

MAC SLAY BED BUD & MITE INSECTICIDE

Public Health Insecticide for Crawling & Biting Insects

1. IDENTIFICATION OF THE MATERIAL AND THE MANUFACTURER

Product Name MAC SLAY BED BUG & MITE INSECTICIDE

(ALL AEROSOL FORMATS)

Supplier Name Arandee Ltd

Address 108 Rockfield Road, Penrose, Auckland 1061, New Zealand

Telephone +64 (9) 579 5139

Emergency National Poisons Centre -24 hours Australia 13 11 26

New Zealand 0800 POISON

0800 764 766

E-mail sales@arandee.co.nz

Web Site http://www.arandee.co.nz

Synonym(s) MAC Slay; MAC Slay Bed Bug

Use(s) Application is by spray atomisation from a handheld aerosol pack.

Use according to manufacturer's directions.

2. HAZARDS IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO GHS AND THE HAZARDOUS SUBSTANCES (MINIMUM DEGREE OF HAZARD) REGS 2001. CLASSIFIED AS A DANGEROUS GOOD, UNDER NZS 5433



Signal Word: DANGER

Physical Hazards Aerosol 1

Health Hazards Skin Irritation 2, Germ Cell Mutagenicity 1,

Carcinogenicity 1, Reproductive Toxicity 2, STOT Single

Exposure 3, Aspiration Toxicity 1

Environmental Hazards Aquatic Acute 1, Aquatic Chronic 2

Ecotoxic to terrestrial invertebrates Triggered

HAZARD STATEMENTS H222+H229 Extremely flammable aerosol. Pressurized container: may burst if heated.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H336 May cause drowsiness or dizziness.

H340 May cause genetic defects.

H350 May cause cancer.

H361 Suspected of damaging fertility or the unborn child

H400 Very toxic to aquatic life.

H411 Toxic to aquatic life with long lasting effects.

PRECAUTIONARY P102 Keep out of reach of children.



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STATEMENTS	P103	Read label before use.
	P202	Do not handle until all safety precautions have been read and understood.
	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition
	P211	sources. No smoking.
		Do not spray on an open flame or other ignition source.
	P251	Do not pierce or burn even after use.
	P261	Avoid breathing mist/vapours/spray.
	P264	Wash hands thoroughly after handling.
	P271	Use only outdoors or in a well-ventilated area.
	P273	Avoid release to the environment.
	P264	Wash hands thoroughly after handling.
	P273	Avoid release to the environment.
	P280	Wear protective gloves.
PRECAUTIONARY	P301+P310	IF SWALLOWED: Immediately call a POISON CENTER.
RESPONSE STATEMENTS	P302+P352	IF ON SKIN: Wash with plenty of water.
RESPONSE STATEMENTS	P302+P332	IF INHALED: Remove person to fresh air and keep comfortable for
	P304+P340	breathing.
	P308+P313	IF exposed or concerned: Get medical advice.
	P312	Call a doctor if you feel unwell.
	P321	Specific treatment: See First Aid instruction on this label.
	P331	Do NOT induce vomiting.
	P332+P313	If skin irritation occurs: Get medical advice.
	P362+P364	Take off contaminated clothing and wash before reuse.
	P391	Collect spillage
DDECALITIONARY	D402 - D222	Chara in a well would letted who as Many agents in out tighthy aloned
PRECAUTIONARY	P403+P233	Store in a well-ventilated place. Keep container tightly closed.
STORAGE STATEMENTS	P405	Store locked up.
	P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F
		•
PRECAUTIONARY	P501	Dispose of contents/container to authorised hazardous or special waste
DISPOSAL STATEMENTS		collection point in accordance with any local regulation.

3. HAZARDS IDENTIFICATION COMPOSITION OF INGREDIENTS

Ingredient	Weight %	CAS No.
NAPTHA PETROLEUM, ISOPARAFFIN, HYDROTREATED	<30	64742-48-9
2-ETHYLHEXYL BICYCLOHEPTENE DICARBOXIMIDE	1-10	113-48-4
D-PHENOTHRIN	<1	26002-80-2
HYDROCARBON PROPELLANT	<75	68476-85-7



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FIRST AID MEASURES

Eve Contact Hold eyelids apart and flush continuously with water. Continue until advised to stop by the Poisons

Information Centre, a doctor, or for at least 15 minutes. Keep patient calm.

Inhalation Leave area of exposure immediately. If irritation persists, seek medical attention.

