

# Ecomist Insect Killer With Natural Pyrethrins

## Damar Industries Pty Ltd

Chemwatch: 5131-40

Version No: 8.1

Safety Data Sheet according to WHS Regulations (Hazardous Chemicals) Amendment 2020 and ADG requirements

Chemwatch Hazard Alert Code: 4

Issue Date: 18/07/2023

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### SECTION 1 Identification of the substance / mixture and of the company / undertaking

#### Product Identifier

Product name	Ecomist Insect Killer With Natural Pyrethrins
Chemical Name	Not Applicable
Synonyms	CEA0300;CEA0301
Proper shipping name	AEROSOLS
Chemical formula	Not Applicable
Other means of identification	Not Available

#### Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses	Insecticide.
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#### Details of the manufacturer or supplier of the safety data sheet

Registered company name	Damar Industries Pty Ltd
Address	25 Hargraves Place, Wetherill Park NSW 2164 Australia
Telephone	1800 243 500
Fax	+61 2 9756 0985
Website	<a href="http://www.damarindustries.com">www.damarindustries.com</a>
Email	orders@damarindustries.com.au

#### Emergency telephone number

Association / Organisation	CHEMCALL	CHEMWATCH EMERGENCY RESPONSE (24/7)
Emergency telephone numbers	1800 127 406	+61 1800 951 288
Other emergency telephone numbers	Not Available	+61 3 9573 3188

Once connected and if the message is not in your preferred language then please dial 01

### SECTION 2 Hazards identification

#### Classification of the substance or mixture

Poisons Schedule	Not Applicable
Classification [1]	Aerosols Category 1, Serious Eye Damage/Eye Irritation Category 2B, Specific Target Organ Toxicity - Single Exposure (Narcotic Effects) Category 3, Hazardous to the Aquatic Environment Long-Term Hazard Category 2
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI

#### Label elements

Hazard pictogram(s)	
Signal word	Danger

#### Hazard statement(s)

H222+H229	Extremely flammable aerosol. Pressurized container: may burst if heated.
H320	Causes eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long lasting effects.
AUH044	Risk of explosion if heated under confinement.
AUH066	Repeated exposure may cause skin dryness and cracking.

#### Precautionary statement(s) Prevention

Ecomist Insect Killer With Natural Pyrethrins

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.
P271	Use only outdoors or in a well-ventilated area.
P261	Avoid breathing mist/vapours/spray.
P273	Avoid release to the environment.
P264	Wash all exposed external body areas thoroughly after handling.

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.
P312	Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P391	Collect spillage.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.

Precautionary statement(s) Storage

P405	Store locked up.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.

Precautionary statement(s) Disposal

P501	Dispose of contents/container to authorised hazardous or special waste collection point in accordance with any local regulation.
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SECTION 3 Composition / information on ingredients

Substances

See section below for composition of Mixtures

Mixtures

CAS No	%[weight]	Name
64742-48-9.	30-60	<u>naphtha petroleum, heavy, hydrotreated</u>
51-03-6	4.79	<u>piperonyl butoxide</u>
8003-34-7	1.8	<u>pyrethrum</u>
68476-85-7.	40-90	<u>hydrocarbon propellant</u>
Legend:	1. Classified by Chemwatch; 2. Classification drawn from HCIS; 3. Classification drawn from Regulation (EU) No 1272/2008 - Annex VI; 4. Classification drawn from C&L; * EU IOELVs available	

SECTION 4 First aid measures

Description of first aid measures

Eye Contact	If aerosols come in contact with the eyes: <ul style="list-style-type: none"><li>▶ Immediately hold the eyelids apart and flush the eye continuously for at least 15 minutes with fresh running water.</li><li>▶ 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.</li><li>▶ Transport to hospital or doctor without delay.</li><li>▶ Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.</li></ul>
Skin Contact	If solids or aerosol mists are deposited upon the skin: <ul style="list-style-type: none"><li>▶ Flush skin and hair with running water (and soap if available).</li><li>▶ Remove any adhering solids with industrial skin cleansing cream.</li><li>▶ <b>DO NOT use solvents.</b></li><li>▶ Seek medical attention in the event of irritation.</li></ul>
Inhalation	If aerosols, fumes or combustion products are inhaled: <ul style="list-style-type: none"><li>▶ Remove to fresh air.</li><li>▶ Lay patient down. Keep warm and rested.</li><li>▶ Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures.</li><li>▶ 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.</li><li>▶ Transport to hospital, or doctor.</li></ul>
Ingestion	<ul style="list-style-type: none"><li>▶ Not considered a normal route of entry.</li></ul>

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

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
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Advice for firefighters

Fire Fighting	<ul style="list-style-type: none"><li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li><li>▶ May be violently or explosively reactive.</li><li>▶ Wear breathing apparatus plus protective gloves.</li><li>▶ Prevent, by any means available, spillage from entering drains or water course.</li><li>▶ If safe, switch off electrical equipment until vapour fire hazard removed.</li><li>▶ Use water delivered as a fine spray to control fire and cool adjacent area.</li><li>▶ <b>DO NOT</b> approach containers suspected to be hot.</li><li>▶ Cool fire exposed containers with water spray from a protected location.</li><li>▶ If safe to do so, remove containers from path of fire.</li><li>▶ Equipment should be thoroughly decontaminated after use.</li></ul>
Fire/Explosion Hazard	<ul style="list-style-type: none"><li>▶ Liquid and vapour are highly flammable.</li><li>▶ Severe fire hazard when exposed to heat or flame.</li><li>▶ Vapour forms an explosive mixture with air.</li><li>▶ Severe explosion hazard, in the form of vapour, when exposed to flame or spark.</li><li>▶ Vapour may travel a considerable distance to source of ignition.</li><li>▶ Heating may cause expansion or decomposition with violent container rupture.</li><li>▶ Aerosol cans may explode on exposure to naked flames.</li><li>▶ Rupturing containers may rocket and scatter burning materials.</li><li>▶ Hazards may not be restricted to pressure effects.</li><li>▶ May emit acrid, poisonous or corrosive fumes.</li><li>▶ On combustion, may emit toxic fumes of carbon monoxide (CO).</li></ul> <p>Combustion products include: carbon monoxide (CO) carbon dioxide (CO2) other pyrolysis products typical of burning organic material.</p> <p><b>Contains low boiling substance:</b> Closed containers may rupture due to pressure buildup under fire conditions.</p>
HAZCHEM	Not Applicable

