

**1. IDENTIFICATION OF THE MATERIAL AND THE MANUFACTURER**

<b>Product Name</b>	<b>MAC SLAY BED BUG &amp; MITE INSECTICIDE</b>		
	The forms of multishot aerosol (500ml)		
<b>Supplier Name</b>	Arandee Ltd		
<b>Address</b>	108 Rockfield Road, Penrose, Auckland 1061, New Zealand		
<b>Telephone</b>	+64 (9) 579 5139		
<b>Emergency</b>	National Poisons Centre -24 hours	Australia New Zealand	13 11 26 0800 POISON 0800 764 766
<b>E-mail</b>	<a href="mailto:sales@arandee.co.nz">sales@arandee.co.nz</a>		
<b>Website</b>	<a href="http://www.arandee.co.nz">http://www.arandee.co.nz</a>		
<b>Synonym(s)</b>	MAC Slay; MAC Slay Bed Bug		
<b>Use(s)</b>	Application is by spray atomisation from a handheld aerosol pack. Use according to manufacturer's directions.		

**2. HAZARDS IDENTIFICATION**

**AUSTRALIA: CLASSIFIED AS HAZARDOUS ACCORDING TO THE GLOBALLY HARMONISED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) INCLUDING WORK, HEALTH AND SAFETY REGULATIONS, AUSTRALIA**

**NEW ZEALAND: THIS SUBSTANCE IS HAZARDOUS ACCORDING TO THE EPA HAZARDOUS SUBSTANCES (CLASSIFICATION) NOTICE 2020**

**Hazard Pictograms**

<b>Signal Word</b>	<b>DANGER</b>
<b>Physical Hazard</b>	Aerosol: Category 1
<b>Health Hazard</b>	Skin irritant: Category 2 Skin sensitiser: Category 1
<b>Environmental Hazard</b>	Aquatic acute: Category 1 Aquatic chronic: Category 1 Hazardous to terrestrial invertebrates

<b>GHS Classification and Category</b>	<b>Code</b>	<b>Statement</b>	
<b>Hazard Code</b>	H222	Extremely flammable aerosol.	
	H229	Pressurised container: May burst if heated.	
	H315	Causes skin irritation.	
	H317	May cause an allergic skin reaction.	
	H400	Pressurised container: May burst if heated.	
	H410	Very toxic to aquatic life with long lasting effects.	
	H441	Very toxic to aquatic life with very long lasting effects.	
	<b>Prevention Code</b>	P102	Hazardous to terrestrial invertebrates.
		P103	Keep out of reach of children.
		P210	Read label before use.
P211		Do not spray on an open flame or other ignition source.	
P251		Do not pierce or burn, even after use.	
P261		Avoid breathing spray.	
P264		Wash hands thoroughly after handling.	
P272		Contaminated work clothing should not be allowed of the workplace.	
P273		Avoid release to the environment.	
P280		Wear protective gloves.	
<b>Response Code</b>	P280	Wear Eye protection.	
	P101	If medical advice is needed, have product container or label at hand.	



	P302+P352	IF ON SKIN: Wash with plenty of water.
	P308+P313	IF exposed or concerned: Get medical advice/attention.
	P321	Specific treatment
	P332+P313	If skin irritation occurs: Get medical advice/attention.
	P333+P313	If Skin irritation or rash occurs: Get medical advice/attention.
	P362+P364	Take off contaminated clothing and wash it before reuse.
	P391	Collect spillage.
<b>Storage Code</b>	P410	Protect from sunlight.
	P412	Do not expose to temperatures exceeding 50°C.
<b>Disposal Code</b>	P501	Dispose of in accordance with relevant local regulations.

### 3. HAZARDS IDENTIFICATION COMPOSITION OF INGREDIENTS

Ingredient	Weight %	CAS No.
NAPHTHA 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

### 4. FIRST AID MEASURES

#### Routes of Exposure

<b>If in Eyes</b>	Rinse cautiously with water for 15 minutes. If eye irritation persists: Get medical advice.
<b>If on Skin</b>	Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention.
<b>If Swallowed</b>	Do not induce vomiting. Wash out mouth thorough with water. Never give anything to the mouth of unconscious person. Seek medical attention if needed.
<b>If Inhaled</b>	Remove person to fresh air. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult.

