

ECOMIST INSECT GRENADE with EGGBUSTERS

Ecomist Systems Limited

Chemwatch Hazard Alert Code: 4

Version No: 1.1

Issue Date: 19/10/2016

Safety Data Sheet according to HSNO Regulations

Print Date: 15/08/2019

S.GHS.NZL.EN

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

Product Identifier

| | |
|-------------------------------|--|
| Product name | ECOMIST INSECT GRENADE with EGGBUSTERS |
| Synonyms | CEA0016 |
| 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 | ECOMIST INSECT GRENADE with Eggbusters is a complete do-it-yourself home protection kit. Its concentrated formulation effectively rids your home of cockroaches, fleas, spiders, silverfish, carpet beetles, moths and ants. ECOMIST INSECT GRENADE with Eggbusters releases a fine mist that penetrates hard-to-reach areas where insects might hide without staining or leaving a wet residue. |
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Details of the supplier of the safety data sheet

| | | |
|-------------------------|----------------------------------|---|
| Registered company name | Ecomist Systems Limited | Ecomist Australia Pty Ltd |
| Address | 800 Te Ngae Road BOP New Zealand | 25 Hargraves Place, Wetherill Park NSW 2164 Australia |
| Telephone | 0800 75 75 78 | 1800 243 500 |
| Fax | 073456019 | +61 2 9756 0985 |
| Website | www.ecomist.co.nz | www.ecomist.com.au |
| Email | info@ecomist.co.nz | info@ecomist.com.au |

Emergency telephone number

| | | |
|-----------------------------------|--------------------------|-----------------------|
| Association / Organisation | CHEMCALL (0800 CHEMCALL) | CHEMCALL 1800 243 622 |
| Emergency telephone numbers | 0800 243 622 | 1800 243 622 |
| Other emergency telephone numbers | 1800 243 622 | Not Available |

SECTION 2 HAZARDS IDENTIFICATION

Classification of the substance or mixture

Considered a Hazardous Substance according to the criteria of the New Zealand Hazardous Substances New Organisms legislation. Classified as Dangerous Goods for transport purposes.

CHEMWATCH HAZARD RATINGS

| | Min | Max |
|--------------|-----|-----|
| Flammability | 4 | |
| Toxicity | 1 | |
| Body Contact | 2 | |
| Reactivity | 1 | |
| Chronic | 2 | |

0 = Minimum
1 = Low
2 = Moderate
3 = High
4 = Extreme

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| Classification ^[1] | Flammable Aerosols Category 1, Skin Corrosion/Irritation Category 3, Eye Irritation Category 2A, Respiratory Sensitizer Category 1, Skin Sensitizer Category 1, Specific target organ toxicity - single exposure Category 2, Acute Aquatic Hazard Category 1, Acute Invertebrate Hazard Category 1 |
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Legend: 1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

Determined by Chemwatch using GHS/HSNO criteria

2.1.2A, 6.3B, 6.4A, 6.5A (respiratory), 6.5B (contact), 6.9B, 9.1A, 9.4A

Label elements

Hazard pictogram(s)



SIGNAL WORD

DANGER

Hazard statement(s)

| | |
|-------------|--|
| H222 | Extremely flammable aerosol. |
| H316 | Causes mild skin irritation. |
| H319 | Causes serious eye irritation. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H317 | May cause an allergic skin reaction. |
| H371 | May cause damage to organs. |
| H400 | Very toxic to aquatic life. |
| H441 | Very toxic to terrestrial invertebrates |

Precautionary statement(s) Prevention

| | |
|-------------|--|
| 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. |
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |

Precautionary statement(s) Response

| | |
|------------------|--|
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P321 | Specific treatment (see advice on this label). |
| P342+P311 | If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider. |
| P391 | Collect spillage. |

Precautionary statement(s) Storage

| | |
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| P405 | Store locked up. |
| P410+P412 | Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F. |

Precautionary statement(s) Disposal

| | |
|-------------|---|
| P501 | Dispose of contents/container in accordance with local regulations. |
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SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Substances

