

SAFETY DATA SHEET

0007

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name PESTIGAS
Synonyms 0007 - SDS NUMBER • PRODUCT CODE: 113

1.2 Uses and uses advised against

Uses PESTICIDE • SPACE SPRAY
This product is an insecticide used in the control of insects. It is intended for use by licensed or other authorised persons.

1.3 Details of the supplier of the product

Supplier name BOC LIMITED (NEW ZEALAND)
Address 988 Great South Road, Penrose, Auckland, NEW ZEALAND
Telephone +64 9 525 5600
Email customer.servicenz@boc.com
Website <http://www.boc.co.nz>

1.4 Emergency telephone numbers

Emergency 0800 111 333 (NZ only)

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

HAZARDOUS ACCORDING TO NZ ENVIRONMENTAL PROTECTION AUTHORITY CRITERIA

Physical Hazards

Gases Under Pressure: Liquefied gas

Health Hazards

Respiratory Sensitisation: Category 1
Skin Sensitisation: Category 1

Environmental Hazards

Aquatic Toxicity (Acute): Category 1
Aquatic Toxicity (Chronic): Category 1

2.2 GHS Label elements

Signal word DANGER

Pictograms



Hazard statements

H280 Contains gas under pressure; may explode if heated.
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.

PRODUCT NAME PESTIGAS

Prevention statements

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.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P284	Wear respiratory protection.

Response statements

P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P321	Specific treatment is advised - see first aid instructions.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

Storage statements

P403	Store in a well-ventilated place.
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Disposal statements

P501	Dispose of contents/container in accordance with relevant regulations.
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2.3 Other hazards

In high concentrations may cause asphyxiation. Contact with liquid may cause cold burns/frostbite.

3. COMPOSITION/ INFORMATION ON INGREDIENTS

3.1 Substances / Mixtures

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

4. FIRST AID MEASURES

4.1 Description of first aid measures

Eye	Cold burns: Immediately flush with tepid water or with sterile saline solution. Hold eyelids apart and irrigate for 15 minutes. Seek medical attention.
Inhalation	Remove from exposure area immediately. If assisting a victim and there is an asphyxiation risk, 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. Give oxygen if available.
Skin	Cold burns: Remove contaminated clothing and gently flush affected areas with warm water (30°C) for 15 minutes. It is recommended that warm water is applied to clothing before removing it so as to prevent further skin damage. 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.
Ingestion	Ingestion is not considered a potential route of exposure.
First aid facilities	None allocated.

4.2 Most important symptoms and effects, both acute and delayed

In high concentrations may cause asphyxiation. Direct contact with the liquefied material or escaping compressed gas may cause frostbite injury. Low concentrations of CO₂ cause increased respiration and headache.

4.3 Immediate medical attention and special treatment needed

Treat for asphyxia and cold burns.

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Use water fog to cool containers from protected area.

5.2 Special hazards arising from the substance or mixture

Non flammable.

5.3 Advice for firefighters

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.

5.4 Hazchem code

2TE

2 Fine Water Spray.

T Wear full fire kit and breathing apparatus. Dilute spill and run-off.

E Evacuation of people in and around the immediate vicinity of the incident should be considered.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

If the cylinder is leaking, evacuate area of personnel. Inform manufacturer/supplier of leak. Use Personal Protective Equipment (PPE) as detailed in Section 8 of the SDS. Ventilate area where possible and eliminate ignition sources.

6.2 Environmental precautions

Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous.

6.3 Methods of cleaning up

Stop the flow of material, if this is without risk. If the leak is irreparable, move the cylinder to a safe and well ventilated area, and allow to discharge. Keep area evacuated and free from ignition sources until any leaked or spilled liquid has evaporated.

6.4 Reference to other sections

See Sections 8 and 13 for exposure controls and disposal.

7. HANDLING AND STORAGE

7.1 Precautions for safe 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.

7.2 Conditions for safe storage, including any incompatibilities

Refer to vessel operating instructions. Do not store near incompatible substances, heat or ignition sources and foodstuffs. Portable liquid containers should be stored: upright, prevented from falling, in a secure area; below 65°C, 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.

7.3 Specific end uses

No information provided.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters**Exposure standards**

Ingredient	Reference	TWA		STEL	
		ppm	mg/m ³	ppm	mg/m ³
Carbon dioxide	WES [NZ]	5000	9000	30000	54000
Mineral Oil Mist	WES [NZ]	--	5	--	--
Pyrethrum	WES [NZ]	--	5	--	--

Biological limits

No biological limit values have been entered for this product.

8.2 Exposure controls

Engineering controls In poorly ventilated areas, mechanical extraction ventilation is recommended. Maintain vapour levels below the recommended exposure standard. 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.

PPE

Eye / Face	Wear safety glasses.
Hands	Wear leather or insulated gloves.
Body	Wear safety boots and coveralls.
Respiratory	Where an inhalation risk exists wear a Type A-Class P2 (Organic gases/vapours and particulate) respirator. Where an asphyxiation risk exists, wear Self Contained Breathing Apparatus (SCBA) or an Air-line respirator.



9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	COLOURLESS GAS (LIQUEFIED UNDER PRESSURE)
Odour	CHRYSANTHEMUM-LIKE ODOUR
Flammability	NON FLAMMABLE
Flash point	NOT APPLICABLE
Boiling point	NOT AVAILABLE
Melting point	NOT AVAILABLE
Evaporation rate	NOT APPLICABLE
pH	NOT APPLICABLE
Vapour density	NOT AVAILABLE
Relative density	NOT APPLICABLE
Solubility (water)	0.759 cm ³ /cm ³ (Carbon dioxide)
Vapour pressure	6300 kPa @ 25°C (Approximately)
Upper explosion limit	NOT APPLICABLE
Lower explosion limit	NOT APPLICABLE
Partition coefficient	NOT AVAILABLE
Autoignition temperature	NOT APPLICABLE
Decomposition temperature	NOT AVAILABLE
Viscosity	NOT AVAILABLE
Explosive properties	NOT AVAILABLE
Oxidising properties	NOT AVAILABLE
Odour threshold	NOT AVAILABLE

9.2 Other information

% Volatiles	100 %
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10. STABILITY AND REACTIVITY

10.1 Reactivity

Carefully review all information provided in sections 10.2 to 10.6.

