SAFETY DATA SHEET ACCORDING TO WHS AND ADG REQUIREMENTS

CHEMWATCH: VERSION NO: ISSUE DATE: PRINT DATE:

23-4003 2..1.1.1 27.06.2017 22.01.2018

SECTION 1 IDENTIFICATION OF THE SUBSTANCES / MIXTURE AND OF THE COMPANY / UNDERTAKING

PRODUCT IDENTIFIER

Product Name	Py-Sect Insecticide	
Proper shipping name	AEROSOLS	
Other means of Identification	Not Available	

RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Relevant identified uses	Application is by spray atomisation from a hand held aerosol pack Insecticide spray.
--------------------------	--

DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Registered company name	Silver Zinc Supplies	
Address	2/10 Maiella Street Stapylton Queensland 4207 Australia	
Telephone	(07) 3287 4567	
Website	silverzinc.com.au	
Email	orders@silverzinc.com.au	

EMERGENCY CONTACT NUMBER

Association / Organization	Silver Zinc Supplies	
Emergency Contact	04000 18006	
Other Emergency Contact	Not Available	



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SECTION 2 HAZARDS IDENTIFICATION

CLASSICATION OF THE SUBSTANCE OR MIXTURE

HAZARDOUS CHEMICAL. DANGEROUS GOODS. ACCORDING TO THE WHS REGULATIONS AND THE ADG CODE.

CHEMWATCH HAZARD RATINGS

		Min	Max	_
Flammability	4			
Toxicity	0			0 = Minimum1 = Low
Body Contact	2			2 = Moderate
Reactivity	1			3 = High
Chronic	0			_ 4 = Extreme

Poisons Schedule	Not Applicable	
Classification[1]	Aerosols Category 1, Gas under Pressure (Compressed gas), Eye Irritation Category 2A, Acute Aquatic Hazard Category 1, Chronic Aquatic Hazard Category 1	
Legend	11. Classified by Chemwatch; 2. Classification drawn from HSIS ; 3. Classification drawn from EC Directive 1272/2008 - Annex VI	

LABEL ELEMENTS

Hazard Pictogram(s)	
Signal Word	Danger

HAZARD STATEMENT (S)

H222	Extremely flammable aserosol.	
H280	Contains gas under pressure; may explode if heated.	
Н319	Causes serious eye irritation.	
H410	Very toxic to aquatic life with long lasting effects.	
AUH044	Risk of explosion if heated under confinement.	

PRECAUTIONARY STATEMENTS(S) PREVENTION

P210	Keep away from heat/sparks/open flames/hot surfaces No smoking.		
P211	Do not spray on an open flame or other ignition source.		
P251	Pressurized container: Do not pierce or burn, even after use.		
P273	Avoid breathing mist/vapours/spray.		
P280	Wear protective gloves/protective clothing/eye protection/face protection.		



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PRECAUTIONARY STATEMENT(S) RESPONSE

P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
P337 + P313	If eye irritation persists: Get medical advice/attention.	
P391	Collect spillage.	

PRECAUTIONARY STATEMENT(S) STORAGE

P410 + P403	Protect from sunlight. Store in a well-ventilated place.	
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.	

PRECAUTIONARY STATEMENT(S) DISPOSAL

P501

Dispose of contents/container to authorized hazardous or special waste collection point in accordance with any local regulation.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCES

SEE SECTION BELOW FOR COMPOSITION OF MIXTURES

MIXTURES

CAS No.	% [Weight]	Name	
64-17-5	30-60	ethanol	
51-03-6	1-10	piperonyl butoxide	
8003-34-7	1-10	pyrethrum	
68476-85-7	30-60	hydrocarbon propellant	
NOTE: Manufacturer has supplied full ingredient information to allow CHEMWATCH assessment.			



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SECTION 4 FIRST AID MEASURES

DESCRIPTION OF FIRST AID MEASURES

Eye Contact	 If aerosols come in contact with the eyes: Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Transport to hospital or doctor without delay. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
Skin Contact	If solids or aerosol mists are deposited upon the skin: Flush skin and hair with running water (and soap if available). Remove any adhering solids with industrial skin cleansing cream. DO NOT use solvents. Seek medical attention in the event of irritation.
Inhalation	 If aerosols, fumes or combustion products are inhaled: Remove to fresh air. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. If breathing is shallow or has stopped, ensure clear airway and apply resuscitation, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor.
Ingestion	 Not considered a normal route of entry. If swallowed do NOT induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice

INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

Treat symptomatically.