Skin Gently flush affected areas with water. Seek medical attention, if irritation persists.

Ingestion For advice, contact a Poisons Information Centre on 0800 764 766 (0800 POISON) or +64 9 579 5139

(New Zealand) or a doctor. If swallowed, DO NOT induce vomiting, as ingestion is considered

unlikely, due to the product form.

Advice to Doctor Treat symptomatically.

First Aid Facilities Eye wash facilities should be provided.

5. FIRE FIGHTING MEASURES

Extinguishing media

Small Fire Use extinguishing agent suitable for type of surrounding fire.

Large Fire

DO NOT direct water at source or leak or venting safely devices as icing may occur.

Small Fire Water spray, dry chemical or CO₂

Large Fire Water spray or fog

Special hazards arising from the substrate or mixture

Avoid contamination with oxidising agents i.e., nitrates. Oxidising acids, chlorine bleaches, pool

Incompatibility chlorine etc. as ignition may result.

Advice to Firefighters

Flammability Highly flammable. Vapours may form explosive mixtures with air. May evolve toxic gases (carbon

> oxides, hydrocarbons) when heated to decomposition temperatures. When handling a significant spillage, eliminate all ignition sources, including cigarettes, open flames, spark producing switches, heaters, naked lights, mobile phones, etc. Aerosol cans may explode when heated above 50 °C.

Fire and Highly flammable, explosive vapour. Evacuate area and contact emergency services. Toxic gases **Explosion**

may evolve, when heated. Remain upwind and notify those downwind of hazard. Wear full protective equipment, including Self Contained Breathing Apparatus (SCBA), when combating fire.

Use water fog to cool intact containers and nearby storage areas.

Dry agent, carbon dioxide foam, or water fog. Prevent contamination of drains or waterways; **Extinguishing**

absorb runoff with sand or similar.

Hazchem 2Y



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6. ACCIDENTAL RELEASE MEASURES

If large quantities of cans are punctured (bulk), clear area of all unprotected personnel and ventilate **Spillage**

> area. Wear splash-proof goggles, leather gloves, coveralls, and boots. Where inhalation risks exist, wear a Type A-Class P1 (Organic vapour and Particulate) respirator. Collect cans and allow to discharge outdoors. Absorb any residues with sand or similar and place in clean containers for

disposal. DO NOT wash away into sewer.

7. HANDLING AND STORAGE

Use safe work practices to avoid eye or skin contact and inhalation. Observe good personal hygiene, **Handling**

including washing hands before eating. Keep out of the reach of children.

DO NOT puncture aerosol cans or incinerate, even when empty.

Store in a cool, dry well-ventilated area, well away from oxidising agents, acids, alkalis, direct Storage

> sunlight, heat or ignition sources, or foodstuffs. Ensure containers are adequately labelled, protected from physical damage, and sealed when not in use. Check regularly for leaks or spills.

Large storage areas should have appropriate fire protection.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

Occupational Exposure Limits (OEL)

INGREDIENT

DATA

Source Australia Exposure Standards	Ingredient naptha petroleum, isoparaffin, hydrotreated	Material Name Oil mist, refined mineral	TWA 5 mg/m3	STEL Not Available	Peak Not Available	Notes Not Available
Australia Exposure Standards	Hydrotreated propellant	LPG (liquified petroleum gas)	1000 ppm / 1800 mg/m3	Not Available	Not Available	Not Available
Emergency Limits						
Ingredient	TEEL-1	TEEL	-2	7	TEEL-3	
naptha petroleum, isoparaffin, hydrotreated	350 mg/m3	1,800	0 mg/m3	4	40,000 mg/m3	
naptha petroleum, isoparaffin, hydrotreated	1,100 mg/m3	1,800) mg/m3	4	40,000 mg/m3	
hydrocarbon propellant	65,000 ppm	2.30	E+05 ppm	2	4.00E+05 ppm	
Ingredient	Original IDLH		Revis	ed IDLH		
Naptha petroleum, isoparaffin, hydrotreated	2,500 mg/m3		Not A	Available		
2-ethylhexyl bicycloheptene dicarboximide	Not Available		Not A	Available		
d-phenothrin	Not Available		Not A	vailable		



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Hydrocarbon propellant

2,000 ppm Not Available

Occupational Exposure Banding

Ingredient Occupational Exposure Band Rating Occupational Exposure Band Limit

2-ethylhexyl E \leq 0.1 ppm

bicycloheptene dicarboximide

d-phenothrin D $> 0.1 \text{ to } \leq 1 \text{ ppm}$

Notes Occupational exposure banding is a process of assigning chemicals into specific categories or bands

based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of

exposure concentrations that are to protect worker health.