See section below for composition of Mixtures

Mixtures

| CAS No | %[weight] | Name |
|-------------|-----------|-------------------------------|
| 68476-85-7* | 60-90 | <u>hydrocarbon propellant</u> |
| 52645-53-1 | 1.67 | <u>permethrin</u> |
| 51-03-6* | 3.33 | <u>piperonyl butoxide</u> |
| 95737-68-1 | 0.1 | <u>pyriproxyfen</u> |

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SECTION 4 FIRST AID MEASURES

Description of first aid measures

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| Eye Contact | <p>If aerosols come in contact with the eyes:</p> <ul style="list-style-type: none"> ▶ 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. ▶ Generally not applicable. |
| Skin Contact | <p>If solids or aerosol mists are deposited upon the skin:</p> <ul style="list-style-type: none"> ▶ 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 | <p>If aerosols, fumes or combustion products are inhaled:</p> <ul style="list-style-type: none"> ▶ 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 | <p>Not considered a normal route of entry.</p> <ul style="list-style-type: none"> ▶ If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomitus. ▶ Avoid giving milk or oils. ▶ Avoid giving alcohol. |

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

For acute or short term repeated exposures to petroleum distillates or related hydrocarbons:

- ▶ Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure.
- ▶ Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO₂ 50 mm Hg) should be intubated.
- ▶ Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance.
- ▶ A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax.
- ▶ Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines. Inhaled cardioselective bronchodilators (e.g. Alupent, Salbutamol) are the preferred agents, with aminophylline a second choice.
- ▶ Lavage is indicated in patients who require decontamination; ensure use of cuffed endotracheal tube in adult patients. [Ellenhorn and Barceloux: Medical Toxicology]

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]

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

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| Fire Incompatibility | ▶ Avoid contamination with oxidising agents i.e. nitrates, oxidising acids, chlorine bleaches, pool chlorine etc. as ignition may result |
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Advice for firefighters

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| Fire Fighting | ▶ Alert Fire Brigade and tell them location and nature of hazard. |
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| | <ul style="list-style-type: none"> ▶ May be violently or explosively reactive. ▶ Wear breathing apparatus plus protective gloves. ▶ Prevent, by any means available, spillage from entering drains or water course. <p>Slight hazard when exposed to heat, flame and oxidisers.</p> |
| Fire/Explosion Hazard | <ul style="list-style-type: none"> ▶ 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. <p>Combustion products include:</p> <ul style="list-style-type: none"> , carbon monoxide (CO) , carbon dioxide (CO₂) , other pyrolysis products typical of burning organic material. ▶ Vented gas is more dense than air and may collect in pits, basements. |

SECTION 6 ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

See section 8

Environmental precautions

See section 12

Methods and material for containment and cleaning up

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| Minor Spills | <ul style="list-style-type: none"> ▶ 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. |
| Major Spills | <ul style="list-style-type: none"> ▶ Clear area of all unprotected personnel and move upwind. ▶ Alert Emergency Authority and advise them of the location and nature of hazard. ▶ May be violently or explosively reactive. ▶ Wear full body clothing with breathing apparatus. ▶ Remove leaking cylinders to a safe place. ▶ Fit vent pipes. Release pressure under safe, controlled conditions ▶ Burn issuing gas at vent pipes. ▶ DO NOT exert excessive pressure on valve; DO NOT attempt to operate damaged valve. ▶ 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. ▶ Clean up all spills immediately. ▶ Wear protective clothing, safety glasses, dust mask, gloves. ▶ Secure load if safe to do so. Bundle/collect recoverable product. |

Personal Protective Equipment advice is contained in Section 8 of the SDS.

SECTION 7 HANDLING AND STORAGE

Precautions for safe handling

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| Safe handling | <ul style="list-style-type: none"> ▶ 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. |
| Other information | <ul style="list-style-type: none"> ▶ 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. ▶ Store away from incompatible materials. |

