



MATERIAL SAFETY DATA SHEET

A18192/01/AUS

DETER INSECTICIDE

SECTION 1 – IDENTIFICATION, CONTACTS, HAZARDOUS NATURE

Bayer Australia Ltd
875 Pacific Highway
Pymble NSW 2073

Emergency Telephone Number

1800 033 111

24 hour Emergency Service Australia Wide, Toll Free

Contact Point (for non-emergency calls)

Animal Health Division

Telephone Number: (02) 9391-6000

Product Name

Deter Insecticide

Product Use

General use insecticide

Other Names

Chlorpyrifos, hydrocarbon solvent

Creation Date

8th August 2003

Revision Date

8th August 2003

SECTION 2 – HAZARDS IDENTIFICATION

Hazard Classification

HAZARDOUS SUBSTANCE

DANGEROUS GOODS

Risk Phrases

Toxic in contact with skin and if swallowed. May cause lung damage if swallowed.

Safety Phrases

Keep locked up and out of the reach of children. After contact with skin, wash immediately with plenty of soap-suds. Wear suitable protective clothing and gloves. In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible). Do not breathe vapour. Avoid contact with skin. If swallowed, do not induce vomiting; seek medical advice immediately and show the container or label.

RISK & SAFETY PHRASES ARE NOT REQUIRED ON PACKAGES INTENDED FOR END-USERS. APPROPRIATE SAFETY DIRECTIONS AND FIRST AID STATEMENTS ARE SHOWN ON THE PRODUCT LABEL.

SECTION 3 – COMPOSITION		
Ingredients	CAS No	Proportion
Chlorpyrifos*	2921-88-2	50%
Hydrocarbon solvent	64742-94-5	48%
Other ingredients determined not to be hazardous	--	<10%

*Chlorpyrifos is an organophosphate compound: O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate.

SECTION 4 – FIRST AID MEASURES	
Label Regulated First Aid Statement	If poisoning occurs contact a doctor or Poisons Information Centre. Phone Australia 131126. If swallowed, do not induce vomiting, give a glass of water. <u>If swallowed</u> , give one atropine tablet every 5 minutes until dryness of the mouth occurs – <u>if poisoned by skin absorption or through lungs</u> , remove any contaminated clothing, wash skin thoroughly and give atropine tablets as above. Get to a doctor or hospital quickly. If in eyes, hold open, flood with water for at least 15 minutes and see a doctor.
General	<p>Chlorpyrifos is an organophosphate compound. Most cases of organophosphate poisoning result from skin absorption due to inadequate protection during preparation or use. Organophosphates act by inhibiting cholinesterase. Some symptoms of overexposure that can arise if the product is mishandled are:</p> <ul style="list-style-type: none"> • Mild: headache blurred vision, weakness, giddiness, sweating, mild chest pain, nausea and vomiting. • Severe: cyanosis, muscular twitching, spasms, miosis and respiratory paralysis. <p>Ensure washing facilities are available.</p> <p>THIS PRODUCT IS TOO HAZARDOUS FOR USE BY HOUSEHOLDERS. HOUSEHOLDERS MUST NOT USE THIS PRODUCT IN OR AROUND THE HOME.</p>
Scheduled Poisons	Poisons Information Centres in each State capital city can provide additional assistance for scheduled poisons. Phone 131126.
Inhalation	Remove victim to fresh air. Give one atropine tablet every 5 minutes until dryness of the mouth occurs. Seek medical advice. Show this MSDS to a medical practitioner.
Skin contact	Remove contaminated clothing. Wash affected areas with plenty of soap and water. Give one atropine tablet every 5 minutes until dryness of the mouth occurs. Seek medical assistance. Show this MSDS to a medical practitioner.
Eye contact	Immediately irrigate with copious quantities of water for at least 15 minutes. Seek medical assistance. Show this MSDS to a medical practitioner.
Ingestion	If swallowed give one atropine tablet every 5 minutes until dryness of the mouth occurs. Seek immediate medical assistance. Show this MSDS to a medical practitioner.