Personal No personal protective equipment is required, normally. When an inhalation risk exists wear a Type

Protection A-Class P1 (Organic vapour and Particulate) Respirator. With prolonged use, wear PVC or rubber

Equipment gloves and splash-proof goggles or safety glasses.





9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	AEROSOL	Vapour Density	> 1 (Air = 1)
Colour	CLEAR	Upper Explosion Limit	NO DATA AVAILABLE
Odour	SLIGHT, ETHER-LIKE ODOUR	Lower Explosion Limit	NO DATA AVAILABLE
рН	7.0	Solubility	SOLUBLE IN WATER
Melting Point	NO DATA AVAILABLE	Specific Gravity @ 25°C	0.90 g/mL – 1000 g/mL
Boiling Point	NO DATA AVAILABLE	Kinematic Viscosity	NO DATA AVAILABLE
Flash Point	<20°C (PROPELLANT)	Auto-ignition	NO DATA AVAILABLE
		Temperature	
Flammability	NO DATA AVAILABLE	Decomposition	NO DATA AVAILABLE
		Temperature	
Vapour Pressure	NO DATA AVAILABLE	Partition Coefficient	NO DATA AVAILABLE

10. STABILITY AND REACTIVITY

Reactivity Incompatible with oxidising agents (e.g., hypochlorite), alkalis, / alkali earth metals and finely divided

metal powders (e.g., aluminium, barium, lithium), heat and ignition sources.

Decomposition May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition temperatures.



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Products

11. TOXICOLOGICAL INFORMATION

Health Hazard Summary General population. The exposure of the general population is expected to be low and is not likely to

present a hazard when it is used as recommended.

Asphyxiant narcotic. This product may only present a hazard with direct eye contact, prolonged and

repeated skin contact or with vapour/gas inhalation at high levels.

Toxicity (Oral) $LD_{50} > 5000 \text{ mg/kg}$, Rat.

Eye Low irritant. Contact may result in lacrimation, pain, redness, and conjunctivitis. Prolonged contact

may result in corneal burns, with possible permanent damage.

Inhalation Low to moderate Irritant, narcotic, asphyxiant. Over exposure may result in upper respiratory tract

irritation, nausea, and headache. At high levels; dizziness, breathing difficulties, and at very high

levels, anaesthesia, cardiac arrhythmias, pulmonary oedema, and unconsciousness.

Skin Low irritant. Prolonged contact may result in irritation, redness, rash, dermatitis, and sensitisation.

Ingestion Exposure considered unlikely, due to product form as an aerosol. Under normal conditions of use,

ingestion is considered a highly unlikely, exposure route.

MAC Slay Bed Bug TOXICITY IRRITATION

& Mite Insecticide Not Available Not Available

TOXICITY IRRITATION

naptha petroleum, isoparaffin, hydrotreated Dermal (rabbit LD_{50} :.1900 mg/kg [1] Inhalation (Rat) LC_{50} ; >4.42 mg/L4h [1] Oral (Rat) LD_{50} ; >4500 mg/kg [1]

chalation (Rat) LC₅₀; >4.42 mg/L4h [1] Skin: adverse effect observed (irritating) [1]

TOXICITY IRRITATION

2-ethylhexyl bicycloheptene dicarboximide

Dermal (Rat) LD₅₀: 470 mg/kg [2] Inhalation (Rat) LC₅₀; 1.94 mg/L4h [2] Oral (Mouse) LD₅₀; 1000 mg/kg [2] Eye: no adverse effect observed (not irritating) [1] Skin: no adverse effect observed (not irritating) [1]

Eye: no adverse effect observed (not irritating) [1]

TOXICITY IRRITATION

d-phenothrin Oral (Mouse) LD₅₀; 480 mg/kg [2] Not Available.

TOXICITY IRRITATION
Inhalation (Rat) LC₅₀; 658 mg/l4h [2] Not Available

hydrocarbon propellant

Legend

ppellant

1. Value obtained from Europe ECHA Registered Substances -Acute toxicity 2. Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS – Register of Toxic Effect

of chemical Substances.