For chronic or short term repeated exposures to pyrethrum and synthetic pyrethroids:

- Mammalian toxicity of pyrethrum and synthetic pyrethroids is low, in part because of poor bioavailability and a large first pass extraction by the liver.
- The most common adverse reaction results from the potent sensitising effects of pyrethrins.
- Clinical manifestations of exposure include contact dermatitis (erythema, vesiculation, bullae); anaphylactoid reactions (pallor, tachycardia, diaphoresis) and asthma. [Ellenhorn Barceloux]
- In cases of skin contact, it has been reported that topical application of Vitamin E Acetate (alpha-tocopherol acetate) has been found to have high therapeutic value, eliminating almost all skin pain associated with exposure to synthetic pyrethroids. [Incitec]



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SECTION 5 FIREFIGHTING MEASURES

EXTINGUISHING MEDIA

• SMALL FIRE: WATER SPRAY, DRY CHEMICAL OR CO2

• LARGE FIRE: WATER SPRAY OR FOG.

SPECIAL HAZARDS ARISING FROM THE SUBSTRATE OR MIXTURE

Fire Incompatibility

 Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result

ADVICE FOR FIREFIGHTERS

Fire Fighting	 Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. If safe, switch off electrical equipment until vapour fire hazard removed. Use water delivered as a fine spray to control fire and cool adjacent area. DO NOT approach containers suspected to be hot.
Fire Explosion/Hazard	 Liquid and vapour are highly flammable. Severe fire hazard when exposed to heat or flame. Vapour forms an explosive mixture with air. Severe explosion hazard, in the form of vapour, when exposed to flame or spark. Vapour may travel a considerable distance to source of ignition. Heating may cause expansion or decomposition with violent container rupture. Aerosol cans may explode on exposure to naked flames. Combustion products include: carbon dioxide (CO2) other pyrolysis products typical of burning organic material. Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions.
HAZCHEM	2Y



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SECTION 6 ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES - SEE SECTION 8
ENVIRONMENTAL PRECAUTIONS - SEE SECTION 12

ADVICE FOR FIREFIGHTERS

Minor Spills	 Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Wear protective clothing, impervious gloves and safety glasses. Shut off all possible sources of ignition and increase ventilation. Wipe up. If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated. Undamaged cans should be gathered and stowed safely.
Major Spills	 Environmental hazard - contain spillage. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. May be violently or explosively reactive. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water courses No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so.

PERSONAL PROTECTIVE EQUIPMENT ADVICE IS CONTAINED IN SECTION 8 OF THE SDS.



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SECTION 7 HANDLING AND STORAGE

PRECAUTIONS FOR SAFE HANDLING

Safe handling	 Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials.
Other Information	 Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can Store in original containers in approved flammable liquid storage area. DO NOT store in pits, depressions, basements or areas where vapours may be trapped. No smoking, naked lights, heat or ignition sources. Keep containers securely sealed. Contents under pressure. Store away from incompatible materials. Store in a cool, dry, well ventilated area

CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOPATIBILITIES

Suitable container	Aerosol dispenser. Check that containers are clearly labelled.
Storage Incompatibility	Pyrethrins and permethrins: are unstable in the presence of light, heat, moisture and air are hydrolysed by oxygen and/ or sunlight may react with strong oxidisers to produce fire and explosions are incompatible with alkalis Avoid strong bases.



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SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION CONTROL PARAMETERS - OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

Source	Ingredients	Sampling Time	TWA	STEL	Peak	Notes
Australia Exposure Standards	ethanol	Ethyl alcohol	1880 mg/m3/ 1000PPM	Not Available	Not Available	Not Available
Australia Exposure Standards	pyrethrum	Pyrethrum	5 mg/m3	Not Available	Not Available	Not Available
Australia Exposure Standards	hydrocarbon propellant	LPG (liquified petroleum gas)	1800 mg/m3 / 1000 ppm	Not Available	Not Available	Not Available

