

Product Name **PESTIGAS (NZ)**

---

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

---

<b>Supplier Name</b>	<b>BOC LIMITED (NEW ZEALAND)</b>
<b>Address</b>	988 Great South Road, Penrose, Auckland, NEW ZEALAND
<b>Telephone</b>	+64 9 525 5600
<b>Fax</b>	+64 9 525 7889
<b>Emergency</b>	0800 111 333 (NZ only)
<b>Email</b>	<a href="mailto:customer-service-nz@boc.com">customer-service-nz@boc.com</a>
<b>Web Site</b>	<a href="http://www.boc.co.nz/">http://www.boc.co.nz/</a>
<b>Synonym(s)</b>	0007 - SDS NUMBER • PRODUCT CODE: 113C • SYNERGISED NATURAL PYRETHRINS INSECTICIDE AEROSOL
<b>Use(s)</b>	PESTICIDE • SPACE SPRAY
<b>SDS Date</b>	10 July 2013

---

## 2. HAZARDS IDENTIFICATION

---

**CLASSIFIED AS HAZARDOUS ACCORDING TO HAZARDOUS SUBSTANCES [CLASSIFICATION] REGULATIONS 2001**

### HSNO CLASSIFICATION

6.5A	Substances that are respiratory sensitisers.
6.5B	Substances that are contact sensitisers.
9.1A	Substances that are very ecotoxic in the aquatic environment.
9.4B	Substances that are ecotoxic to terrestrial invertebrates.

### HAZARD STATEMENT

H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H442	Toxic to terrestrial invertebrates.

### PREVENTION STATEMENT

P103	Read label before use (applies only where the substance is available to the general public).
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment. This statement does not apply where this is the intended use.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P285	In case of inadequate ventilation wear respiratory protection.

### RESPONSE STATEMENT

P321	Specific treatment is advised - see first aid instructions.
P363	Wash contaminated clothing before reuse.
P391	Collect spillage.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P341	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

**DISPOSAL STATEMENT**

P501

In the case of a substance that is in compliance with a HSNO approval other than a Part 6A (Group Standards) approval, a label must provide a description of one or more appropriate and achievable methods for the disposal of a substance in accordance with the Hazardous Substances (Disposal) Regulations 2001. This may also include any method of disposal that must be avoided.

**3. COMPOSITION/ INFORMATION ON INGREDIENTS**

Ingredient	Identification	Content
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	CAS: 64742-47-8 EC: 265-149-8	10%
PYRETHRUM	CAS: 8003-34-7 EC: 232-319-8	0.4%
CARBON DIOXIDE	CAS: 124-38-9 EC: 204-696-9	87.6%
PIPERONYL BUTOXIDE	CAS: 51-03-6 EC: 200-076-7	2%

**4. FIRST AID MEASURES**

<b>Eye</b>	Cold burns: Immediately flush with tepid water or with sterile saline solution. Hold eyelids apart and irrigate for 15 minutes. Seek medical attention.
<b>Inhalation</b>	Remove from exposure area immediately. If assisting a victim, avoid becoming a casualty, wear an Air-line respirator or Self Contained Breathing Apparatus (SCBA). If victim is not breathing apply artificial respiration and seek urgent medical attention. G
<b>Skin</b>	Cold burns: Remove contaminated clothing and gently flush affected areas with warm water (30°C) for 15 minutes. Apply sterile dressing and treat as for a thermal burn. For large burns, immerse in warm water for 15 minutes. DO NOT apply any form of direct heat. Seek immediate medical attention.
<b>Ingestion</b>	Ingestion is not considered a potential route of exposure.
<b>Advice to Doctor</b>	Treat for asphyxia and cold burns.

**5. FIRE FIGHTING MEASURES**

<b>Flammability</b>	Non flammable. Exposure to fire may cause containers to rupture/explode.
<b>Fire and Explosion</b>	Temperatures in a fire may cause cylinders to rupture. Cool cylinders exposed to fire by applying water from a protected location. Do not approach cylinders suspected of being hot. Remove cool cylinders from the path of the fire.
<b>Extinguishing</b>	Use water fog to cool containers from protected area.
<b>Hazchem Code</b>	2TE 2 Water Fog (or fine water spray if fog unavailable) T Self Contained Breathing apparatus and protective gloves. E Evacuation of people in the vicinity of the incident should be considered.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	If the cylinder is leaking, evacuate area of personnel. Inform manufacturer/supplier of leak. Use personal protective equipment as detailed in Section 8 of this SDS.
<b>Environmental Precautions</b>	Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.
<b>Methods of Cleaning Up</b>	Carefully move material to a well ventilated remote area, then allow to discharge if safe to do so. Do not attempt to repair leaking valve or cylinder safety devices.
<b>References</b>	See Sections 8 and 13 for exposure controls and disposal.