Conditions for safe storage, including any incompatibilities

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| Suitable container | <ul style="list-style-type: none"> ▶ Aerosol dispenser. ▶ Check that containers are clearly labelled. |
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| Storage incompatibility | <p>Butane/ isobutane</p> <ul style="list-style-type: none"> ▶ reacts violently with strong oxidisers ▶ reacts with acetylene, halogens and nitrous oxides ▶ is incompatible with chlorine dioxide, conc. nitric acid and some plastics ▶ may generate electrostatic charges, due to low conductivity, in flow or when agitated - these may ignite the vapour. <p>Segregate from nickel carbonyl in the presence of oxygen, heat (20-40 C)</p> <p>Pyrethrins and permethrins:</p> <ul style="list-style-type: none"> ▶ 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 <p>Propane:</p> <ul style="list-style-type: none"> ▶ reacts violently with strong oxidisers, barium peroxide, chlorine dioxide, dichlorine oxide, fluorine etc. ▶ liquid attacks some plastics, rubber and coatings ▶ may accumulate static charges which may ignite its vapours ▶ Avoid reaction with oxidising agents ▶ Compressed gases may contain a large amount of kinetic energy over and above that potentially available from the energy of reaction produced by the gas in chemical reaction with other substances |
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SECTION 8 EXPOSURE CONTROLS / PERSONAL PROTECTION

Control parameters

OCCUPATIONAL EXPOSURE LIMITS (OEL)

INGREDIENT DATA

| Source | Ingredient | Material name | TWA | STEL | Peak | Notes |
|--|------------------------|-------------------------------|-----------------------------------|---------------|---------------|---------------|
| New Zealand Workplace Exposure Standards (WES) | hydrocarbon propellant | LPG (Liquefied petroleum gas) | 1000 ppm / 1800 mg/m ³ | Not Available | Not Available | Not Available |

EMERGENCY LIMITS

| Ingredient | Material name | TEEL-1 | TEEL-2 | TEEL-3 |
|------------------------|-----------------------------------|-----------------------|----------------------|-------------------------|
| hydrocarbon propellant | Liquified petroleum gas; (L.P.G.) | 65,000 ppm | 2.30E+05 ppm | 4.00E+05 ppm |
| piperonyl butoxide | Piperonyl butoxide | 6.5 mg/m ³ | 72 mg/m ³ | 1,200 mg/m ³ |

| Ingredient | Original IDLH | Revised IDLH |
|------------------------|---------------|---------------|
| hydrocarbon propellant | 2,000 ppm | Not Available |
| permethrin | Not Available | Not Available |
| piperonyl butoxide | Not Available | Not Available |
| pyriproxyfen | Not Available | Not Available |

Exposure controls

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| Appropriate engineering controls | <p>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.</p> <p>The basic types of engineering controls are:</p> <p>Process controls which involve changing the way a job activity or process is done to reduce the risk.</p> <p>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.</p> |
| Personal protection |  |
| Eye and face protection | <ul style="list-style-type: none"> ▶ 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. ▶ Close fitting gas tight goggles <p>DO NOT wear contact lenses.</p> <ul style="list-style-type: none"> ▶ Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens 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. <p>No special equipment required due to the physical form of the product.</p> |

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| Skin protection | See Hand protection below |
| Hands/feet protection | <p>NOTE:</p> <ul style="list-style-type: none"> ▶ The material may produce skin sensitisation in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact. ▶ Contaminated leather items, such as shoes, belts and watch-bands should be removed and destroyed. ▶ No special equipment needed when handling small quantities. <p>OTHERWISE:</p> <ul style="list-style-type: none"> ▶ 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. <p>No special equipment required due to the physical form of the product.</p> |
| Body protection | See Other protection below |
| Other protection | <ul style="list-style-type: none"> ▶ The clothing worn by process operators insulated from earth may develop static charges far higher (up to 100 times) than the minimum ignition energies for various flammable gas-air mixtures. This holds true for a wide range of clothing materials including cotton. ▶ Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost. <p>BREThERICK: Handbook of Reactive Chemical Hazards. No special equipment needed when handling small quantities.</p> <p>OTHERWISE:</p> <ul style="list-style-type: none"> ▶ Overalls. ▶ Skin cleansing cream. ▶ Eyewash unit. <p>No special equipment required due to the physical form of the product.</p> |

Respiratory protection

Type AG 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.

| Required Minimum Protection Factor | Half-Face Respirator | Full-Face Respirator | Powered Air Respirator |
|------------------------------------|----------------------|----------------------|------------------------|
| up to 5 x ES | Air-line* | AG-2 | AG-PAPR-2 ^ |
| up to 10 x ES | - | AG-3 | - |
| 10+ x ES | - | Air-line** | - |

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

^ - Full-face

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)

