contact): 0.029 µg/bee
Environmental fate, persistence and degradation:	Permethrin degrades rapidly in soil and water.

SECTION 13 DISPOSAL CONSIDERATIONS

Triple rinse containers before disposal. Do not dispose of undiluted chemicals on site. Dispose of container by wrapping with paper and putting in garbage.

SECTION 14 TRANSPORT INFORMATION

Road & Rail Transport: Classified as Dangerous Goods by the criteria of the Australian Code for the Transport of Dangerous Goods by Road or Rail (7th Ed) (ADG Code). This product is classified as a Marine Pollutant as it is a Class 9 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains permethrin), UN 3082, Packing Group III. However, as this product is only available in 20 mL containers or 26 x 20 mL shipping containers, it is **not** subject to the ADG Code(7th Ed) for the Transport of Dangerous Goods when being transported by road or rail since receptacles for UN No. 3082 of 500 L or less are excluded from the conditions of the ADG Code.

Air Transport: Although the product is a Marine Pollutant, Environmentally Hazardous Substance, Liquid, N.O.S. (Permethrin), Class 9, UN3082, PGIII (as described above), under IATA Dangerous Goods Regulations, Special Provision A97, it is **not** required to be classified as UN3082 in Australia.

SECTION 15 REGULATORY INFORMATION

Classified as a hazardous substance according to criteria of NOHSC Australia. Under the Standard for Uniform Scheduling of Drugs and Poisons (SUSDP No. 22), this product is a Schedule 6 poison. This product is registered under the Agricultural and Veterinary Chemicals Code Act 1994. Product Registration No. 61119.

Since this product is limited by pack size (less than 500 L), the product is not subject to the conditions as Dangerous Good according to the ADG Code (7th Ed).

SECTION 16 | OTHER INFORMATION

Issue Date: April 2008 (First issue).

Key to abbreviations and acronyms used in this MSDS:

ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail (7 th Ed.).
IATA	International Air Transport Association.
NOHSC	National Occupational Health and Safety Commission.
PPE	Personal protective equipment.
SUSDP	Standard for Uniform Scheduling of Drugs and Poisons (22 nd Ed)
Teratogen	An agent capable of causing abnormalities in a developing foetus.
Mutagen	A substance capable of causing genetic damage.

References

1. "Search Hazardous Substances". Dept. of Employment and Workplace Relations. Office of the Australian Safety and Compensation Council website. (2006).
2. "Approved Criteria for Classifying Hazardous Substances" 3rd Ed. NOHSC Australia. [NOHSC:1008 (2004)]. October 2004.
3. Bayer CropScience Pty Ltd product safety data and published data.
4. Fact Sheet for the ADG Code "Changes in the 7th Edition Code".
5. Handbook Of First Aid Instructions, Safety Directions, Warning Statements And General Safety Precautions For Agricultural And Veterinary Chemicals (Sept 07).

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

End of MSDS