Advice to doctor	<p>See also Chapter 11. Apply basic aid and decontamination procedures. Treat symptomatically and if necessary apply artificial respiration and administer antidote.</p> <p>Antidote is atropine sulfate. Administer at 5-10 minute intervals until dryness of the mouth occurs. This will relieve the muscarinic effects. Atropine should not be given to a cyanosed patient.</p> <p>In cases of severe poisoning (respiratory depression and muscle twitching) administer pralidoxime (preferably less than 48 hours after exposure) to relieve the nicotinic effects.</p>
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SECTION 5 – FIRE FIGHTING MEASURES

Extinguishing Media	Use water fog, foam, dry chemical
Fire and Explosion Hazards	The product is not flammable but is combustible.
Hazardous Combustion Products	May give off oxides of phosphorous or chlorine products.
Fire Fighting	<p>Fight fire in the early stages if safe to do so.</p> <p>Full protective equipment, including self-contained breathing apparatus (SAA 1716), must be worn. Do not release contaminated water into the environment.</p>

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Accidental Release	<p>Shut off all possible sources of ignition. DO NOT smoke. Avoid contact with eyes, skin and clothing or inhalation of product. Dealing with spills and disposals may result in the potential for increased personal exposure. During such operations it is recommended that the following protective clothing is worn:</p> <ul style="list-style-type: none"> • Cotton overalls buttoned to the neck and wrist • Elbow-length PVC gloves • Face shield or goggles • Half-face respirator <p>CONTAIN SPILL and absorb with earth, sand, sawdust, clay, sweeping material or absorbent material and store in properly labelled, sealed drums for safe disposal in an approved landfill, or bury under at least 500 mm of soil in a non-crop, non-pasture area away from water sources or homes. DO NOT burn empty containers or product. Deal with all spillages immediately. Keep people away and upwind. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.</p>
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SECTION 7 – HANDLING AND STORAGE

Safe Handling	Keep out of reach of children. Wear long sleeved overalls and gloves while handling. After handling and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water. Avoid contact with the eyes, skin and clothing or inhalation of product. Neutralising chemicals: alkalis.
Storage	Store in the closed, original container in a dry, cool well-ventilated area, out of direct sunlight. Store in locked room or place away from children, animals, food, feedstuffs, seed and fertilisers. Store below 30°C.

SECTION 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits	ES-TWA chlorpyrifos, 0.2 mg/m ³ (ACGIH). No standards allocated for other ingredients in this formulation.
Ventilation	Use in a well ventilated area only.
Eye Protection	Avoid contact with the eyes. Wear safety goggles or a face shield when handling product, preparing and using spray.
Skin Protection	Avoid contact with skin. Wear cotton overalls buttoned to the neck and wrist, washable hat. Protective clothing must be stored separately from private clothing. Wear elbow-length PVC or nitrile gloves.
Respirator	Do not inhale vapour or spray mist. Wear a disposable respirator to prevent inhalation.
Protective Material Types	PVC or nitrile
General Advice	Product is poisonous if absorbed by skin contact, inhaled or swallowed. Repeated minor exposure may have a cumulative poisoning effect. Avoid contact with the eyes and skin. Avoid inhaling spray mist. When opening the container and preparing the spray, and using the prepared spray, wear cotton overalls buttoned to the neck and wrist, washable hat, elbow-length PVC gloves, and face shield or goggles. If product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, face shield or goggles, and contaminated clothing. When using this product as a termiticide, refer to the product label for additional protection instructions.

SECTION 9 – PHYSICAL & CHEMICAL PROPERTIES

Physical State	Clear liquid
Colour	Pale yellow
Odour	Mercaptan odour
Melting Point	Not applicable
Solidifying point	Not available
Density	1.098 at 20°C
Vapour Pressure	2.7 mPa at 25°C (chlorpyrifos)
Viscosity	Not available
Solubility in Water	Emulsifiable
pH	3.0 to 5.0
Flash Point	66°C
Ignition Temperature	Not available
Explosive Limits	Not available
Other Information	No other information.

SECTION 10 – STABILITY & REACTIVITY

Chemical Stability	Stable under normal conditions of use.
Conditions to Avoid	Extreme heat and fire
Incompatible Materials	Hydrolysed by alkalis
Hazardous Decomposition	May give off oxides of phosphorous or chlorine products
Hazardous Reactions	Hazardous polymerization will not occur

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute Toxicity	<p>Oral LD₅₀ (rat) > 135 – 163 mg/kg (active constituent) Oral LD₅₀ (guinea pig) 504mg/kg(active constituent) Oral LD₅₀ (rabbit) 1,000 – 2,000 mg/kg (active constituent) Dermal LD₅₀ (rat) > 2000 mg/kg (active constituent) Inhalation LC₅₀ (rat) 0.2 mg/L (active constituent)</p> <p>Repeated minor exposure may cause allergic disorders. Repeated minor exposure may have a cumulative poisoning effect.</p>
Local Effects	Will irritate eyes and skin. Poisonous if inhaled.
Reproductive Effects	None of the ingredients of the formulation has been shown to produce reproductive or teratogenic effects.
Mutagenicity	None of the ingredients of the formulation has been shown to produce mutagenic effects.