- ▶ Respirators may be necessary when engineering and administrative controls do not adequately prevent exposures.
- ▶ The decision to use respiratory protection should be based on professional judgment that takes into account toxicity information, exposure measurement data, and frequency and likelihood of the worker's exposure - ensure users are not subject to high thermal loads which may result in heat stress or distress due to personal protective equipment (powered, positive flow, full face apparatus may be an option).
- ▶ Published occupational exposure limits, where they exist, will assist in determining the adequacy of the selected respiratory protection. These may be government mandated or vendor recommended.
- ▶ Certified respirators will be useful for protecting workers from inhalation of particulates when properly selected and fit tested as part of a complete respiratory protection program.
- ▶ Use approved positive flow mask if significant quantities of dust becomes airborne.
- ▶ Try to avoid creating dust conditions.

- ▶ Generally not applicable.

Aerosols, in common with most vapours/ mists, should never be used in confined spaces without adequate ventilation. Aerosols, containing agents designed to enhance or mask smell, have triggered allergic reactions in predisposed individuals.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

| | | | |
|-----------------------|---------|--|---------------|
| Appearance | Aerosol | | |
| Physical state | article | Relative density (Water = 1) | 0.67 |
| Odour | Slight | Partition coefficient n-octanol / water | Not Available |

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|--|-------------------|----------------------------------|----------------|
| Odour threshold | Not Available | Auto-ignition temperature (°C) | 431 |
| pH (as supplied) | Not Applicable | Decomposition temperature | Not Available |
| Melting point / freezing point (°C) | Not Available | Viscosity (cSt) | Not Available |
| Initial boiling point and boiling range (°C) | Not Available | Molecular weight (g/mol) | Not Applicable |
| Flash point (°C) | -81 | Taste | Not Available |
| Evaporation rate | Not Available | Explosive properties | Not Available |
| Flammability | HIGHLY FLAMMABLE. | Oxidising properties | Not Available |
| Upper Explosive Limit (%) | 10 | Surface Tension (dyn/cm or mN/m) | Not Available |
| Lower Explosive Limit (%) | 1.5 | Volatile Component (%vol) | >95 |
| Vapour pressure (kPa) | Not Available | Gas group | Not Available |
| Solubility in water | Immiscible | pH as a solution (1%) | Not Applicable |
| Vapour density (Air = 1) | 1.8 | VOC g/L | Not Available |

SECTION 10 STABILITY AND REACTIVITY

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| Reactivity | See section 7 |
| Chemical stability | <ul style="list-style-type: none"> ▶ 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 |

SECTION 11 TOXICOLOGICAL INFORMATION

Information on toxicological effects

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|--------------|---|
| Inhaled | <p>The material is not thought to produce adverse health effects or irritation of the respiratory tract (as classified by EC Directives using animal models). Nevertheless, good hygiene practice requires that exposure be kept to a minimum and that suitable control measures be used in an occupational setting.</p> <p>The vapour is discomforting</p> <p>WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.</p> <p>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 inco-ordination.</p> <p>Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.</p> <p>Material is highly volatile and may quickly form a concentrated atmosphere in confined or unventilated areas. The vapour may displace and replace air in breathing zone, acting as a simple asphyxiant. This may happen with little warning of overexposure.</p> <p>Symptoms of asphyxia (suffocation) may include headache, dizziness, shortness of breath, muscular weakness, drowsiness and ringing in the ears. If the asphyxia is allowed to progress, there may be nausea and vomiting, further physical weakness and unconsciousness and, finally, convulsions, coma and death.</p> |
| Ingestion | <p>Ingestion of pyrethrins may produce nausea, vomiting, headache, muscle tremors, shock and perhaps death. Its fatal human dose is estimated at 100 grams per 70 kg man (1430 mg/kg).</p> <p>Not normally a hazard due to physical form of product.</p> <p>Considered an unlikely route of entry in commercial/industrial environments</p> <p>Central nervous system (CNS) depression may include general discomfort, symptoms of giddiness, headache, dizziness, nausea, anaesthetic effects, slowed reaction time, slurred speech and may progress to unconsciousness. Serious poisonings may result in respiratory depression and may be fatal.</p> |
| Skin Contact | <p>Skin contact is not thought to have harmful health effects (as classified under EC Directives); the material may still produce health damage following entry through wounds, lesions or abrasions.</p> <p>There is some evidence to suggest that this material can cause inflammation of the skin on contact in some persons.</p> |