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

Minor Spills	<ul style="list-style-type: none"><li>▶ Clean up all spills immediately.</li><li>▶ Avoid breathing vapours and contact with skin and eyes.</li><li>▶ Wear protective clothing, impervious gloves and safety glasses.</li><li>▶ Shut off all possible sources of ignition and increase ventilation.</li><li>▶ Wipe up.</li><li>▶ If safe, damaged cans should be placed in a container outdoors, away from all ignition sources, until pressure has dissipated.</li><li>▶ Undamaged cans should be gathered and stowed safely.</li></ul>
Major Spills	<ul style="list-style-type: none"><li>▶ Clear area of personnel and move upwind.</li><li>▶ Alert Fire Brigade and tell them location and nature of hazard.</li><li>▶ May be violently or explosively reactive.</li><li>▶ Wear breathing apparatus plus protective gloves.</li><li>▶ Prevent, by any means available, spillage from entering drains or water courses</li><li>▶ No smoking, naked lights or ignition sources.</li><li>▶ Increase ventilation.</li><li>▶ Stop leak if safe to do so.</li><li>▶ Water spray or fog may be used to disperse / absorb vapour.</li><li>▶ Absorb or cover spill with sand, earth, inert materials or vermiculite.</li><li>▶ If safe, damaged cans should be placed in a container outdoors, away from ignition sources, until pressure has dissipated.</li><li>▶ Undamaged cans should be gathered and stowed safely.</li><li>▶ Collect residues and seal in labelled drums for disposal.</li></ul>

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

SECTION 7 Handling and storage

Precautions for safe handling

Safe handling	<ul style="list-style-type: none"><li>▶ Avoid all personal contact, including inhalation.</li><li>▶ Wear protective clothing when risk of exposure occurs.</li><li>▶ Use in a well-ventilated area.</li><li>▶ Prevent concentration in hollows and sumps.</li><li>▶ <b>DO NOT enter confined spaces until atmosphere has been checked.</b></li><li>▶ Avoid smoking, naked lights or ignition sources.</li><li>▶ Avoid contact with incompatible materials.</li><li>▶ <b>When handling, DO NOT eat, drink or smoke.</b></li><li>▶ <b>DO NOT incinerate or puncture aerosol cans.</b></li><li>▶ <b>DO NOT spray directly on humans, exposed food or food utensils.</b></li><li>▶ Avoid physical damage to containers.</li></ul>
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	<ul style="list-style-type: none"><li>▶ Always wash hands with soap and water after handling.</li><li>▶ Work clothes should be laundered separately.</li><li>▶ Use good occupational work practice.</li><li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li><li>▶ Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions are maintained.</li></ul>
Other information	<ul style="list-style-type: none"><li>▶ Store in original containers in approved flammable liquid storage area.</li><li>▶ <b>DO NOT store in pits, depressions, basements or areas where vapours may be trapped.</b></li><li>▶ No smoking, naked lights, heat or ignition sources.</li><li>▶ Keep containers securely sealed. Contents under pressure.</li><li>▶ Store away from incompatible materials.</li><li>▶ Store in a cool, dry, well ventilated area.</li><li>▶ Avoid storage at temperatures higher than 40 deg C.</li><li>▶ Store in an upright position.</li><li>▶ Protect containers against physical damage.</li><li>▶ Check regularly for spills and leaks.</li><li>▶ Observe manufacturer's storage and handling recommendations contained within this SDS.</li><li>▶ Keep dry to avoid corrosion of cans. Corrosion may result in container perforation and internal pressure may eject contents of can</li></ul>

Conditions for safe storage, including any incompatibilities

Suitable container	<ul style="list-style-type: none"><li>▶ Aerosol dispenser.</li><li>▶ Check that containers are clearly labelled.</li></ul>
Storage incompatibility	<ul style="list-style-type: none"><li>▶ Avoid reaction with oxidising agents</li></ul>

SECTION 8 Exposure controls / personal protection

Control parameters

Occupational Exposure Limits (OEL)

INGREDIENT DATA

Source	Ingredient	Material name	TWA	STEL	Peak	Notes
Australia Exposure Standards	naphtha petroleum, heavy, hydrotreated	Oil mist, refined mineral	5 mg/m3	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)	1000 ppm / 1800 mg/m3	Not Available	Not Available	Not Available

Emergency Limits

Ingredient	TEEL-1	TEEL-2	TEEL-3
naphtha petroleum, heavy, hydrotreated	350 mg/m3	1,800 mg/m3	40,000 mg/m3
piperonyl butoxide	6.5 mg/m3	72 mg/m3	1,200 mg/m3
hydrocarbon propellant	65,000 ppm	2.30E+05 ppm	4.00E+05 ppm

Ingredient	Original IDLH	Revised IDLH
naphtha petroleum, heavy, hydrotreated	2,500 mg/m3	Not Available
piperonyl butoxide	Not Available	Not Available
pyrethrum	5,000 mg/m3	Not Available
hydrocarbon propellant	2,000 ppm	Not Available

MATERIAL DATA

NOTE P: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.01% w/w benzene (EINECS No 200-753-7). Note E shall also apply when the substance is classified as a carcinogen. This note applies only to certain complex oil-derived substances in Annex VI.