#### Most important symptoms and effects, both acute and delayed

<b>Symptoms:</b>	None known.
<b>Notes to Doctor:</b>	Treat symptomatically
<b>Routes of Exposure</b>	

### 5. FIRE FIGHTING MEASURES

<b>Hazard Type</b>	Extremely flammable aerosol. Vapours may form explosive mixtures with air.
<b>Hazards from combustion products</b>	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.
<b>Suitable Extinguishing Media</b>	Dry agent, carbon dioxide foam, or water fog. Prevent contamination of drains or waterways; absorb runoff with sand or similar.
<b>Precautions for firefighters and special protective clothing</b>	Wear full protective equipment, including self contained breathing apparatus (SCBA), when combating fire. Use waterfog to cool intact containers and nearby storage areas. Evacuate area and contact emergency services. Toxic gases may evolve, when heated. Remain upwind and notify those downwind of hazard.
<b>HAZCHEM CODE</b>	2YE

### 6. ACCIDENTAL RELEASE MEASURES

<b>For emergency responders</b>	Wear protective equipment as detailed in Section 8. Where inhalation risks exist, wear a Type A-Class P1 (Organic vapour and Particulate) respirator. If large quantities of cans are punctured (bulk), clear area of all unprotected personnel and ventilate area.
<b>Environmental precautions</b>	Keep product away from drains, surface and underground water.
<b>Method and material for containment and cleaning up</b>	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. For any concern related to disposal consult section 13.

**7. HANDLING AND STORAGE**

**Precautions for Handling**

Read carefully and follow all instructions.  
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
 Do not spray on an open flame or other ignition source.  
 Do not pierce or burn, even after use.  
 Avoid release to the environment (if this is not the intended use).  
 Use safe work practices to avoid eye or skin contact and inhalation.  
 Observe good personal hygiene, including washing hands before eating.  
 DO NOT puncture aerosol cans or incinerate, even when empty.

**Precautions for Storage**

Keep out of the reach of children.  
 Do not expose to temperatures exceeding 50°C.  
 Protect from sunlight.  
 Store in a cool, dry well-ventilated area, well away from oxidising agents, acids, alkalis.  
 Ensure containers are adequately labelled, protected from physical damage, and sealed when not in use.  
 Check regularly for leaks and spills.  
 Large storage areas should have appropriate fire protection.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

**Engineering Controls**

DO NOT directly inhale concentrated vapours. Use in well-ventilated areas. Mechanical Extraction ventilation is recommended for poorly ventilated area. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Maintain vapour levels below the recommended exposure standard.

**Personal Protection Equipment**



**Eyes**

No personal protective equipment is required for normally use. In bulk or industrial setting wear splash-proof goggles or safety glasses.

**Skin**

No personal protective equipment is required for normally use. In bulk or industrial setting wear PVC or rubber gloves.

**Respiratory**

No personal protective equipment is required, normally. When an inhalation risk exist wear a Type A-Class P1 (Organic vapour and Particulate) Respirator.

**INGREDIENT DATA**

Source	Ingredient	Material	TWA	STEL	Peak	Notes
Australia Exposure Standards	naptha petroleum, isoparaffin, hydrotreated	Oil mist, refined mineral	5 mg/m3	Not Available	Not Available	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	TEEL-3
naptha petroleum, isoparaffin, hydrotreated	350 mg/m3	1,800 mg/m3	40,000 mg/m3
naptha petroleum, isoparaffin, hydrotreated	1,100 mg/m3	1,800 mg/m3	40,000 mg/m3
hydrocarbon propellant	65,000 ppm	2.30E+05 ppm	4.00E+05 ppm

Ingredient	Original IDLH	Revised IDLH
Naptha petroleum, isoparaffin, hydrotreated	2,500 mg/m3	Not Available
2-ethylhexyl bicycloheptene dicarboximide	Not Available	Not Available



d-phenothrin	Not Available	Not Available
Hydrocarbon propellant	2,000 ppm	Not Available