EMERGENCY LIMITS

Ingredients	Material Name	TEEL-1	TEEL-2	TEEL-3
ethanol	Ethyl alcohol; (Ethanol)	Not Available	Not Available	15000 ppm
piperonyl butoxide	Piperonyl butoxide	6.5 mg/m3	72 mg/m3	1,200 mg/m3
hydrocarbon propellant	Liquified petroleum gas; (L.P.G.)	65,000 ppm	2.30E+05 ppm	4.00E+05 ppm

Ingredient	Original IDLH	Revised IDLH	
ethanol	3,300 [LEL] ppm	Not Available	
piperonyl butoxide	Not Available	Not Available	
pyrethrum	5000 mg/m3	Not Available	
hydrocarbon propellant	2,000 [LEL] ppm	Not Available	



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EXPOSURE CONTROLS

Appropriate engineering controls	Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment. Ventilation can remove or dilute an air contaminant if designed properly. The design of a ventilation system must match the particular process and chemical or contaminant in use. Employers may need to use multiple types of controls to prevent employee overexposure
Personal protection	
Eye and face protection	 Safety glasses with side shields. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable.
Skin protection	See Hand protection below
Hands/feet protection	No special equipment needed when handling small quantities. OTHERWISE: • For potentially moderate exposures: • Wear general protective gloves, eg. light weight rubber gloves. • For potentially heavy exposures: • Wear chemical protective gloves, eg. PVC. and safety footwear.
Body protection	See Other protection below
Other protection	No special equipment needed when handling small quantities. OTHERWISE: Overalls. Skin cleansing cream. Eyewash unit. Do not spray on hot surfaces.
Thermal hazards	Not Available



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RECOMMENDED MATERIAL(S)

GLOVE SELECTION INDEX

GLOVE SELECTION INDEX Glove selection is based on a modified presentation of the:

"Forsberg Clothing Performance Index".

The effect(s) of the following substance(s) are taken into account in the *computergenerated* selection:

PY-Sect Insecticide

Material	СРІ	
BUTYL	С	
NATURAL RUBBER	С	
NATURAL+NEOPRENE	С	
NEOPRENE	С	
NITRILE	С	
NITRILE+PVC	С	
PE/EVAL/PE	С	
PVC	С	

* CPI - Chemwatch Performance Index

A: Best Selection

B: Satisfactory; may degrade after 4 hours continuous immersion

C: Poor to Dangerous Choice for other than short term immersion

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation.

* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

RESPIRATORY PROTECTION

Type AX-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent) Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	AX-AUS P2		AX-PAPR-AUS / Class 1 P2
up to 50 x ES	-	AX-AUS / Class 1 P2	-
up to 100 x ES	-	AX-2 P2	AX-PAPR-2 ^ P2 ^

- * Continuous-flow;
- ** Continuous-flow or positive pressure demand

A(All classes) = Organic vapours

B AUS or B1 = Acid gasses

B2 = Acid gas or hydrogen cyanide(HCN)

B3 = Acid gas or hydrogen cyanide(HCN)

E = Sulfur dioxide(SO2)

G = Agricultural chemicals

K = Ammonia(NH3)

Hg = Mercury

NO = Oxides of nitrogen

MB = Methyl bromide

AX = Low boiling point organic compounds(below 65 degC)



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SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

INFORMATION ON BASIC PHYSICAL AND CHIMICAL PROPERTIES

Appearance

Supplied as an aerosol pack. Contents under PRESSURE. Contains highly flammable hydrocarbon propellant. |Clear fragranced liquid spray; does not mix with water.

Physical state	Liquid	Relative density (Water = 1)	Not Available
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	Not Available
pH (as supplied)	Not Applicable	Decomposition temperature	Not Available
Melting point/freezing point (°C)	Not Available	Viscosity (cSt)	Not Available
Initial boiling point & boiling range (°C)	Not Available	Molecular weight (g/mol)	Not Applicable
Flash point (°C)	Not Available	Taste	Not Available
Evaporation rate	Not Available	Explosive properties	Not Available
Flammability	Not Available	Oxidising properties	Not Available
Upper Explosive Limit (%)	Not Available	Surface Tension (dyn/cm or mN/m	Not Available
Lower Explosive Limit (%)	Not Available	Volatile Component (%vol)	Not Available
Vapour pressure (kPa)	Not Available	Gas group	Not Available
Solubility in water	Immiscible	pH as a solution (1%)	Not Applicable
Vapour density (Air = 1)	Not Available	VOC g/L	Not Available