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| | <p>Spray mist may produce discomfort</p> <p>Open cuts, abraded or irritated skin should not be exposed to this material</p> <p>Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects. Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.</p> |
| Eye | <p>This material can cause eye irritation and damage in some persons. Not considered to be a risk because of the extreme volatility of the gas.</p> |
| Chronic | <p>Inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population. Skin contact with the material is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> <p>Main route of exposure to the gas in the workplace is by inhalation.</p> <p>There has been some concern that this material can cause cancer or mutations but there is not enough data to make an assessment.</p> <p>Chronic poisoning by natural pyrethrins may result in convulsion, paralysis with extreme muscle tone, rapid and uneven heart beat, liver and kidney damage, or death. Natural pyrethrins may cause hypersensitivity especially if past exposure has occurred.</p> <p>There is some evidence that inhaling this product is more likely to cause a sensitisation reaction in some persons compared to the general population.</p> |

| ECOMIST INSECT GRENADE with EGGBUSTERS | TOXICITY | IRRITATION |
|--|--|--|
| | | Not Available |
| hydrocarbon propellant | TOXICITY | IRRITATION |
| | | Not Available |
| permethrin | TOXICITY | IRRITATION |
| | dermal (rat) LD50: 1750 mg/kg ^[2] Oral (rat) LD50: 383 mg/kg ^[2] | Skin (rabbit): 500 mg/24h - mild |
| piperonyl butoxide | TOXICITY | IRRITATION |
| | dermal (rat) LD50: *200 mg/kg ^[2] | Not Available |
| | dermal (rat) LD50: >7950 mg/kg ^[2] | |
| | Oral (mouse) LD50: 2600 mg/kg ^[2] | |
| | Oral (Rabbit) LD50: 2650 mg/kg ^[2] | |
| pyriproxyfen | TOXICITY | IRRITATION |
| | dermal (rat) LD50: >2000 mg/kg ^[2] Oral (rat) LD50: >2000 mg/kg ^[2] | Eye (rabbit): minimal * Skin (rabbit): non-irritating * |
| Legend: | <i>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</i> | |

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| ECOMIST INSECT GRENADE with EGGBUSTERS | <p>Allergic reactions involving the respiratory tract are usually due to interactions between IgE antibodies and allergens and occur rapidly. Allergic potential of the allergen and period of exposure often determine the severity of symptoms. Some people may be genetically more prone than others, and exposure to other irritants may aggravate symptoms. Allergy causing activity is due to interactions with proteins.</p> <p>Attention should be paid to atopic diathesis, characterised by increased susceptibility to nasal inflammation, asthma and eczema.</p> <p>Exogenous allergic alveolitis is induced essentially by allergen specific immune-complexes of the IgG type; cell-mediated reactions (T lymphocytes) may be involved. Such allergy is of the delayed type with onset up to four hours following exposure.</p> |
| PERMETHRIN | <p>The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.</p> <p>[* The Pesticides Manual, Incorporating The Agrochemicals Handbook, 10th Edition, Editor Clive Tomlin, 1994, British Crop Protection Council]</p> <p>Oral (rat) LD50: 430-4000 mg/kg * Oral (mouse) LD50: 540-2960 mg/kg * cis/trans ratio: 40:60 cis/trans ratio: 20:80 ADI: 0.05 mg/kg for nominal cis-trans 40:60 and 25:75 isomers only</p> |
| piperonyl butoxide | <p>Dermal (rabbit) LD50: >1880 mg/kg [Handbook of Toxicology] *Published value - probably not peer-reviewed ADI: 0.03 mg/kg</p> |
| PYRIPROXYFEN | <p>The juvenile hormone mimics generally exhibit excellent acute and repeat dose hazard profiles in animals. Although they disrupt the normal hormonal function of insects, they do not do so in higher animals.</p> <p>Not a skin sensitiser in guinea pigs * * [manufacturer]</p> |