Occupational Exposure Banding Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
2-ethylhexyl bicycloheptene dicarboximide	E	≤ 0.1 ppm
d-phenothrin	D	> 0.1 to ≤ 1 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.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

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

**10. STABILITY AND REACTIVITY**

<b>Stability of Substance</b>	This product is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No data available.
<b>Conditions to Avoid</b>	Heat and ignition sources.
<b>Incompatible Materials</b>	Incompatible with oxidising agents (e.g., hypochlorite), alkalis, / alkali earth metals and finely divided metal powders (e.g., aluminium, barium, lithium).
<b>Hazardous Decomposition Products</b>	May evolve toxic gases (carbon oxides, hydrocarbons) when heated to decomposition temperatures.

**11. TOXICOLOGICAL INFORMATION**

<b>Health Summary</b>	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.
<b>Acute Effects Swallowed</b>	This product is not classified as acutely toxic. Exposure considered unlikely due to product from as an aerosol. Under normal conditions of use, ingestion is considered a highly unlikely, exposure route. LD50 = > 5000mg/kg, Rat
<b>Dermal Inhalation</b>	This product is not classified as acutely toxic. This product is not classified as acutely toxic. 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.

- Eye** This product is not classified an eye irritant/corrosive. Low irritant. Contact may result in lacrimation, pain, redness and conjunctivitis. Prolonged contact may result in corneal burns, with possible permanent damage.
- Skin** This product is not classified as a skin irritant/corrosive. Low irritant. Prolonged contact may result in irritation, redness, rash, dermatitis and sensitisation.
- Chronic Effects**
- Carcinogenicity** This product is not classified as carcinogenic.
- Reproductive Toxicity** This product is not classified as toxic for reproduction.
- Germ Cell Mutagenicity** This product is not classified as mutagenic.
- Aspiration** This product is not classified as Asp Tox.
- STOT/SE** This product is not classified as STOT SE.
- STOT/RE** This product is not classified as STOT RE.

MAC Slay Bed Bug & Mite Insecticide	TOXICITY Not Available	IRRITATION Not Available
naptha petroleum, isoparaffin, hydrotreated	Dermal (rabbit LD <sub>50</sub> : 1900 mg/kg [1] Inhalation (Rat) LC <sub>50</sub> : >4.42 mg/L4h [1] Oral (Rat) LD <sub>50</sub> : >4500 mg/kg [1]	Eye: no adverse effect observed (not irritating) [1] Skin: adverse effect observed (irritating) [1]
2-ethylhexyl bicycloheptene dicarboximide	Dermal (Rat) LD <sub>50</sub> : 470 mg/kg [2] Inhalation (Rat) LC <sub>50</sub> : 1.94 mg/L4h [2] Oral (Mouse) LD <sub>50</sub> : 1000 mg/kg [2]	Eye: no adverse effect observed (not irritating) [1] Skin: no adverse effect observed (not irritating) [1]
d-phenothrin	Oral (Mouse) LD <sub>50</sub> : 480 mg/kg [2]	Not Available.
hydrocarbon propellant	Inhalation (Rat) LC <sub>50</sub> : 658 mg/l4h [2]	Not Available

**Legend** 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.

**12. ECOLOGICAL INFORMATION**

MAC Slay Bed Bug & Mite Insecticide	Endpoint Not Available	Test Duration (hr) Not Available	Species Not Available	Value Not Available	Source Not Available
naptha petroleum, isoparaffin, hydrotreated	EC <sub>50</sub> (EC <sub>x</sub> )	96h	Algae or other aquatic plants	64mg/L	2
	EC <sub>50</sub>	96h	Algae or other aquatic plants	64mg/L	2
2-ethylhexyl bicycloheptene dicarboximide	EC <sub>50</sub>	72h	Algae or other aquatic plants	>1.63<2.7 mg/L	2
	EC <sub>50</sub>	72h	Algae or other aquatic plants	4.38mg/L	2
	EC <sub>50</sub>	48h	Crustacea	1.995-4.83mg/L	4
	NOEC (EC <sub>x</sub> )	96h	Crustacea	<0.077mg/L	2
	LC <sub>50</sub>	96h	Fish	0.138-0.21mg/L	4
d-phenothrin	EC <sub>50</sub>	48h	Crustacea	0.004-0.005mg/L	4
	NOEC(EC <sub>x</sub> )	504h	Crustacea	<0.001mg/L	4
	LC <sub>50</sub>	96h	Fish	0.001mg/L	4