European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

NOTE K: The classification as a carcinogen need not apply if it can be shown that the substance contains less than 0.1%w/w 1,3-butadiene (EINECS No 203-450-8). - European Union (EU) List of harmonised classification and labelling hazardous substances, Table 3.1, Annex VI, Regulation (EC) No 1272/2008 (CLP) - up to the latest ATP

Exposure controls

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. 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.</p> <p>Employers may need to use multiple types of controls to prevent employee overexposure.</p> <p>General exhaust is adequate under normal conditions. If risk of overexposure exists, wear SAA approved respirator. Correct fit is essential to obtain adequate protection.</p> <p>Provide adequate ventilation in warehouse or closed storage areas.</p> <p>Air contaminants generated in the workplace possess varying "escape" velocities which, in turn, determine the "capture velocities" of fresh circulating air required to effectively remove the contaminant.</p> <table><tr><td>Type of Contaminant:</td><td>Speed:</td></tr><tr><td>aerosols, (released at low velocity into zone of active generation)</td><td>0.5-1 m/s</td></tr></table>	Type of Contaminant:	Speed:	aerosols, (released at low velocity into zone of active generation)	0.5-1 m/s
Type of Contaminant:	Speed:				
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	<p>direct spray, spray painting in shallow booths, gas discharge (active generation into zone of rapid air motion)</p> <p>1-2.5 m/s (200-500 f/min.)</p> <p>Within each range the appropriate value depends on:</p> <table> <tr> <th>Lower end of the range</th><th>Upper end of the range</th></tr> <tr> <td>1: Room air currents minimal or favourable to capture</td><td>1: Disturbing room air currents</td></tr> <tr> <td>2: Contaminants of low toxicity or of nuisance value only.</td><td>2: Contaminants of high toxicity</td></tr> <tr> <td>3: Intermittent, low production.</td><td>3: High production, heavy use</td></tr> <tr> <td>4: Large hood or large air mass in motion</td><td>4: Small hood-local control only</td></tr> </table> <p>Simple theory shows that air velocity falls rapidly with distance away from the opening of a simple extraction pipe. Velocity generally decreases with the square of distance from the extraction point (in simple cases). Therefore the air speed at the extraction point should be adjusted, accordingly, after reference to distance from the contaminating source. The air velocity at the extraction fan, for example, should be a minimum of 1-2 m/s (200-400 f/min.) for extraction of solvents generated in a tank 2 meters distant from the extraction point. Other mechanical considerations, producing performance deficits within the extraction apparatus, make it essential that theoretical air velocities are multiplied by factors of 10 or more when extraction systems are installed or used.</p>	Lower end of the range	Upper end of the range	1: Room air currents minimal or favourable to capture	1: Disturbing room air currents	2: Contaminants of low toxicity or of nuisance value only.	2: Contaminants of high toxicity	3: Intermittent, low production.	3: High production, heavy use	4: Large hood or large air mass in motion	4: Small hood-local control only
Lower end of the range	Upper end of the range										
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4: Large hood or large air mass in motion	4: Small hood-local control only										
Individual protection measures, such as personal protective equipment	   										
Eye and face protection	<ul style="list-style-type: none"> <li>▶ No special equipment for minor exposure i.e. when handling small quantities.</li> <li>▶ OTHERWISE: For potentially moderate or heavy exposures:</li> <li>▶ Safety glasses with side shields.</li> <li>▶ NOTE: Contact lenses pose a special hazard; soft lenses may absorb irritants and ALL lenses concentrate them.</li> </ul>										
Skin protection	See Hand protection below										
Hands/feet protection	<ul style="list-style-type: none"> <li>▶ No special equipment needed when handling small quantities.</li> <li>▶ OTHERWISE:</li> <li>▶ For potentially moderate exposures:</li> <li>▶ Wear general protective gloves, eg. light weight rubber gloves.</li> <li>▶ For potentially heavy exposures:</li> <li>▶ Wear chemical protective gloves, eg. PVC. and safety footwear.</li> </ul>										
Body protection	See Other protection below										
Other protection	<p>No special equipment needed when handling small quantities.</p> <p>OTHERWISE:</p> <ul style="list-style-type: none"> <li>▶ Overalls.</li> <li>▶ Skin cleansing cream.</li> <li>▶ Eyewash unit.</li> <li>▶ Do not spray on hot surfaces.</li> </ul>										

## 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.

Required Minimum Protection Factor	Half-Face Respirator	Full-Face Respirator	Powered Air Respirator
up to 10 x ES	AX-AUS P3	-	AX-PAPR-AUS / Class 1 P3
up to 50 x ES	-	AX-AUS / Class 1 P3	-
up to 100 x ES	-	AX-2 P3	AX-PAPR-2 P3 ^

^ - 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(SO<sub>2</sub>), G = Agricultural chemicals, K = Ammonia(NH<sub>3</sub>), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds(below 65 degC)

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	Highly flammable liquid; does not mix with water.		
Physical state	Liquid	Relative density (Water = 1)	0.6-0.63
Odour	Not Available	Partition coefficient n-octanol / water	Not Available
Odour threshold	Not Available	Auto-ignition temperature (°C)	431
pH (as supplied)	Not Applicable	Decomposition temperature (°C)	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

Continued...