**7. STORAGE AND HANDLING**

<b>Storage</b>	Do not store near incompatible materials. Cylinders should be stored below 45°C in a secure area,
----------------	---

**Product Name**      **PESTIGAS (NZ)**

upright and restrained to prevent cylinders from falling. Cylinders should also be stored in a dry, well ventilated area constructed of non-combustible material with firm level floor (preferably concrete), away from areas of heavy traffic and emergency exits.

**Handling**

Before use carefully read the product label. Use of safe work practices are recommended to avoid eye or skin contact and inhalation. Observe good personal hygiene, including washing hands before eating. Do not drop, roll or drag cylinders. The uncontrolled release of any gas under pressure may cause physical harm. Use a suitable hand truck for cylinder movement.

---

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

---

**Exposure Standards**

Ingredient	Reference	TWA		STEL	
		ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Carbon dioxide	WES (NZ)	5000	9000	30000	54000
Mineral Oil Mist	WES (NZ)	--	5	--	--
Pyrethrum	WES (NZ)	--	5	--	--

**Biological Limits**

No biological limit allocated.

**Engineering Controls**

Maintain vapour levels below the recommended exposure standard. In poorly ventilated areas, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard. It is recommended to maximise the effectiveness of this product, that it should be applied with artificial and natural ventilation closed. Hand held applications should commence at the furthest point from the exit and continue as the operator moves away from the spray drift towards the exit. Entry should be barred to areas in which fixed nozzle spraying occurs during spraying. Ventilation should be re-opened 2 hours after spraying has ceased.

**PPE****Eye / Face**

Wear safety glasses.

**Hands**

Wear leather or cotton gloves.

**Body**

Wear coveralls and safety boots.

**Respiratory**

Where an inhalation risk exists, wear Self Contained Breathing Apparatus (SCBA) or an Air-line respirator.



---

**9. PHYSICAL AND CHEMICAL PROPERTIES**

---

<b>Appearance</b>	LIQUEFIED GAS, MIXTURE FORMS AEROSOL WHEN RELEASED INTO AIRSPACE
<b>Odour</b>	CHRYSANTHEMUM-LIKE ODOUR
<b>Flammability</b>	NON FLAMMABLE
<b>Flash point</b>	NOT APPLICABLE
<b>Boiling point</b>	-78.5°C (CO <sub>2</sub> )
<b>Melting point</b>	NOT AVAILABLE
<b>Evaporation rate</b>	NOT APPLICABLE
<b>pH</b>	NOT APPLICABLE
<b>Vapour density</b>	1.53 (Air = 1) (Carbon dioxide)
<b>Specific gravity</b>	NOT APPLICABLE
<b>Solubility (water)</b>	0.14 %
<b>Vapour pressure</b>	6300 kPa @ 25°C (Approximately)
<b>Upper explosion limit</b>	NOT APPLICABLE
<b>Lower explosion limit</b>	NOT APPLICABLE
<b>Partition coefficient</b>	NOT AVAILABLE
<b>Autoignition temperature</b>	NOT APPLICABLE
<b>Decomposition temperature</b>	NOT AVAILABLE
<b>Viscosity</b>	NOT AVAILABLE
<b>% Volatiles</b>	100 %

---

## 10. STABILITY AND REACTIVITY

---

<b>Chemical Stability</b>	Stable under recommended conditions of storage.
<b>Conditions to Avoid</b>	Avoid shock, friction, heavy impact, heat, sparks, open flames and other ignition sources.
<b>Hazardous Decomposition Products</b>	This material will not decompose to form hazardous products other than that already present.
<b>Hazardous Reactions</b>	Polymerization will not occur.