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| | |
|--|--|
| ECOMIST INSECT GRENADE with EGBBUSTERS & PERMETHRIN | The following information refers to contact allergens as a group and may not be specific to this product. Contact allergies quickly manifest themselves as contact eczema, more rarely as urticaria or Quincke's oedema. The pathogenesis of contact eczema involves a cell-mediated (T lymphocytes) immune reaction of the delayed type. Other allergic skin reactions, e.g. contact urticaria, involve antibody-mediated immune reactions. |
| ECOMIST INSECT GRENADE with EGBBUSTERS & hydrocarbon propellant | No significant acute toxicological data identified in literature search. inhalation of the gas |
| PERMETHRIN & 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. |

| | | | |
|--|---|---------------------------------|---|
| Acute Toxicity | ✗ | Carcinogenicity | ✗ |
| Skin Irritation/Corrosion | ✓ | Reproductivity | ✗ |
| Serious Eye Damage/Irritation | ✓ | STOT - Single Exposure | ✓ |
| Respiratory or Skin sensitisation | ✓ | STOT - Repeated Exposure | ✗ |
| Mutagenicity | ✗ | Aspiration Hazard | ✗ |

Legend: ✗ – Data either not available or does not fill the criteria for classification
✓ – Data available to make classification

SECTION 12 ECOLOGICAL INFORMATION

Toxicity

| ECOMIST INSECT GRENADE with EGBBUSTERS | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|--|---------------|--------------------|---------------|---------------|---------------|
| | Not Available | Not Available | Not Available | Not Available | Not Available |

| hydrocarbon propellant | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|------------------------|----------|-------------------------------|----------|-----------|--------|
| | LC50 | 96 | Fish | 24.11mg/L | 2 |
| EC50 | 96 | Algae or other aquatic plants | 7.71mg/L | 2 | |

| permethrin | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|------------|----------|--------------------|-------------------------------|--------------|--------|
| | LC50 | 96 | Fish | 0.00062mg/L | 4 |
| | EC50 | 48 | Crustacea | 0.000112mg/L | 4 |
| | EC50 | 96 | Algae or other aquatic plants | 0.005mg/L | 3 |
| | BCFD | 24 | Algae or other aquatic plants | 1mg/L | 4 |
| NOEC | 96 | Crustacea | 0.000025mg/L | 4 | |

| piperonyl butoxide | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|--------------------|----------|--------------------|-------------------------------|------------|--------|
| | LC50 | 96 | Fish | 0.0024mg/L | 4 |
| | EC50 | 48 | Crustacea | 0.1mg/L | 4 |
| | EC50 | 72 | Algae or other aquatic plants | 0.85mg/L | 2 |
| NOEC | 48 | Crustacea | 0.01mg/L | 4 | |

| pyriproxyfen | ENDPOINT | TEST DURATION (HR) | SPECIES | VALUE | SOURCE |
|--------------|----------|--------------------|-------------------------------|-----------|--------|
| | LC50 | 96 | Fish | 0.041mg/L | 3 |
| | EC50 | 48 | Crustacea | 0.4mg/L | 2 |
| | EC50 | 96 | Algae or other aquatic plants | 0.045mg/L | 3 |
| | EC100 | 48 | Crustacea | >0.6mg/L | 2 |
| NOEC | 72 | Crustacea | 0.0001mg/L | 4 | |

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

Toxic to aquatic organisms.

Do NOT allow product to come in contact with surface waters or to intertidal areas below the mean high water mark. Do not contaminate water when

ECOMIST INSECT GRENADE with EGGBUSTERS

cleaning equipment or disposing of equipment wash-waters.

Wastes resulting from use of the product must be disposed of on site or at approved waste sites.

For Petroleum Hydrocarbon Gases:

Environmental Fate: Petroleum hydrocarbon gases are primarily produced in petroleum refineries, or in gas plants that separate natural gas and natural gas liquids. This category contains 99 petroleum hydrocarbon gas substances, the majority of which never reach the consumer. Petroleum hydrocarbon gases do not contain inorganic compounds, (e.g. hydrogen sulfide, ammonia, and carbon monoxide), other than asphyxiant gases; the low molecular weight hydrocarbon molecules are primarily responsible for the hazard associated with these gases.

Atmospheric Fate: All components of these gases will evaporate to the air where interaction with hydroxyl radicals is an important fate process.