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)	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)	1.8	VOC g/L	Not Available

SECTION 10 Stability and reactivity

Reactivity	See section 7
Chemical stability	<ul style="list-style-type: none"><li>▶ Elevated temperatures.</li><li>▶ Presence of open flame.</li><li>▶ Product is considered stable.</li><li>▶ Hazardous polymerisation will not occur.</li></ul>
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

Inhaled	<p>Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by narcosis, reduced alertness, loss of reflexes, lack of coordination and vertigo.</p> <p>Inhalation of vapours or aerosols (mists, fumes), generated by the material during the course of normal handling, may be damaging to the health of the individual.</p> <p>Limited evidence or practical experience suggests that the material may produce irritation of the respiratory system, in a significant number of individuals, following inhalation. In contrast to most organs, the lung is able to respond to a chemical insult by first removing or neutralising the irritant and then repairing the damage. The repair process, which initially evolved to protect mammalian lungs from foreign matter and antigens, may however, produce further lung damage resulting in the impairment of gas exchange, the primary function of the lungs.</p> <p>Respiratory tract irritation often results in an inflammatory response involving the recruitment and activation of many cell types, mainly derived from the vascular system.</p> <p>Inhalation hazard is increased at higher temperatures.</p> <p>Acute effects from inhalation of high concentrations of vapour are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterised by headache and dizziness, increased reaction time, fatigue and loss of co-ordination</p> <p><b>WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.</b></p>
Ingestion	<p>Accidental ingestion of the material may be damaging to the health of the individual.</p> <p>Considered an unlikely route of entry in commercial/industrial environments</p>
Skin Contact	<p>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.</p> <p>Skin contact with the material may damage the health of the individual; systemic effects may result following absorption.</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, puncture wounds 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>Evidence exists, or practical experience predicts, that the material may cause eye irritation in a substantial number of individuals and/or may produce significant ocular lesions which are present twenty-four hours or more after instillation into the eye(s) of experimental animals.</p> <p>Repeated or prolonged eye contact may cause inflammation characterised by temporary redness (similar to windburn) of the conjunctiva (conjunctivitis); temporary impairment of vision and/or other transient eye damage/ulceration may occur.</p> <p>The liquid produces a high level of eye discomfort and is capable of causing pain and severe conjunctivitis. Corneal injury may develop, with possible permanent impairment of vision, if not promptly and adequately treated.</p>
Chronic	<p>On the basis, primarily, of animal experiments, concern has been expressed that the material may produce carcinogenic or mutagenic effects; in respect of the available information, however, there presently exists inadequate data for making a satisfactory assessment.</p> <p>Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems.</p> <p>Practical evidence shows that inhalation of the material is capable of inducing a sensitisation reaction in a substantial number of individuals at a greater frequency than would be expected from the response of a normal population.</p> <p>Pulmonary sensitisation, resulting in hyperactive airway dysfunction and pulmonary allergy may be accompanied by fatigue, malaise and aching. Significant symptoms of exposure may persist for extended periods, even after exposure ceases. Symptoms can be activated by a variety of nonspecific environmental stimuli such as automobile exhaust, perfumes and passive smoking.</p> <p>Practical experience shows that skin contact with the material is capable either of inducing a sensitisation reaction in a substantial number of individuals, and/or of producing a positive response in experimental animals.</p> <p>Substances that can cause occupational asthma (also known as asthmagens and respiratory sensitisers) can induce a state of specific airway hyper-responsiveness via an immunological, irritant or other mechanism. Once the airways have become hyper-responsive, further exposure to the substance, sometimes even to tiny quantities, may cause respiratory symptoms. These symptoms can range in severity from a runny nose to asthma. Not all workers who are exposed to a sensitiser will become hyper-responsive and it is impossible to identify in advance who are likely to become hyper-responsive.</p> <p>Substances that can cause occupational asthma should be distinguished from substances which may trigger the symptoms of asthma in people with pre-existing air-way hyper-responsiveness. The latter substances are not classified as asthmagens or respiratory sensitisers. Wherever it is reasonably practicable, exposure to substances that can cause occupational asthma should be prevented. Where this is not possible the primary aim is to apply adequate standards of control to prevent workers from becoming hyper-responsive.</p> <p>Activities giving rise to short-term peak concentrations should receive particular attention when risk management is being considered. Health surveillance is appropriate for all employees exposed or liable to be exposed to a substance which may cause occupational asthma and there should be appropriate consultation with an occupational health professional over the degree of risk and level of surveillance.</p> <p>Harmful: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed.</p>