Carcinogenic Effects	None of the ingredients in the formulation has been shown to have carcinogenic potential. Other ingredients are not classified as carcinogens.
Health Hazard Information	This product is too hazardous for use by householders. Householders must not use this product in or around the home.

SECTION 12 – ECOLOGICAL INFORMATION

Octanol/Water Partition Co-efficient	$K_{ow} \text{ LogP} = 4.7$
Ecotoxicity	<p>Fish toxicity (active ingredient) $LC_{50} = 0.003 \text{ mg/L (96 h)}$ rainbow trout</p> <p>Daphnia toxicity $LC_{50} = 0.003 \text{ mg/L (96 h)}$</p> <p>Bird toxicity $LD_{50} = 490 \text{ mg/kg}$ Mallard Duck $LD_{50} = 32-102 \text{ mg/kg}$ Chickens</p> <p>Chlorpyrifos is extremely toxic to fish, highly toxic to birds and dangerous to bees.</p>

SECTION 13 – DISPOSAL INFORMATION

After Intended Use	Triple or (preferably) pressure rinse containers before disposal. Add rinsings to the spray tank. Do not dispose of undiluted chemicals on-site. If recycling, replace cap and return clean container to recycler or designated collection point. If no recycling break, crush, or puncture and bury empty containers in a local authority landfill. If no local landfill is available, bury the empty containers at a depth of 500mm or deeper in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Rinsate/rinse waste should be disposed of in accordance with appropriate State legislation and should preferably onto an application site or added as up to 10% of the diluent the next time this product or another similar termiticide is used. Do not put down sewers, gutters or storm water drains. In some States wastes can only be buried at a licences landfill.
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After spill or accident	<p>Prevent spillage from spreading or entering waterways and underground drains. Work from up-wind side of spill. Stop leaks if possible. Take up with absorbent material such as sawdust, peat or chemical binding agent. Fill material along with any contaminated soil etc. into sealable containers. Clean affected area with an aqueous detergent and a small amount of water. Absorb this with hydrated lime and place in a sealable drum. Spread hydrated lime over the affected area. On completion of cleanup remove and wash all protective clothing and equipment with detergent and water.</p> <p>Do not smoke, drink or eat during clean-up procedure.</p> <p>Dispose of sealed containers at an approved local waste disposal site.</p>
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SECTION 14 – TRANSPORT INFORMATION

UN No	3018
UN Proper Shipping Name	Organophosphorus Pesticide, Liquid, Toxic
Class & Subsidiary Risk	6.1
Packaging Group	III
Hazchem Code	2X

SECTION 15 – REGULATORY INFORMATION

Poisons Schedule	Schedule 6
APVMA Registration	The product is registered by the APVMA.
Registration Number	32908
Labelling	All necessary directions, precautions and warnings for normal use of the product are included on the product label.

SECTION 16 – OTHER INFORMATION

Summary of Changes from Last Edition	This is the first edition of this MSDS.
Data source	Bayer CropScience Pty. Ltd. – Product Safety Data
Acronyms	<p>ADG Code Australian Code for the Transport of Dangerous Goods by Road and Rail</p> <p>APVMA Australian Pesticides and Veterinary Medicines Authority</p> <p>CAS Chemical Abstracts Service Registry Number</p> <p>HDPE High density polyethylene</p> <p>LDPE Low density polyethylene</p> <p>NOHSC National Occupational Health & Safety Commission</p> <p>SUSDP Standard for the Uniform Scheduling of Drugs and Poisons</p> <p>UN Number United Nations number</p>
Disclaimer	<p>This Material Safety Data Sheet has been developed according to the NOHSC National Code of Practice for the Preparation of MSDS [NOHSC:2011(2003)].</p> <p>The data, information and recommendations herein ("information") are represented in good faith and believed to be correct as of the date hereof.</p> <p>The purpose of this Material Safety Data Sheet is to describe product in terms of their safety requirements.</p> <p>Bayer Australia Limited make no representation of merchantability, fitness for a particular purpose or application, or of any other nature with respect to the information or the product to which the information refers ("the product").</p> <p>The information is supplied upon the condition that the persons receiving the same will make their own determination as to its suitability for their purposes prior to use of the product.</p> <p>The physical data shown herein are typical values based on material tested. These values should not be construed as a guaranteed analysis of any specific lot or as guaranteed specification for the product or specific lots thereof.</p> <p>Due care should be taken to make sure that the use or disposal of this product and / or its packaging is in compliance with relevant Federal, State and Local Government regulations.</p>

END OF MSDS