1. IDENTIFICATION OF THE MATERIAL AND THE MANUFACTURER

Product Name	**MAC SLAY PROFESSIONAL (DRY) INSECTICIDE** The forms of automatic dispenser refill, fogger and multishot aerosols (80ml – 600ml)		
Address	108 Rockfield Road, Penrose, Auckland 1061, New Zealand		
Telephone	+64 (9) 579 5139		
Emergency	National Poisons Centre -24 hours		
		Australia	13 11 26
E-mail	sales@arandee.co.nz	New Zealand	0800 POISON 0800 764 766
Website	http://www.arandee.co.nz		
Synonym(s)	MAC Slay; MAC Slay Auto Refill, MAC Slay Professional, MAC Slay Fogger		
Use(s)	A unique synergised synthetic pyrethroid formulation, effective against flying and crawling insects. Synergises three powerful insect killers to achieve rapid knockdown and high kill rate. Non-residual with low mammalian toxicity, important for the safety of humans and pets. Fine dry spray atomisation with a low irritant formulation.		

2. HAZARD(S) IDENTIFICATION

AUSTRALIA: CLASSIFIED AS HAZARDOUS ACCORDING TO THE GLOBALLY HARMONISED SYSTEM OF CLASSIFICATION AND LABELLING OF CHEMICALS (GHS) INLCUDING WORK, HEALTH AND SAFETY REGULATIONS, AUSTRALIA
NEW ZEALAND: THIS SUBSTANCE IS HAZARDOUS ACCORDING TO THE EPA HZARDOUS SUBSTANCES (CLASSIFICATION) NOTICE 2020

Hazard Pictograms

Signal Word	**DANGER**	
Physical Hazard	Aerosol: Category 1	
Health Hazards	NA	
Environmental Hazards	Aquatic acute: Category 1 Aquatic chronic: Category 1 Hazardous to terrestrial invertebrates	
GHS Classification and Category	**Code**	**Statement**
Hazard Code	H222	Extremely flammable aerosol.
	H229	Pressurised container: May burst if heated.
	H400	Very toxic to aquatic life.
	H410	Very toxic to aquatic life with very long lasting effects.
	H441	Hazardous to terrestrial invertebrates.
Prevention Code	P102	Keep out of reach of children.
	P103	Read label before use.
	P210	Keep away from heat, hot surfaces, sparks open flames and other ignition sources. No smoking.
	P211	Do not spray on an open flame or other ignition source.
	P251	Do not pierce or burn, even after use.
	P273	Avoid release to the environment.
Response Code	P101	If medical advice is needed, have product container or label at hand.
	P391	Collect spillage.
Storage Code	P410	Protect from sunlight.
	P412	Do not expose to temperatures exceeding 50°C.
Disposal Code	P501	Dispose of in accordance with relevant local legislation.

3. HAZARD(S) IDENTIFICATION COMPOSITION OF INGREDIENTS

Name	% Weight	CAS Number
d-PHENOTHRIN	<10%	26002-80-2
TETRAMETHRIN	<10%	7696-12-0
PIPERONYL BUTOXIDE	<10%	51-03-6
ALIPHATIC HYDORCARBON BLEND	<5%	64741-65-7
HYDROCARBON PROPELLANT BLEND	<32%	68476-85-7
INGREDIENTS DETERMINED NOT TO BE HAZARDOUS	BALANCE	

4. FIRST AID MEASURES

If in Eyes Rinse cautiously with water for 15 minutes. If eye irritation persists: Get medical advice.

If on Skin Wash with plenty of soap and water. If skin irritation occurs: get medical advice/attention.

If Swallowed Do not induce vomiting. Wash out mouth thorough with water. Never give anything to the mouth of unconscious person. Seek medical attention if needed.

If Inhaled 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

Symptoms: None known.

Notes to Doctor: Treat symptomatically

5. FIRE FIGHTING MEASURES

Hazard Type Extremely flammable aerosol. Vapours may form explosive mixtures with air.

Hazards from combustion products 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.

Suitable Extinguishing Media Dry agent, carbon dioxide foam, or water fog. Prevent contamination of drains or waterways; absorb runoff with sand or similar.