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	<p>Serious damage (clear functional disturbance or morphological change which may have toxicological significance) is likely to be caused by repeated or prolonged exposure. As a rule the material produces, or contains a substance which produces severe lesions. Such damage may become apparent following direct application in subchronic (90 day) toxicity studies or following sub-acute (28 day) or chronic (two-year) toxicity tests.</p> <p>Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.</p> <p>There is some evidence to provide a presumption that human exposure to the material may result in impaired fertility on the basis of: some evidence in animal studies of impaired fertility in the absence of toxic effects, or evidence of impaired fertility occurring at around the same dose levels as other toxic effects but which is not a secondary non-specific consequence of other toxic effects.</p> <p>Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS]</p> <p><b>WARNING: Aerosol containers may present pressure related hazards.</b></p>	
Ecomist Insect Killer With Natural Pyrethrins	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (None) LD50: 2884 mg/kg <sup>[2]</sup>	Not Available
	Oral (Rat) LD50: 9912 mg/kg <sup>[2]</sup>	
naphtha petroleum, heavy, hydrotreated	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: >1900 mg/kg <sup>[1]</sup>	Eye: no adverse effect observed (not irritating) <sup>[1]</sup>
	Inhalation (Rat) LC50: >4.42 mg/L4h <sup>[1]</sup>	Skin: adverse effect observed (irritating) <sup>[1]</sup>
piperonyl butoxide	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: >2000 mg/kg <sup>[1]</sup>	Not Available
	Inhalation (Rat) LC50: >5.2 mg/L4h <sup>[1]</sup>	
pyrethrum	<b>TOXICITY</b>	<b>IRRITATION</b>
	Dermal (rabbit) LD50: 300 mg/kg <sup>[2]</sup>	Not Available
	Oral (Rat) LD50: 200 mg/kg <sup>[2]</sup>	
hydrocarbon propellant	<b>TOXICITY</b>	<b>IRRITATION</b>
	Inhalation (Rat) LC50: 658 mg/L4h <sup>[2]</sup>	Not Available
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	

NAPHTHA PETROLEUM, HEAVY, HYDROTREATED	<p>Studies indicate that normal, branched and cyclic paraffins are absorbed from the mammalian gastrointestinal tract and that the absorption of n-paraffins is inversely proportional to the carbon chain length, with little absorption above C30. With respect to the carbon chain lengths likely to be present in mineral oil, n-paraffins may be absorbed to a greater extent than iso- or cyclo-paraffins.</p> <p>The major classes of hydrocarbons have been shown to be well absorbed by the gastrointestinal tract in various species. In many cases, the hydrophobic hydrocarbons are ingested in association with dietary lipids. The dependence of hydrocarbon absorption on concomitant triglyceride digestion and absorption, is known as the "hydrocarbon continuum hypothesis", and asserts that a series of solubilising phases in the intestinal lumen, created by dietary triglycerides and their digestion products, afford hydrocarbons a route to the lipid phase of the intestinal absorptive cell (enterocyte) membrane. While some hydrocarbons may traverse the mucosal epithelium unmetabolised and appear as solutes in lipoprotein particles in intestinal lymph, there is evidence that most hydrocarbons partially separate from nutrient lipids and undergo metabolic transformation in the enterocyte. The enterocyte may play a major role in determining the proportion of an absorbed hydrocarbon that, by escaping initial biotransformation, becomes available for deposition in its unchanged form in peripheral tissues such as adipose tissue, or in the liver.</p> <p>For petroleum: This product contains benzene, which can cause acute myeloid leukaemia, and n-hexane, which can be metabolized to compounds which are toxic to the nervous system. This product contains toluene, and animal studies suggest high concentrations of toluene lead to hearing loss. This product contains ethyl benzene and naphthalene, from which animal testing shows evidence of tumour formation. Cancer-causing potential: Animal testing shows inhaling petroleum causes tumours of the liver and kidney; these are however not considered to be relevant in humans.</p> <p>Mutation-causing potential: Most studies involving gasoline have returned negative results regarding the potential to cause mutations, including all recent studies in living human subjects (such as in petrol service station attendants).</p> <p>Reproductive toxicity: Animal studies show that high concentrations of toluene (&gt;0.1%) can cause developmental effects such as lower birth weight and developmental toxicity to the nervous system of the foetus. Other studies show no adverse effects on the foetus.</p> <p>Human effects: Prolonged or repeated contact may cause defatting of the skin which can lead to skin inflammation and may make the skin more susceptible to irritation and penetration by other materials.</p> <p>Animal testing shows that exposure to gasoline over a lifetime can cause kidney cancer, but the relevance in humans is questionable.</p>
PIPERONYL BUTOXIDE	<p>Dermal (rabbit) LD50: &gt;1880 mg/kg [Handbook of Toxicology] *Published value - probably not peer-reviewed ADI: 0.03 mg/kg</p> <p>The substance is classified by IARC as Group 3:</p> <p><b>NOT</b> classifiable as to its carcinogenicity to humans.</p> <p>Evidence of carcinogenicity may be inadequate or limited in animal testing.</p>
PYRETHRUM	<p>ADI: 0.04 mg/kg/day</p> <p>For pyrethrins</p> <p>The term "pyrethrin" refers to all six isomers found in pyrethrum, extracts which are obtained from the dried and ground flowers of the pyrethrum plant, <i>Chrysanthemum cinerariaefolium</i>. The CAS Registry No. for the mixture is 8003-34-7. The individual isomers are referred to by the common names of the acid followed by an Arabic number 1 or 2 (i.e., pyrethrin 1, pyrethrin 2, cinerin 1, cinerin 2, jasmolin 1, jasmolin 2). If the term pyrethrins is followed by a roman numerical designation, then it refers to all of the isomers of that number in the pyrethrum extract (e.g., pyrethrins I includes pyrethrin 1, cinerin 1, and jasmolin 1).</p> <p>Pyrethrins have low to moderate acute toxicity via the oral, dermal, and inhalation routes. Mammalian toxicity data suggest that pyrethrins are slightly toxic to small mammals on an acute oral basis (LD50 = 700 mg/kg body weight).</p> <p>They are a moderate eye irritant, a mild dermal irritant, and are not a skin sensitiser.</p>

**Toxic Effects**

The critical toxicological effects of pyrethrins are

- ▶ neurobehavioral effects (tremors, labored breathing, hyperactivity, secretory signs, matted coats), following acute, short-term, and chronic exposure, with nervous system lesions observed in the rat and mouse following acute exposure;
- ▶ thyroid effects, following chronic exposure in the rat and dog; and
- ▶ liver effects, following short- and long-term exposure in the rat, dog, and mouse.