---

## 11. TOXICOLOGICAL INFORMATION

---

<b>Health Hazard Summary</b>	Escaping liquid from the cylinder can form a dry ice powder like snow and leave a liquid residue. Asphyxiant gas. Frost-bite burns may result from exposure to cold vapour or liquid. Carbon dioxide concentrations of 3-5 % in air cause increased respiration and headache. Concentrations of 8-15% cause headache, nausea and vomiting which may lead to unconsciousness if not moved to open air and given oxygen. Inhalation of a mixture containing no oxygen may result in unconsciousness from the first breath and death will follow in a few minutes. Adverse health effects to long term exposure to carbon dioxide have not been reported. Escaping liquid from the cylinder can form a dry ice powder like snow and leave a liquid residue.												
<b>Eye</b>	Direct contact with evaporating liquid may result in cold burns, similar to frostbite injury, with possible permanent damage.												
<b>Inhalation</b>	Asphyxiant. Effects are proportional to oxygen displacement. Acts as a simple asphyxiant by displacing oxygen in the lungs thereby diminishing the supply of oxygen to the blood and tissues. Inhalation of the vapour may result in a headache and nausea.												
<b>Skin</b>	Skin contact with dry ice powder could result in frostbite or cold burns. Non irritant. Contact with evaporating liquid (eg. cold vessels or pipes containing low pressure liquid) may result in cold burns with severe tissue damage. Skin contact with dry ice powder could result in cold burns.												
<b>Ingestion</b>	Ingestion is considered unlikely due to product form. Solid carbon dioxide will cause cold burns to mouth and throat.												
<b>Toxicity Data</b>	<p>CARBON DIOXIDE (124-38-9)</p> <table><tr><td>LC50 (inhalation)</td><td>470000 ppm/30M (rat)</td></tr><tr><td>LCLo (inhalation)</td><td>9 pph/5M (human)</td></tr></table> <p>PIPERONYL BUTOXIDE (51-03-6)</p> <table><tr><td>LD50 (ingestion)</td><td>2600 mg/kg (mouse)</td></tr><tr><td>LD50 (skin)</td><td>200 mg/kg (rabbit)</td></tr><tr><td>LDLo (intraperitoneal)</td><td>1000 mg/kg (mouse)</td></tr><tr><td>TDLo (intraperitoneal)</td><td>200 mg/kg (mouse; male; effects on fertility)</td></tr></table>	LC50 (inhalation)	470000 ppm/30M (rat)	LCLo (inhalation)	9 pph/5M (human)	LD50 (ingestion)	2600 mg/kg (mouse)	LD50 (skin)	200 mg/kg (rabbit)	LDLo (intraperitoneal)	1000 mg/kg (mouse)	TDLo (intraperitoneal)	200 mg/kg (mouse; male; effects on fertility)
LC50 (inhalation)	470000 ppm/30M (rat)												
LCLo (inhalation)	9 pph/5M (human)												
LD50 (ingestion)	2600 mg/kg (mouse)												
LD50 (skin)	200 mg/kg (rabbit)												
LDLo (intraperitoneal)	1000 mg/kg (mouse)												
TDLo (intraperitoneal)	200 mg/kg (mouse; male; effects on fertility)												

---

## 12. ECOLOGICAL INFORMATION

---

<b>Environment</b>	Since increases in the atmospheric carbon dioxide levels have been linked with global warming emission of carbon dioxide into the atmosphere should be minimised as far as possible. Piperonyl butoxide is toxic to terrestrial invertebrates and aquatic organisms.
<b>Ecotoxicity</b>	When discharged to the atmosphere in large quantities, carbon dioxide may contribute to the greenhouse effect.
<b>Persistence/Degradability</b>	Not applicable.
<b>Mobility</b>	Not applicable.

---

## 13. DISPOSAL CONSIDERATIONS

---

<b>Waste Disposal</b>	Cylinders should be returned to the manufacturer or supplier for disposal of contents.
<b>Legislation</b>	Dispose of in accordance with relevant local legislation.