SECTION 10 STABILITY AND REACTIVITY

Reactivity	See section 7
Chemical stability	 Elevated temperatures. Presence of open flame. Product is considered stable. Hazardous polymerisation will not occur.
Possibility of hazardous reactions	See section 7
Conditions to avoid	See section 7
Incompatible materials	See section 7
Hazardous decomposition products	See section 5



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SECTION 11 TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Inhaled	Inhalation of high concentrations of gas/vapour causes lung irritation with coughing and nausea, central nervous depression with headache and dizziness, slowing of reflexes, fatigue and incoordination. WARNING:Intentional misuse by concentrating/inhaling contents may be lethal.	
Ingestion	Not normally a hazard due to physical form of product. Considered an unlikely route of entry in commercial/industrial environments Ingestion may result in nausea, abdominal irritation, pain and vomiting	
Skin Contact	Repeated exposure may cause skin cracking, flaking or drying following normal handling and use. Spray mist may produce discomfort Open cuts, abraded or irritated skin should not be exposed to this materia	
Еуе	The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.	
Chronic	Principal routes of exposure are by accidental skin and eye contact and by inhalation of vapours especially at higher temperatures. As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice. WARNING: Aerosol containers may present pressure related hazards.	

PY-SECT INSECTICIDE

тохісіту	IRRITATION
Not Available	Not Available

ETHANOL

тохісіту	IRRITATION
Dermal (rabbit) LD50: >1700mg / kg[2]	Eye (rabbit): 500 mg SEVERE
Inhalation (rat) LC50: 63926.976 mg / I / 4h[2]	Eye (rabbit):100mg/24hr-moderate
Oral (mouse) LD50: 2119mg / kg[2]	Skin (rabbit):20 mg/24hr-moderate
	Skin (rabbit):400 mg (open)-mild

PIPERONYL BUTOXIDE

TOVIOLEV	
TOXICITY	IRRITATION
dermal (rat) LD50: >7950 mg/kg[2]	Not Available
Inhalation (rat) LC50: >5.9 mg / I / 4h[2]	
Oral (rat) LD50: 5630 mg / kg[2]	

PYRETHRUM

TOXICITY	IRRITATION
dermal (rat) LD50: 1350 mg/kg[2]	Not Available
Oral (rat) LD50: 200 mg/kg[2]	

HYDROCARBON PROPELLANT

TOXICITY	IRRITATION
Inhalation (rat) LC50: 84.684 mg/I15 min[1]	Not Available
Inhalation (rat) LC50: 90.171125 mg/l15 min[1]	

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



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PIPERONYL BUTOXIDE	The substance is classified by IARC as Group 3: NOT classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing. Dermal (rabbit) LD50: >1880 mg/kg [Handbook of Toxicology] *Published value - probably not peer reviewed ADI: 0.03 mg/kg
PYRETHRUM	Pyrethrins have low to moderate acute toxicity when swallowed, inhaled and on skin contact. They have a moderate irritant effect on the eye and skin (but do not sensitise the skin). The toxic effects of pyrethrin include tremors, laboured breathing, hyperactivity, thyroid disturbances, and liver effects. Animal testing has found that pyrethrins can cause tremors and convulsions before death and that pyrethrins are toxic to the axon. In testing involving animals, pyrethrins have been found to cause reproductive toxicity at sufficient doses, as well as benign liver tumours. There is not enough information to assess whether pyrethrins cause cancer in humans. There is evidence that pyrethrins are associated with disturbance of thyroid function. ADI: 0.04 mg/kg/day
ACETONE	For acetone: The acute toxicity of acetone is low. Acetone is not a skin irritant or sensitizer, but it removes fat from the skin, and it also irritates the eye. Animal testing shows acetone may cause macrocytic anaemia. Studies in humans have shown that exposure to acetone at a level of 2375 mg/cubic metre has not caused neurobehavioural deficits.
HYDROCARBON PROPELLANT	inhalation of the gas
PYRETHRUM & HYDROCARBON PROPELLANTT	No significant acute toxicological data identified in literature search.