For synthetic pyrethroids:

Environmental Fate: Synthetic pyrethroids are examples of optimised insecticidal activity, selectivity and tailored environmental persistence. Through modifications of both acid and alcohol portions of the ester, compounds of desired residual activity have been synthesised whilst maintaining a biodegradable ester linkage. While these compounds are generally very toxic to crustaceans and fish in laboratory bio assays, under field conditions, the residues are tightly bound in sediment, and ingested residues are readily metabolised, resulting in their toxicity in natural systems generally being less than laboratory test data might indicate. They are generally non-persistent in the environment, as pyrethroid concentrations decrease rapidly due to sorption to sediment, suspended particles and plants.

Substances containing unsaturated carbons are ubiquitous in indoor environments. They result from many sources (see below). Most are reactive with environmental ozone and many produce stable products which are thought to adversely affect human health. The potential for surfaces in an enclosed space to facilitate reactions should be considered.

Source of unsaturated substances Unsaturated substances (Reactive Emissions) Major Stable Products produced following reaction with ozone.

For Isobutene (Refrigerant Gas): Koc: 35, (estimated); Henry's Law Constant: 4.08 atm-cu m/mole; Vapor Pressure: 2611 mm Hg @ 25 deg C; BCF: 74, (estimated).

Atmospheric Fate: Isobutane is a gas at ordinary temperatures. The substance is highly flammable and explosive. It is degraded in the atmosphere by reactions with hydroxyl radicals; the half-life for this reaction in air is 6.9 days.

For Propane: Koc 460. log

Kow 2.36.

Henry's Law constant of 7.07x10⁻¹ atm-cu m/mole, derived from its vapour pressure, 7150 mm Hg, and water solubility, 62.4 mg/L. Estimated BCF: 13.1.

DO NOT discharge into sewer or waterways.

Persistence and degradability

| Ingredient | Persistence: Water/Soil | Persistence: Air |
|--------------------|-------------------------|------------------|
| permethrin | HIGH | HIGH |
| piperonyl butoxide | HIGH | HIGH |
| pyriproxyfen | HIGH | HIGH |

Bioaccumulative potential

| Ingredient | Bioaccumulation |
|--------------------|------------------------|
| permethrin | LOW (LogKOW = 7.4267) |
| piperonyl butoxide | HIGH (LogKOW = 4.75) |
| pyriproxyfen | HIGH (LogKOW = 5.9863) |

Mobility in soil

| Ingredient | Mobility |
|--------------------|--------------------|
| permethrin | LOW (KOC = 178400) |
| piperonyl butoxide | LOW (KOC = 69.74) |
| pyriproxyfen | LOW (KOC = 405200) |

SECTION 13 DISPOSAL CONSIDERATIONS

Waste treatment methods

| Product / Packaging disposal | |
|------------------------------|--|
| | <ul style="list-style-type: none"> ▶ 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. |

Ensure that the hazardous substance is disposed in accordance with the Hazardous Substances (Disposal) Notice 2017

Disposal Requirements

Packages that have been in direct contact with the hazardous substance must be only disposed if the hazardous substance was appropriately removed and cleaned out from the package. The package must be disposed according to the manufacturer's directions taking into account the material it is made of. Packages which hazardous content have been appropriately treated and removed may be recycled.

The hazardous substance must only be disposed if it has been treated by a method that changed the characteristics or composition of the substance and

ECOMIST INSECT GRENADE with EGGBUSTERS

it is no longer hazardous.

SECTION 14 TRANSPORT INFORMATION

Labels Required

| | |
|------------------|---|
| |  |
| Marine Pollutant |  |
| HAZCHEM | Not Applicable |

Land transport (UN)

| | |
|------------------------------|---|
| 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 |

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 : 150 kg 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 Subrisk : Not Applicable |
| Packing group | Not Applicable |

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| | | |
|-------------------------------------|--------------------|----------------------------|
| Environmental hazard | Marine Pollutant | |
| Special precautions for user | EMS Number | F-D , S-U |
| | Special provisions | 63 190 277 327 344 381 959 |
| | Limited Quantities | 1000 ml |

Transport in bulk according to Annex II of MARPOL and the IBC code

Not Applicable

SECTION 15 REGULATORY INFORMATION**Safety, health and environmental regulations / legislation specific for the substance or mixture**