---

## 14. TRANSPORT INFORMATION

---

**CLASSIFIED AS A DANGEROUS GOOD ACCORDING TO LAND TRANSPORT RULE:  
DANGEROUS GOODS 2005; NZS 5433:2007, UN, IMDG OR IATA**



	LAND TRANSPORT (NZS 5433)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
UN Number	1968	-	-
Proper Shipping Name	INSECTICIDE GAS, N.O.S.	-	-
DG Class/ Division	2.2	-	-
Subsidiary Risk(s)	None Allocated	-	-
Packing Group	None Allocated	-	-
Hazchem Code	2TE		
Other Information	Wherever possible use open vehicles or trailers. If cylinder must be carried in an enclosed van or car ensure good ventilation at all times by: a) Using a compartment within the vehicle permanently vented to the outside but sealed from the rest of the vehicle's interior, or b) Opening the vehicle's windows (this is not a preferred method). NOTE: A car boot would not normally be a ventilated compartment. Ensure cylinder is separated from driver and foodstuffs and that outlet of relief device is not obstructed. Wherever possible use open vehicles or trailers. If cylinder must be carried in an enclosed van or car ensure good ventilation at all times by: a) Using a compartment within the vehicle permanently vented to the outside but sealed from the rest of the vehicle's interior, or b) Opening the vehicle's windows (this is not a preferred method). NOTE: A car boot would not normally be a ventilated compartment. All cylinders must be carried secured firmly so that they cannot move in transit. Cylinders must be protected against damage from other cargo, particularly the valves. Do not store cylinders in an enclosed vehicle overnight or for periods longer than one hour. Do not use cylinders in a closed vehicle. Never transport cylinders with equipment attached unless the cylinder valve is shut and the cylinders are secured.		

## 15. REGULATORY INFORMATION

Approval Code	HSR000350
Group Name	Aerosol containing 2.3 - 20 g/litre pyrethrins and 11.6 - 20 g/litre piperonyl butoxide
Inventory Listing(s)	<b>NEW ZEALAND: NZIoC (New Zealand Inventory of Chemicals)</b> All components are listed on the NZIoC inventory, or are exempt.
Chemical Authorisation	(MAF Qual): Ref 15/4/13/2 Type A. Pestigas is authorised for use in meat, fish, game and game meat premises.
Dairy Approval	(MAF Qual): category A.
ACVM Registration No.	P2929
HSNO Controls	Refer to the ERMA website for more information: <a href="http://www.ermanz.govt.nz">www.ermanz.govt.nz</a>

## 16. OTHER INFORMATION

Additional Information	This product is an insecticide used in the control of insects. It is intended for use by licensed or other authorised persons  APPLICATION METHOD: Cylinder positioned vertically with valve at top. Portable cylinders connected to hand held spray gun or manifolded cylinders connected to fixed pipework distribution system with spray nozzles and controlled release.  PERSONAL PROTECTIVE EQUIPMENT GUIDELINES: The recommendation for protective equipment contained within this report is provided as a guide only. Factors such as method of application, working environment, quantity used, product concentration and the availability of engineering controls should be considered before final selection of personal protective equipment is made.
------------------------	---

**HEALTH EFFECTS FROM EXPOSURE:**

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

**Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists
CAS #	Chemical Abstract Service number - used to uniquely identify chemical compounds
CCID	Chemical Classification and Information Database (HSNO)
CNS	Central Nervous System
EC No.	EC No - European Community Number
ERMANZ	Environmental Risk Management Authority (New Zealand)
GHS	Globally Harmonized System
HSNO	Hazardous Substances and New Organisms
IARC	International Agency for Research on Cancer
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m <sup>3</sup>	Milligrams per Cubic Metre
PEL	Permissible Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
REACH	Regulation on Registration, Evaluation, Authorisation and Restriction of Chemicals
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
TLV	Threshold Limit Value
TWA/OEL	Time Weighted Average or Occupational Exposure Limit

**Revision History**

Revision	Description
2.1	Standard SDS Review
2.0	Standard SDS Review.
1.0	Initial SDS creation

**Report status**

This document has been compiled by RMT on behalf of the manufacturer, importer or supplier of the product and serves as their Safety Data Sheet ('SDS').

It is based on information concerning the product which has been provided to RMT by the manufacturer, importer or supplier or obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer, importer or supplier.

While RMT 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, RMT accepts no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS.

**Prepared By**

Risk Management Technologies  
5 Ventnor Ave, West Perth  
Western Australia 6005  
Phone: +61 8 9322 1711  
Fax: +61 8 9322 1794  
Email: info@rmt.com.au  
Web: www.rmt.com.au.

**Revision:** 2.1  
**SDS Date:** 10 July 2013

**End of SDS**