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<b>hydrocarbon propellant</b>	EC <sub>50</sub> (EC <sub>x</sub> )	96h	Algae or other aquatic plants	7.71mg/L	2
	LC <sub>50</sub>	96h	Fish	24.11mg/L	2
	EC <sub>50</sub>	96h	Algae or other aquatic plants	7.71mg/L	2
	EC <sub>50</sub> (EC <sub>x</sub> )	96h	Algae or other aquatic plants	7.71mg/L	2
	LC <sub>50</sub>	96h	Fish	24.11mg/L	2
	EC <sub>50</sub>	96h	Algae or other aquatic Plants	7.71mg/L	2

**Legend** 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**

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

**Bioaccumulative potential**

<b>Ingredient</b>	<b>Bioaccumulation</b>
2-ethylhexyl bicycloheptene dicarboximide	HIGH (Log <sub>KOW</sub> = 3.7)
d-phenothrin	LOW (Log <sub>KOW</sub> = 7.5367)

**Mobility in Soil**

<b>Ingredient</b>	<b>Mobility</b>
2-ethyl bicycloheptene dicarboximide	LOW (KOC = 10410)
d-phenothrin	LOW (KOC = 178400)

**13. DISPOSAL CONSIDERATIONS**

**Disposal Method** For small amounts, absorb contents with sand or similar and dispose of to an approved landfill site. Ensure any container holding waste product or contaminated spill media is labelled “Hazardous Waste – Flammable, Exotoxic” and that the label also has the Flammable, Ecotoxic Pictogram, waste type identifier, and the business name, address, and the phone number.

**Legislation** Dispose of in accordance with relevant, local legislation.

**Precautions or methods to avoid** Avoid release to the environment. DO NOT puncture or incinerate aerosol cans.

**14. TRANSPORT INFORMATION**

**THIS PRODUCT IS CLASSIFIED AS A DANGEROUS GOODS FOR TRANSPORT IN NZ; NZS 5433:2020 AND SNZ HB 5433:2021**

	<b>Shipping Name</b>	<b>UN No</b>	<b>Packing Group</b>	<b>DG Class</b>	<b>Subsidiary Risk(s)</b>
<b>LAND TRANSPORT</b>	AEROSOLS	1950	None Allocated	2.1	None Allocated
<b>SEA TRANSPORT</b>		1950	III	2.1	None Allocated



(IMDG/IMO)	AEROSOLS				
AIR TRANSPORT IATA/ICAO)	AEROSOLS	1950	None Allocated	2.1	None Allocated

**Special precautions for user**

**Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage

**Shipping Label**



**Special Precautions**

**Hazchem code: 2YE**

**15. REGULATORY INFORMATION**

This substance is classified as hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

MPI	Type A (All animal products excluding dairy)
NZEPA	Approved pursuant to the HSNO Act 1996, Approval No. HSR101199
HSW (HS) Regulations 2017 and EPA Notices	<b>Trigger Quantity</b>
Certified Handler	No
Location Certificate	3000L (AWC)
Tracking Trigger Quantities	Not required.
Signage Trigger Quantities	100L
Emergency Response Plan	100L
Secondary Containment	100L
Restriction of Use	Only use for the intended purpose. Refer to EPA website for full controls document.

**16. OTHER INFORMATION**

CAS #	Chemical Abstract Service number – uniquely identifies chemical compounds.
EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority.
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
NOEC	No Observed Effect Concentration.
NOAEL	No Observed Adverse Effect Level.
OSHA	American Occupational Safety and Health Administration.
TEL	Tolerable Exposure Limit.
TWA	Time Weighted Average.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
UEL	Upper Explosive Level.
WES	Workplace Exposure Limit.

**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, quanti

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used, product concentration and the availability of engineering controls should be considered before the final selection of personal protective equipment is made.

**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.