Following inhalation exposure, neurobehavioral effects were observed initially, and respiratory tract lesions were observed at all dose levels.

The neurobehavioral effects and the mode of action on the sodium channel are considered relevant to humans because the effects are observed in both the rat and mouse, and the mode of action affects a basic function of the nervous system that is common to all animals.

**Toxic Mixtures Effects:** The U.S.EPA considered the possibility for increased toxicity due to the presence of synergists such as MGK-264 and piperonyl butoxide in pyrethrins formulations. In order for synergistic effects to be observed in humans, absorbed doses high enough to significantly affect the mixed function oxidase enzymes would be required. It is unlikely that these levels would occur based on the registered uses of pyrethrins.

**Neurotoxicity:** There is a concern for neurotoxicity resulting from exposure to pyrethrins, based on

- ▶ tremors in female rats, decreased motor activity in male rats, and neuropathology in both sexes in a rat acute neurotoxicity study;
- ▶ clinical signs (excessive salivation and head arched backward) in a female rabbit following exposure during gestation; and
- ▶ tremors in female rats in a subchronic inhalation study.

In the range-finding developmental toxicity studies in rats and rabbits, tremors/convulsions were observed in those that died during the study. In the mouse 90-day range-finding study, tremors and increased/decreased activity were observed at dose levels that also resulted in mortality. Pyrethrins are axonic poisons.

**Reproductive toxicity:** In the two generation rat reproduction study, parental male systemic and reproductive toxicity were detected at 1000 ppm (65 mg/kg body weight per day) and parental female systemic toxicity was detected at 3000 ppm (196 mg/kg body weight per day). The NOAEL for parental systemic (male) and reproductive toxicity was 100 ppm (6.4 mg/kg body weight-day).

**Cancer:** Pyrethrins are classified as "Suggestive Evidence of Carcinogenicity, but Not Sufficient to Assess Human Carcinogenic Potential," based on the weight-of-the-evidence including

- ▶ the occurrence of benign liver tumors in female rats,
- ▶ no treatment-related increase in liver tumors in male rats,
- ▶ no treatment-related increase in tumors in either sex of mice, and
- ▶ no concern for mutagenicity.

**Endocrine disruption:** There is evidence that pyrethrins are associated with endocrine disruption. Direct measurements of serum thyroid hormones [T3, T4, and TSH], as well as histopathological alterations in the thyroid (i.e. follicular cell hypertrophy, follicular cell hyperplasia, follicular cell adenomas and/or carcinomas) indicate there is concern regarding the potential for endocrine disruption. When the appropriate screening and/or testing protocols have been developed, pyrethrins may be subject to additional screening and/or testing.

**Pyrethrins and pyrethroids:** Pyrethrins are botanical insecticides that come from the pyrethrum flower, *Chrysanthemum cinerariaefolium*. Pyrethrins have limitations because of the cost of production and instability in sunlight; therefore, many synthetic pyrethrins-like compounds were developed to be more stable in sunlight and cost effective. These compounds are referred to as synthetic pyrethroids. Although all pyrethroids interact with sodium channels, there are multiple types of sodium channels and it is currently unknown whether the pyrethrins and pyrethroids have similar effects on all channels

**HYDROCARBON PROPELLANT**

for Petroleum Hydrocarbon Gases:

In many cases, there is more than one potentially toxic constituent in a refinery gas. In those cases, the constituent that is most toxic for a particular endpoint in an individual refinery stream is used to characterize the endpoint hazard for that stream. The hazard potential for each mammalian endpoint for each of the petroleum hydrocarbon gases is dependent upon each petroleum hydrocarbon gas constituent endpoint toxicity values (LC50, LOAEL, etc.) and the relative concentration of the constituent present in that gas. It should also be noted that for an individual petroleum hydrocarbon gas, the constituent characterizing toxicity may be different for different mammalian endpoints, again, being dependent upon the concentration of the different constituents in each, distinct petroleum hydrocarbon gas.

All Hydrocarbon Gases Category members contain primarily hydrocarbons (i.e., alkanes and alkenes) and occasionally asphyxiant gases like hydrogen. The inorganic components of the petroleum hydrocarbon gases are less toxic than the C1 - C4 and C5 - C6 hydrocarbon components to both mammalian and aquatic organisms. Unlike other petroleum product categories (e.g. gasoline, diesel fuel, lubricating oils, etc.), the inorganic and hydrocarbon constituents of hydrocarbon gases can be evaluated for hazard individually to then predict the screening level hazard of the Category members

**Acute toxicity:** No acute toxicity LC50 values have been derived for the C1 -C4 and C5- C6 hydrocarbon (HC) fractions because no mortality was observed at the highest exposure levels tested (~ 5 mg/l) for these petroleum hydrocarbon gas constituents. The order of acute toxicity of petroleum hydrocarbon gas constituents from most to least toxic is:

C5-C6 HCs (LC50 > 1063 ppm) > C1-C4 HCs (LC50 > 10,000 ppm) > benzene (LC50 = 13,700 ppm) > butadiene (LC50 = 129,000 ppm) > asphyxiant gases (hydrogen, carbon dioxide, nitrogen).