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12. ECOLOGICAL INFORMATION

	Endpoint	Test Duration (hr)	Species	Value	Source
MAC Slay Bed Bug &					
Mite Insecticide	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
naptha petroleum, isoparaffin, hydrotreated	EC ₅₀ (EC _x) EC ₅₀	96h	Algae or other aquatic plants Algae or other aquatic plants	64mg/L 64mg/L	2 2
	Endpoint	Test Duration (hr)	Species	Value	Source
2-ethylhexyl bicycloheptene dicarboximide	EC ₅₀ EC ₅₀ EC ₅₀ NOEC (ECx) LC ₅₀	72h 48h 96h 96h	Algae or other aquatic plants Algae or other aquatic plants Crustacea Crustacea Fish	>1.63<2.7 mg/L 4.38mg/L 1.995-4.83mg/L <0.077mg/L 0.138-0.21mg/L	2 2 4 2 4
	Endpoint	Test Duration (hr)	Species	Value	Source
d-phenothrin	EC ₅₀ NOEC(EC _x) LC ₅₀	504h 96h	Crustacea Crustacea Fish	0.004-0.005mg/L <0.001mg/L 0.001mg/L	4 4 4
	Endpoint	Test Duration (hr)	Species	Value	Source
hydrocarbon propellant	EC_{50} $EC_{50}(EC_x)$	96h 96h 96h 96h	Algae or other aquatic plants Fish Algae or other aquatic plants Algae or other aquatic plants	7.71mg/L 24.11mg/L 7.71mg/L 7.71mg/L	2 2 2 2
	LC ₅₀ EC ₅₀	96h	Fish Algae or other aquatic Plants	24.11mg/L 7.71mg/L	2
Legend	Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances – Ecotoxicological				

.egend Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances – Ecotoxicological

Information – Aquatic Toxicity 4. US EPA Ecotox Database – Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) – Bioconcentration Data 7. METI (Japan) – Bioconcentration

Data 8. Vendor Data

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

DO NOT discharge into sewer or waterways.

Persistence and Degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
2-ethylhexyl bicycloheptene dicarboximide	HIGH	HIGH
d-phenothrin	HIGH	HIGH



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Bioaccumulative potential

Ingredient **Bioaccumulation** 2-ethylhexyl HIGH ($Log_{KOW} = 3.7$)

bicycloheptene dicarboximide

d-phenothrin LOW ($Log_{KOW} = 7.5367$)

Mobility in Soil

Ingredient Mobility

2-ethyl bicycloheptene LOW (KOC = 10410)

dicarboximide

d-phenothrin LOW (KOC = 178400)

13. DISPOSAL CONSIDERATIONS

Waste Disposal For small amounts, absorb contents with sand or similar and dispose of to an approved landfill

site. DO NOT puncture or incinerate aerosol cans. Contact the manufacturer for additional

information.

Legislation Dispose of in accordance with relevant, local legislation.

14. TRANSPORT INFORMATION

CLASSIFIED AS DANGEROUS GOODS FOR TRANSPORT BY THE CRITERIA OF NZS5433:2020. **CLASSIFIED AS A MARINE POLLUTANT IMDG REGULATIONS**

	Shipping Name	UN	Packing Group	DG Class	Subsidiary Risk(s)
Land	AEROSOLS, flammable	1950	None Allocated	2.1	None Allocated
Sea	AEROSOLS, flammable	1950	None Allocated	2.1	None Allocated
Air	AEROSOLS, flammable	1950	None Allocated	2.1	None Allocated

15. REGULATORY INFORMATION

Safety, health, and environmental regulations / legislation specific for the substance or mixture naptha petroleum, isoparaffin, hydrotreated is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS)

-Hazardous Chemicals

Chemical Footprint Project -Chemicals of High Concern

Australian Inventory of Industrial Chemicals (AIIC)

International Agency for Research on Cancer (IARC) -

Agents Classified by the IARC Monographs



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2-ethylhexyl bicycloheptene dicarboximide is found on the following regulatory lists

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) – 5

Australian Inventory of Industrial Chemicals (AIIC)

d-phenothrin is found on the following regulatory lists

Australia Chemicals with non-industrial uses removed from the Australian Inventory of Chemical Substances (old Inventory)

Australia Hazardous Chemical Information System (HCIS)
-Hazardous Chemicals

Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) – Schedule 2 Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) – Schedule 6

hydrocarbon propellant is found on the following regulatory lists

Australia Hazardous Chemical Information System (HCIS) – Hazardous Chemicals

Australian Inventory of Industrial Chemicals (AIIC)