This substance is to be managed using the conditions specified in an applicable Group Standard

| HSR Number | Group Standard |
|------------|---|
| HSR000255 | Flammable aerosol containing 15.7 g/kg permethrin, 33.3 g/kg piperonyl butoxide and 1 g/kg pyriproxyfen |

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

| | |
|---|--|
| International Air Transport Association (IATA) Dangerous Goods Regulations | New Zealand Inventory of Chemicals (NZIoC) |
| International Maritime Dangerous Goods Requirements (IMDG Code) | New Zealand Workplace Exposure Standards (WES) |
| New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals | United Nations Recommendations on the Transport of Dangerous Goods Model Regulations |
| New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data | |

PERMETHRIN(52645-53-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|---|---|
| International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs | New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data |
| International Air Transport Association (IATA) Dangerous Goods Regulations | New Zealand Inventory of Chemicals (NZIoC) |
| International Maritime Dangerous Goods Requirements (IMDG Code) | New Zealand Land Transport Rule: Dangerous Goods 2005 - Schedule 1 Quantity limits |
| New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals | United Nations Recommendations on the Transport of Dangerous Goods Model Regulations |

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

| | |
|---|---|
| International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs | New Zealand Inventory of Chemicals (NZIoC) |
| International Air Transport Association (IATA) Dangerous Goods Regulations | New Zealand Land Transport Rule: Dangerous Goods 2005 - Schedule 1 Quantity limits |
| International Maritime Dangerous Goods Requirements (IMDG Code) | New Zealand Land Transport Rule: Dangerous Goods 2005 - Schedule 3 Segregation requirements for dangerous goods |
| New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals | United Nations Recommendations on the Transport of Dangerous Goods Model Regulations |
| New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data | |

PYRIPROXYFEN(95737-68-1) IS FOUND ON THE FOLLOWING REGULATORY LISTS

| | |
|---|--|
| International Air Transport Association (IATA) Dangerous Goods Regulations | New Zealand Inventory of Chemicals (NZIoC) |
| International Maritime Dangerous Goods Requirements (IMDG Code) | New Zealand Land Transport Rule: Dangerous Goods 2005 - Schedule 1 Quantity limits |
| New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals | United Nations Recommendations on the Transport of Dangerous Goods Model Regulations |
| New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data | |

Hazardous Substance Location

Subject to the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Hazard Class | Quantity beyond which controls apply for closed containers | Quantity beyond which controls apply when use occurring in open containers |
|--------------|--|--|
| 2.1.2A | 3 000 L (aggregate water capacity) | 3 000 L (aggregate water capacity) |

Certified Handler

Subject to Part 4 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

| Class of substance | Quantities |
|----------------------------|----------------------------------|
| 9.1A, 9.2A, 9.3A, and 9.4A | Any quantity |
| 2.1.2A | 3 000 L aggregate water capacity |

ECOMIST INSECT GRENADE with EGGBUSTERS

Refer Group Standards for further information

Tracking Requirements

Not Applicable

National Inventory Status

| National Inventory | Status |
|-------------------------------|---|
| Australia - AICS | No (pyriproxyfen) |
| Canada - DSL | No (pyriproxyfen; permethrin) |
| Canada - NDSL | No (pyriproxyfen; piperonyl butoxide; hydrocarbon propellant; permethrin) |
| China - IECSC | No (pyriproxyfen) |
| Europe - EINEC / ELINCS / NLP | Yes |
| Japan - ENCS | Yes |
| Korea - KECI | Yes |
| New Zealand - NZIoC | Yes |
| Philippines - PICCS | No (pyriproxyfen) |
| USA - TSCA | No (pyriproxyfen; permethrin) |
| Taiwan - TCSI | Yes |
| Mexico - INSQ | Yes |
| Vietnam - NCI | Yes |
| Russia - ARIPS | No (pyriproxyfen) |
| Thailand - TECI | No (hydrocarbon propellant) |
| Legend: | <p><i>Yes = All CAS declared ingredients are on the inventory</i></p> <p><i>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)</i></p> |

SECTION 16 OTHER INFORMATION

| | |
|----------------------|------------|
| Revision Date | 19/10/2016 |
| Initial Date | 19/10/2016 |

Other information

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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