**Repeat dose toxicity:** With the exception of the asphyxiant gases, repeated dose toxicity has been observed in individual selected petroleum hydrocarbon gas constituents. Based upon LOAEL values, the order of order of repeated-dose toxicity of these constituents from most toxic to the least toxic is:

Benzene (LOAEL .>=10 ppm) > C1-C4 HCs (LOAEL = 5,000 ppm; assumed to be 100% 2-butene) > C5-C6 HCs (LOAEL = 6,625 ppm) > butadiene (LOAEL = 8,000 ppm) > asphyxiant gases (hydrogen, carbon dioxide, nitrogen).

**Genotoxicity:**

**In vitro:** The majority of the Petroleum Hydrocarbon Gases Category components are negative for *in vitro* genotoxicity. The exceptions are: benzene and 1,3-butadiene, which are genotoxic in bacterial and mammalian *in vitro* test systems.

**In vivo:** The majority of the Petroleum Hydrocarbon Gases Category components are negative for *in vivo* genotoxicity. The exceptions are benzene and 1,3-butadiene, which are genotoxic in *in vivo* test systems

**Developmental toxicity:** Developmental effects were induced by two of the petroleum hydrocarbon gas constituents, benzene and the C5 - C6 hydrocarbon fraction. No developmental toxicity was observed at the highest exposure levels tested for the other petroleum hydrocarbon gas constituents tested for this effect. The asphyxiant gases have not been tested for developmental toxicity. Based on LOAEL and NOAEL values, the order of acute toxicity of these constituents from most to least toxic is:

Benzene (LOAEL = 20 ppm) > butadiene (NOAEL .>=1,000 ppm) > C5-C6 HCs (LOAEL = 3,463 ppm) > C1-C4 HCs (NOAEL >=5,000 ppm; assumed to be 100% 2-butene) > asphyxiant gases (hydrogen, carbon dioxide, nitrogen).

**Reproductive toxicity:** Reproductive effects were induced by only two petroleum hydrocarbon gas constituents, benzene and isobutane (a constituent of the C1-C4 hydrocarbon fraction). No reproductive toxicity was observed at the highest exposure levels tested for the other petroleum hydrocarbon gas constituents tested for this effect. The asphyxiant gases have not been tested for reproductive toxicity. Based on LOAEL and NOAEL values, the order of reproductive toxicity of these constituents from most to least toxic is:

Benzene (LOAEL = 300 ppm) > butadiene (NOAEL .>=6,000 ppm) > C5-C6 HCs (NOAEL .>=6,521 ppm) > C1-C4 HCs (LOAEL = 9,000 ppm; assumed to be 100% isobutane) > asphyxiant gases (hydrogen, carbon dioxide, nitrogen)

**PYRETHRUM & HYDROCARBON PROPELLANT**

No significant acute toxicological data identified in literature search.

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 Killer With Natural Pyrethrins	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
naphtha petroleum, heavy, hydrotreated	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48h	Crustacea	>0.002mg/l	2
	EC50	96h	Algae or other aquatic plants	64mg/l	2
	EC50(ECx)	48h	Crustacea	>0.002mg/l	2
piperonyl butoxide	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48h	Crustacea	0.46-0.674mg/L	4
	EC50	72h	Algae or other aquatic plants	0.85mg/l	2
	NOEC(ECx)	48h	Crustacea	0.01mg/l	4
pyrethrum	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48h	Crustacea	0.01-0.014mg/L	4
	NOEC(ECx)	504h	Crustacea	0.001mg/L	4
	LC50	96h	Fish	0.003-0.004mg/L	4
hydrocarbon propellant	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	96h	Algae or other aquatic plants	7.71mg/l	2
	EC50(ECx)	96h	Algae or other aquatic plants	7.71mg/l	2
	LC50	96h	Fish	24.11mg/l	2
Legend: Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 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, may cause long-term adverse effects in the aquatic environment.  
90ecowate  
**DO NOT** discharge into sewer or waterways.

Persistence and degradability

Ingredient	Persistence: Water/Soil	Persistence: Air
piperonyl butoxide	HIGH	HIGH

Bioaccumulative potential

Ingredient	Bioaccumulation
piperonyl butoxide	HIGH (LogKOW = 4.75)

Mobility in soil

Ingredient	Mobility
piperonyl butoxide	LOW (Log KOC = 69.74)

SECTION 13 Disposal considerations

Waste treatment methods



Product / Packaging disposal	<ul style="list-style-type: none"><li>▶ <b>DO NOT</b> allow wash water from cleaning or process equipment to enter drains.</li><li>▶ It may be necessary to collect all wash water for treatment before disposal.</li><li>▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first.</li><li>▶ Where in doubt contact the responsible authority.</li><li>▶ Consult State Land Waste Management Authority for disposal.</li><li>▶ Discharge contents of damaged aerosol cans at an approved site.</li><li>▶ Allow small quantities to evaporate.</li><li>▶ <b>DO NOT</b> incinerate or puncture aerosol cans.</li></ul>
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Continued...

► Bury residues and emptied aerosol cans at an approved site.