10.2 Chemical stability

Stable under recommended conditions of storage.

10.3 Possibility of hazardous reactions

Polymerization will not occur.

10.4 Conditions to avoid

Avoid contact with incompatible substances.

10.5 Incompatible materials

Moist carbon dioxide is corrosive, hence acid resistant materials are required (e.g. stainless steel). Certain properties of some plastics and rubbers may be affected by carbon dioxide (i.e. embrittlement, leaching of plasticisers, etc).

10.6 Hazardous decomposition products

May evolve toxic gases if heated to decomposition.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity Based on available data, the classification criteria are not met. Low concentrations of carbon dioxide cause increased respiration and headache.

Information available for the ingredients:

Ingredient	Oral LD50	Dermal LD50	Inhalation LC50
DISTILLATES (PETROLEUM), HYDROTREATED LIGHT	> 2000 mg/kg (rat)	> 2000 mg/kg (rabbit)	--
PIPERONYL BUTOXIDE	2600 mg/kg (mouse)	200 mg/kg (rabbit)	--
PYRETHRUM	200 mg/kg (rat)	300 mg/kg (rabbit)	3.4 mg/L (rat)

Skin Not classified as a skin irritant. Contact with dry ice powder may cause frostbite injury or cold burns. Repeated exposure may cause skin dryness or cracking.

Eye Not classified as an eye irritant. Contact with dry ice powder may cause frostbite injury or cold burns.

Sensitisation Pyrethrins have been shown to cause allergic skin reactions and allergy or asthma symptoms or breathing difficulties if inhaled.

Mutagenicity Not classified as a mutagen.

Carcinogenicity Not classified as a carcinogen.

Reproductive Not classified as a reproductive toxin.

STOT - single exposure Asphyxiant. Effects are proportional to oxygen displacement. Over exposure may result in dizziness, drowsiness, weakness, fatigue, breathing difficulties and unconsciousness.

STOT - repeated exposure Not classified as causing organ damage from repeated exposure.

Aspiration Not classified as causing aspiration.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Very toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Piperonyl butoxide is not rapidly biodegradable.

12.3 Bioaccumulative potential

Piperonyl butoxide may bioaccumulate.

12.4 Mobility in soil

The substance is a gas, not applicable.

12.5 Other adverse effects

Piperonyl butoxide is toxic to terrestrial invertebrates and aquatic organisms. The substance must not be applied onto or into water.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Waste disposal Ensure all liquid and gas supply valves are shut. Notify the manufacturer that you will be returning the portable liquid container. Residual product will be disposed of under the manufacturer's supervision.

Legislation 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 5433:2012, UN, IMDG OR IATA



	LAND TRANSPORT (NZS 5433)	SEA TRANSPORT (IMDG / IMO)	AIR TRANSPORT (IATA / ICAO)
14.1 UN Number	1968	1968	1968
14.2 Proper Shipping Name	INSECTICIDE GAS, N.O.S. (contains piperonyl butoxide, carbon dioxide)	INSECTICIDE GAS, N.O.S. (contains piperonyl butoxide, carbon dioxide)	INSECTICIDE GAS, N.O.S. (contains piperonyl butoxide, carbon dioxide)
14.3 Transport hazard class	2.2	2.2	2.2
14.4 Packing Group	None allocated.	None allocated.	None allocated.

14.5 Environmental hazards

Marine Pollutant.

14.6 Special precautions for user

Hazchem code	2TE
EmS	F-C, S-V
Other information	The environmentally hazardous substance mark is not required when transported in packages of less than 5 kg/L (UN Model Regulations: Special Provision 375; IATA: Special Provision A197; IMDG: Special Provision 969). Transport on open top vehicles in accordance with local legislation. Ensure cylinder is separated from driver and foodstuffs, and that outlet of relief device is not obstructed.

15. REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Approval code	HSR101527
Group standard	Liquified gas containing 2.3 - 20 g/litre pyrethrins and 11.6 - 20 g/litre piperonyl butoxide
Inventory listings	NEW ZEALAND: NZIoC (New Zealand Inventory of Chemicals) All components are listed on the NZIoC inventory, or are exempt.

16. OTHER INFORMATION

Additional information This product is used as a space spray for control of cockroaches, flies, mosquitos and fleas. It is registered in New Zealand. ACVM Number: P2929.

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 form of product, 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: form of product; 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 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
EMS	Emergency Schedules (Emergency Procedures for Ships Carrying Dangerous Goods)
EPA	Environmental Protection Authority [New Zealand]
GHS	Globally Harmonized System
HSNO	Hazardous Substances and New Organisms
IARC	International Agency for Research on Cancer
LC50	Lethal Concentration, 50% / Median Lethal Concentration
LD50	Lethal Dose, 50% / Median Lethal Dose
mg/m ³	Milligrams per Cubic Metre
OEL	Occupational Exposure Limit
pH	relates to hydrogen ion concentration using a scale of 0 (high acidic) to 14 (highly alkaline).
ppm	Parts Per Million
STEL	Short-Term Exposure Limit
STOT-RE	Specific target organ toxicity (repeated exposure)
STOT-SE	Specific target organ toxicity (single exposure)
TLV	Threshold Limit Value
TWA	Time Weighted Average

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.

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