Acute Toxicity	Carcinogenicity		igoremsize
Skin Irritation/Corrosion	igoredown	Reproductivity	igorems
Serious Eye Damage/Irritation	V	STOT - Single Exposure	igorems
Respiratory or Skin sensitisation	\bigcirc	STOT - Repeated Exposure	\bigcirc
Mutagenicity	0	Aspiration Hazard	Ŏ .

LEGEND

- X DATA EITHER NOT AVAILABLE OR DOES NOT FILL THE CRITERIA FOR CLASSIFICATION
- ✓ DATA AVAILABLE TO MAKE CLASSIFICATION
- O DATA NOT AVAILABLE TO MAKE A CLASSIFICATION



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SECTION 12	ECOLOGICAL II	NFORMATION	TOXICITY		
PY-SECT	Endpoint	Test Duration (hr)	Species	Value	Source
INSECTICIDE	Not Available	Not Available	Not Available	Not Available	Not Available
	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96	Fish	42mg/L	4
ETHANOL	EC50	48	Crustacea	2mg/L	4
	EC50	96	Algae or other aquatic plants	17.921mg/L	4
	NOEC	2016	Fish	0.000375mg/L	4
	Endpoint	Test Duration (hr)	Species	Value	Source
PIPERONYL			· · · · · · · · · · · · · · · · · · ·		4
BUTOXIDE	LC50	96	Fish	0.0024mg/L	·
	EC50	48	Crustacea	0.1mg/L	4
	NOEC	240	Crustacea	0.01mg/L	4
PYRETHRUM	Endpoint	Test Duration (hr)	Species	Value	Source
	LC50	96	Fish	0.0032mg/L	4

HYDROCARBON PROPELLANT

Endpoint	Test Duration (hr)	Species	Value	Source
LC50	Not Available	Not Available	Not Available	Not Available

LEGEND

EXTRACTED FROM 1. IUCLID TOXICITY DATA 2. EUROPE ECHA REGISTERED SUBSTANCES - ECOTOXICOLOGICAL INFORMATION - AQUATIC TOXICITY 3. EPIWIN SUITE V3.12 (QSAR) - AQUATIC TOXICITY DATA (ESTIMATED) 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

 $\label{thm:condition} \textit{Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.}$ DO NOT discharge into sewer or waterways.

PERSISTENCE AND DEGRADABILITY

Ingredient	Persistence: Water/Soil	Persistence: Air
ethanol	LOW (Half-life = 2.17 days)	LOW (Half-life = 5.08 days)
piperonyl butoxide	HIGH	HIGH

BIOACCUMULATIVE POTENTIAL

Ingredient	Bioaccumulation
ethanol	LOW (LogKOW = -0.31)
piperonyl butoxide	HIGH (LogKOW = 4.75)

MOBILITY IN SOIL

Ingredient	Bioaccumulation
ethanol	HIGH (KOC = 1)
piperonyl butoxide	LOW (KOC = 69.74)



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SECTION 13 DISPOSAL CONSIDERATIONS

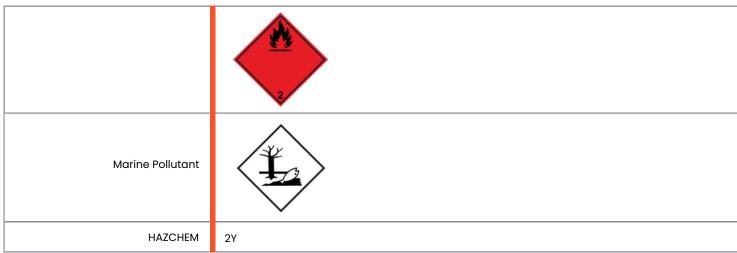
WASTE TREATMENT METHODS

Product / Packaging disposal

- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.
- Where in doubt contact the responsible authority.
- Consult State Land Waste Management Authority for disposal.
- Discharge contents of damaged aerosol cans at an approved site.
- Allow small quantities to evaporate.
- DO NOT incinerate or puncture aerosol cans.
- Bury residues and emptied aerosol cans at an approved site

SECTION 14 TRANSPORT INFORMATION

LABELS REQUIRED



LAND TRANSPORT (ADG)