SECTION 14 Transport information

Labels Required

	
Marine Pollutant	
HAZCHEM	Not Applicable

Land transport (ADG)

14.1. UN number or ID number	1950	
14.2. UN proper shipping name	AEROSOLS	
14.3. Transport hazard class(es)	Class	2.1
	Subsidiary Hazard	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Environmentally hazardous	
14.6. Special precautions for user	Special provisions	63 190 277 327 344 381
	Limited quantity	1000ml

Air transport (ICAO-IATA / DGR)

14.1. UN number	1950	
14.2. UN proper shipping name	Aerosols, flammable	
14.3. Transport hazard class(es)	ICAO/IATA Class	2.1
	ICAO / IATA Subsidiary Hazard	Not Applicable
	ERG Code	10L
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Environmentally hazardous	
14.6. Special precautions for user	Special provisions	A145 A167 A802
	Cargo Only Packing Instructions	203
	Cargo Only Maximum Qty / Pack	150 kg
	Passenger and Cargo Packing Instructions	203
	Passenger and Cargo Maximum Qty / Pack	75 kg
	Passenger and Cargo Limited Quantity Packing Instructions	Y203
	Passenger and Cargo Limited Maximum Qty / Pack	30 kg G

Sea transport (IMDG-Code / GGVSee)

14.1. UN number	1950	
14.2. UN proper shipping name	AEROSOLS	
14.3. Transport hazard class(es)	IMDG Class	2.1
	IMDG Subsidiary Hazard	Not Applicable
14.4. Packing group	Not Applicable	
14.5. Environmental hazard	Marine Pollutant	
14.6. Special precautions for user	EMS Number	F-D , S-U
	Special provisions	63 190 277 327 344 381 959
	Limited Quantities	1000 ml

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

Not Applicable

14.7.2. Transport in bulk in accordance with MARPOL Annex V and the IMSBC Code

Product name	Group
naphtha petroleum, heavy, hydrotreated	Not Available
piperonyl butoxide	Not Available
pyrethrum	Not Available
hydrocarbon propellant	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
naphtha petroleum, heavy, hydrotreated	Not Available
piperonyl butoxide	Not Available
pyrethrum	Not Available
hydrocarbon propellant	Not Available

SECTION 15 Regulatory information

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

<b>naphtha petroleum, heavy, hydrotreated is found on the following regulatory lists</b>
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australian Inventory of Industrial Chemicals (AIIC)
Chemical Footprint Project - Chemicals of High Concern List
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
<b>piperonyl butoxide is found on the following regulatory lists</b>
Australian Inventory of Industrial Chemicals (AIIC)
International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
<b>pyrethrum is found on the following regulatory lists</b>
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 2
Australia Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) - Schedule 5
Australian Inventory of Industrial Chemicals (AIIC)
<b>hydrocarbon propellant is found on the following regulatory lists</b>
Australia Hazardous Chemical Information System (HCIS) - Hazardous Chemicals
Australian Inventory of Industrial Chemicals (AIIC)
Chemical Footprint Project - Chemicals of High Concern List

Additional Regulatory Information

Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSSL	No (naphtha petroleum, heavy, hydrotreated; piperonyl butoxide; pyrethrum; hydrocarbon propellant)
China - IECSC	Yes
Europe - EINEC / ELINCS / NLP	Yes
Japan - ENCS	No (pyrethrum)
Korea - KECI	Yes
New Zealand - NZIoC	Yes
Philippines - PICCS	Yes
USA - TSCA	No (pyrethrum)
Taiwan - TCSI	Yes
Mexico - INSQ	Yes
Vietnam - NCI	Yes
Russia - FBEPH	Yes
<b>Legend:</b>	Yes = All CAS declared ingredients are on the inventory No = One or more of the CAS listed ingredients are not on the inventory. These ingredients may be exempt or will require registration.

SECTION 16 Other information

<b>Revision Date</b>	18/07/2023
<b>Initial Date</b>	10/08/2005

**SDS Version Summary**

Version	Date of Update	Sections Updated
7.1	10/12/2021	Classification change due to full database hazard calculation/update.
8.1	18/07/2023	Toxicological information - Acute Health (inhaled), Toxicological information - Acute Health (skin), Toxicological information - Acute Health (swallowed), Physical and chemical properties - Appearance, Hazards identification - Classification, Firefighting measures - Fire Fighter (fire/explosion hazard), First Aid measures - First Aid (swallowed), Composition / information on ingredients - Ingredients, Exposure controls / personal protection - Personal Protection (Respirator), Handling and storage - Storage (storage requirement), Handling and storage - Storage (suitable container), Identification of the substance / mixture and of the company / undertaking - Supplier Information, Toxicological information - Toxicity and Irritation (Toxicity Figure), Transport Information, Identification of the substance / mixture and of the company / undertaking - Use, Name

**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
- ▶ ES: Exposure Standard
- ▶ 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
- ▶ DNEL: Derived No-Effect Level
- ▶ PNEC: Predicted no-effect concentration
  
- ▶ AIIC: Australian Inventory of Industrial Chemicals
- ▶ DSL: Domestic Substances List
- ▶ NDSL: Non-Domestic Substances List
- ▶ IECSC: Inventory of Existing Chemical Substance in China
- ▶ EINECS: European INventory of Existing Commercial chemical Substances
- ▶ ELINCS: European List of Notified Chemical Substances
- ▶ NLP: No-Longer Polymers
- ▶ ENCS: Existing and New Chemical Substances Inventory
- ▶ KECI: Korea Existing Chemicals Inventory
- ▶ NZIoC: New Zealand Inventory of Chemicals
- ▶ PICCS: Philippine Inventory of Chemicals and Chemical Substances
- ▶ TSCA: Toxic Substances Control Act
- ▶ TCSI: Taiwan Chemical Substance Inventory
- ▶ INSQ: Inventario Nacional de Sustancias Químicas
- ▶ NCI: National Chemical Inventory
- ▶ FBEPH: Russian Register of Potentially Hazardous Chemical and Biological Substances

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