Chemical Footprint Project -Chemicals of High Concern List

National Inventory Status

Australia – AIIC / Yes

Australia Non-Industrial Use

Canada – DSL No (d-phenothrin)

Canada -NDSL No (naptha petroleum, isoparaffin, hydrotreated; 2-ethylhexyl bicycloheptene

dicarboximide; d-phenothrin; hydrocarbon propellant

China – IECSC Yes
Europe – EINEC / Yes

ELINCS / NLP

Japan – ENCS Yes

Korea - KECI No (2-ethylhexyl bicycloheptene dicarboximide; d-phenothrin)

New Zealand - Yes

NZIoC

Philippines - PICCS No (d-phenothrin)

USA - TSCANo (2-ethylhexyl bicycloheptene dicarboximide; d-phenothrin)

Taiwan - TCSI Yes

Mexico - INSQ Yes

Vietnam - NCI Yes

Russia - FBEPH No (2-ethylhexyl bicycloheptene dicarboximide)

Legend Yes = All CAS declared ingredients are on the inventory

No = One or more of the CAS listed ingredients are not on the inventory. These ingredients

may be exempt or will require registration.



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Poison Schedule

AICS

A poison schedule number has not been allocated to this product using the criteria in the

Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

All chemicals listed on the Australian Inventory of Chemical Substances (AICS).

MPI None Allocated
AsureQuality None Allocated

NZEPA New Zealand Approval HSR002515

16. OTHER INFORMATION

Additional Information

ASPHYXIANTS (1): reduce the oxygen concentration by displacement, when present in the atmospheres, in high concentrations. As most simple asphyxiants are odourless, atmospheres deficient in oxygen do not provide adequate sensory warning of danger. Therefore, it is not generally appropriate to recommend an exposure standard for each asphyxiant, but instead warn of the need to maintain oxygen concentrations.

Some asphyxiants may be given an exposure standard, due to their potential for narcotic effects at high concentrations, or an explosion hazard.

Asphyxiants (2)

There is a significant hazard associated with workers entering poorly, ventilated areas (e.g., tanks) where oxygen levels may be deficient. An air supplied breathing apparatus may be required if adequate ventilation is not ensured. Refer to AS/NZS 2865 - Safe Working in a Confined Space.

Respirators

In general, the best practice to avoid exposure is to use engineering controls, such as adequate

ventilation, rather than the use of respirators (which should be limited). If respiratory equipment must be worn, ensure correct respirator selection and training is

undertaken. Some respirators may be extremely uncomfortable, when used for long periods. The use of air powered or air supplied respirators should be considered where prolonged or repeated use is necessary.

Abbreviations

mg/kg - milligrams per kilogram

mg/m³ – milligrams per cubic metre mg/L – milligrams per Litre

ppb - Parts Per Billion

NOEC – No Observed Effect Concentration NOAEL – No Observed Adverse Effect Level

 LD_{50} – Dosage that is lethal to 50% of the test population

 LC_{50} – Concentration that is lethal to 50%50% of the test population

TWA - Time Weighted Average

CAS# – Chemical Abstract Service number - uniquely identifies chemical compounds.

NZEPA - New Zealand Environmental Protection Authority

MPI – New Zealand Ministry of Primary Industries NZIOC – New Zealand Inventory of Chemicals

WES – Workplace Exposure Standard

Personal Protective Equipment

The recommendations for protective equipment contained within this SDS report are provided as a guide only, when dealing with an abnormal situation. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before the final selection of personal protective equipment is made.



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Health Effects from Exposure

It should be noted that the effects from excess exposure to this product would depend on several factors, including duration of exposure, quantity involved, effectiveness of control measures used; protective equipment and method of application. Given that, it is impractical to prepare an SDS report, which would encompass all possible scenarios, it is anticipated that users will assess the risks in an emergency and apply appropriate control methods.

Report Status

This report is based upon information provided by ingredient manufacturers, and third-party experts. We believe that the information represents the current state of knowledge about safety and handling precautions that are appropriate for this product. Further clarification regarding any aspect of the product should be obtained directly from the Chief Chemist at Arandee Ltd. While Arandee has taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy, or completeness. As far as lawfully possible, Arandee accepts no liability for any loss, injury, or damage (including consequential loss) which may be suffered, or incurred by any person, because of their reliance upon the information contained in this Safety Data Sheet.