UN number	1950
UN proper shipping name	AEROSOLS
Transport hazard class(es)	Class 2.1 Subrisk Not applicable
Packing group	Not applicable
Environmental hazard	Environmentally Hazardous
Special precautions for user	Special provisions 63 190 277 327 344 381 Limited quantity 1000ml



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AIR TRANSPORT (ICAO-IATA / DGR)

UN number	1950	
UN proper shipping name	Aerosols, flammable (engine starting fluid); Aerosols, flammable	
Transport hazard class(es	ICAO/IATA Class 2.1 ICAO / IATA Subrisk Not Applicable ERG Code 10L	
Packing group	Not Applicable	
Environmental hazard	Environmentally hazardous	
Special precautions for user	Special provisions	A145 A167 A802; A1 A145 A167 A802
	Cargo Only Packing Instructions	203
	Cargo Only Maximum Qty / Pack	150kg
	Passenger and Cargo Packing Instructions	203; Forbidden
	Passenger and Cargo Maximum Qty / Pack	75 kg; Forbidden
	Passenger and Cargo Limited Quantity Packing Instructions	Y203; Forbidden
	Passenger and Cargo Limited Maximum Qty / Pack	30 kg G; Forbidden

SEA TRANSPORT (IMDG-CODE / GGVSEE)

UN number	1950
UN proper shipping name	AEROSOLS
Transport hazard class(es	IMDG CLASS 2.1 IMDG SURISK Not Applicable
Packing group	Not Applicable
Environmental hazard	Marine Pollutant
Special precautions for user	EMS Number F-D , S-U Special provisions 63 190 277 327 344 381 959 Limited Quantites 1000ml

TRANSPORT IN BULK ACCORDING TO ANNEX II OF MARPOL AND THE IBC CODE

Not Applicable



SAFETY DATA SHEET ACCORDING TO WHS AND ADG REQUIREMENTS

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SECTION 15 REGULATORY INFORMATION

SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

ETHANOL(64-17-5) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists Australia Inventory of Chemical Substances (AICS)

PIPERONYL BUTOXIDE (51-03-6) IS FOUND ON THE FOLLOWING REGULATORY

Australia Hazardous Substances Information System - Consolidated Lists Australia Inventory of Chemical Substances (AICS)

International Agency for Research on Cancer (IARC) - Agents Classified by the IARC

Monographs

PYRETHRUM (8003-34-7) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists Australia Inventory of Chemical Substances (AICS)

HYDROCARBON PROPELLANT (68476-85-7.) IS FOUND ON THE FOLLOWING REGULATORY LISTS

Australia Exposure Standards

Australia Hazardous Substances Information System - Consolidated Lists Australia Inventory of Chemical Substances (AICS)

National Inventory	Status
Australia - AIIC	Yes
Canada - DSL	Yes
Canada - NDSL	No (pyrethrum; piperonyl butoxide; ethanol; hydrocarbon propellant)
China - IECSC	No (piperonyl butoxide)
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	No (pyrethrum)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	No (pyrethrum)

LEGEND

YES = ALL CAS DECLARED INGREDIENTS ARE ON THE INVENTORY
NO = ONE OR MORE OF THE CAS LISTED INGREDIENTS ARE NOT ON THE INVENTORY AND ARE NOT EXEMPT FROM LISTING (SEE
SPECIFIC INGREDIENTS IN BRACKETS)



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SECTION 16 OTHER INFORMATION

OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Name	CAS No
hydrocarbon propellant	68476-85-7., 68476-86-8.

Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

The SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

Definitions and abbreviations

- PC TWA: Permissible Concentration-Time Weighted Average
- PC STEL: Permissible Concentration-Short Term Exposure Limit
- IARC: International Agency for Research on Cancer
- ACGIH: American Conference of Governmental Industrial Hygienists
- STEL: Short Term Exposure Limit
- TEEL: Temporary Emergency Exposure Limit
- IDLH: Immediately Dangerous to Life or Health Concentrations
- OSF: Odour Safety Factor
- NOAEL :No Observed Adverse Effect Level
- LOAEL: Lowest Observed Adverse Effect Level
- TLV: Threshold Limit Value
- LOD: Limit Of Detection
- OTV: Odour Threshold Value
- BCF: BioConcentration Factors
- BEI: Biological Exposure Index

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