Precautions for firefighters and special protective clothing 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.

HAZCHEM CODE 2YE

6. ACCIDENTAL RELEASE MEASURES

For emergency responders 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.

Environmental precautions Keep product away from drains, surface and underground water.

Method and material for containment and cleaning up 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)

Source	Ingredient Name	Exposure Limits
New Zealand Workplace Exposure Standards (WES)	butane	**NZ OSH (New Zealand, 2/2013).** WES-TWA: 800 ppm 8 hours. WES-TWA: 1900 mg/m³ 8 hours.

EMERGENCY LIMITS

Ingredient	Material Name	TEEL-1	TEEL-2	TEEL-3
Hydrocarbons, C11-C13, isoalkanes, <2% aromatics	Naphtha, hydrotreated heavy; (Isopar L-rev 2)	350 gm/m³	1,800 mg/m³	40.000 mg/m³

Ingredient	Original IDLH	Revised IDLH
Hydrocarbons, C11-C13 isoalkanes, <2% aromatics	2,500 mg/m³	Not Available

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	AEROSOL GAS	**Vapour Density**	-1 (AIR=1)
Colour	COLOURLESS	**Vapour Pressure**	NOT AVAILABLE
Odour	SLIGHT, ETHERAL-LIKE	**Upper and Lower Explosion Limit**	NOT AVAILABLE
Odour Threshold	NOT AVAILABLE	**Specific Gravity**	0.80-0.82 g/ml
pH	NOT AVAILABLE	**Water Solubility**	DISPERSABLE
Boiling Point	NOT AVAILABLE	**Partition Coefficient**	NOT AVAILABLE
Melting Point	NOT AVAILABLE	**Auto-igntion**	NOT AVAILABLE
Freezing Point	NOT AVAIALBLE	**Decomposition Temperature**	NOT AVAILABLE

Flash Point	<20°C (PROPELLENT)	**Kinematic Viscosity**	NOT AVAILABLE
Flammability	HIGHLY FLAMMABLE	**% Volatiles**	100%

10. STABILITY AND REACTIVITY

Stability of Substance This product is stable under normal conditions.

Possibility of hazardous reactions No data available.

Conditions to Avoid Heat and ignition sources.

Incompatible Materials Incompatible with oxidising agents (e.g., hypochlorite), alkalis, / alkali earth metals and finely divided metal powders (e.g., aluminium, barium, lithium).

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

11. TOXICOLOGICAL INFORMATION

Health 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.

Acute Effects

Swallowed 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

Dermal This product is not classified as acutely toxic.

Inhalation 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.

12. ECOLOGICAL INFORMATION

Very toxic to aquatic life with long lasting effects. Hazardous to terrestrial invertebrates.

Environmental effects of the compound are extremely unlikely, due to packaging in the form of an aerosol. Ensure appropriate measures are taken to prevent this product from entering the environment through wastewater.

Product

Persistence and degradability No data available

Bioaccumulation No data available

Mobility in Soil No data available

Other adverse effects No data available

Individual Component Information

d-Phenothrin:

Route	Species	Duration	Value LC50/EC50
Acute aquatic, fish	Onchoryhncus mykiss (Rainbow Trout)	96 hr	0.0027mg/L
Chronic aquatic, fish	Onchoryhncus mykiss (Rainbow Trout)	-	1.1mg/L (NOEC)
Acute aquatic, Crustacean	Daphnia magna	48 hr	0.0043mg/L
Chronic aquatic, Crustacean	Daphnia magna	-	0.47mg/L (NOEC)

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

	Shipping Name	UN No	Packing Group	DG Class	Subsidiary Risk(s)	EPG
LAND TRANSPORT	AEROSOLS	1950	None Allocated	2.1	None Allocated	
SEA TRANSPORT (IMDG/IMO)	AEROSOLS	1950	III	2.1	None Allocated	
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 upreight and secure. Ensure that persons transporting the product know what to do in thre even 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 including dairy)

NZEPA Approved pursuant to the HSNO Act 1996,
Approval No. HSR000332

HSW (HS) Regulations 2017 and EPA Notices **Trigger Quantity**

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

Glossary

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, quantity 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.