

Ecomist Insect Killer with Natural Pyrethrins Aerosol

Damar Industries Limited

Version No: 4.8
Safety Data Sheet according to the Health and Safety at Work (Hazardous Substances) Regulations 2017

Chemwatch Hazard Alert Code: 4

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S.GHS.NZL.EN

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

Product Identifier

Product name	Ecomist Insect Killer with Natural Pyrethrins Aerosol
Chemical Name	Not Applicable
Synonyms	CEA0300,CEA0301,CNIKNEZ614
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 Limited	Ecomist Systems Limited
Address	800 Te Ngae Road, Eastgate Business Park, Rotorua 3042, New Zealand	800 Te Ngae Road BOP New Zealand
Telephone	0800 33 4475	0800 75 75 78
Fax	+64 7 345 6019	073456019
Website	www.damarindustries.com	www.ecomist.co.nz
Email	info@damarindustries.co.nz	info@ecomist.co.nz

Emergency telephone number

Association / Organisation	CHEMCALL (0800 CHEMCALL)	CHEMCALL (0800 CHEMCALL)
Emergency telephone numbers	0800 243 622	0800 243 622
Other emergency telephone numbers	1800 127 406 (outside New Zealand)	Not Available

SECTION 2 Hazards identification

Classification of the substance or mixture

Classification [1]	Aerosols Category 1, Sensitisation (Skin) Category 1, Serious Eye Damage/Eye Irritation Category 2, Sensitisation (Respiratory) Category 1, Hazardous to the Aquatic Environment Long-Term Hazard Category 3
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, 6.4A, 6.5A (respiratory), 6.5B (contact), 9.1C

Label elements

Hazard pictogram(s)	
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Signal word	Danger
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Hazard statement(s)

H222+H229	Extremely flammable aerosol. Pressurized container: may burst if heated.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statement(s) Prevention

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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.
P261	Avoid breathing dust/fumes.

Precautionary statement(s) Response

P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342+P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor/physician/first aider.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Precautionary statement(s) Storage

P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.
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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>
8003-34-7	<1	<u>pyrethrum</u>
51-03-6	1-5	<u>piperonyl butoxide</u>
106-97-8.	10-30	<u>butane</u>
74-98-6	30-60	<u>propane</u>
Legend:	1. Classified by Chemwatch; 2. Classification drawn from CCID EPA NZ; 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">▶ 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	If solids or aerosol mists are deposited upon the skin: <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.▶ Generally not applicable.
Inhalation	If aerosols, fumes or combustion products are inhaled: <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.▶ Generally not applicable.
Ingestion	Not considered a normal route of entry. <ul style="list-style-type: none">▶ Generally not applicable.▶ 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

For petroleum distillates

- In case of ingestion, gastric lavage with activated charcoal can be used promptly to prevent absorption - decontamination (induced emesis or lavage) is controversial and should be considered on the merits of each individual case; of course the usual precautions of an endotracheal tube should be considered prior to lavage, to prevent aspiration.
- Individuals intoxicated by petroleum distillates should be hospitalized immediately, with acute and continuing attention to neurologic and cardiopulmonary function.
- Positive pressure ventilation may be necessary.
- Acute central nervous system signs and symptoms may result from large ingestions of aspiration-induced hypoxia.
- After the initial episode, individuals should be followed for changes in blood variables and the delayed appearance of pulmonary oedema and chemical pneumonitis. Such patients should be followed for several days or weeks for delayed effects, including bone marrow toxicity, hepatic and renal impairment. Individuals with chronic pulmonary disease will be more seriously impaired, and recovery from inhalation exposure may be complicated.
- Gastrointestinal symptoms are usually minor and pathological changes of the liver and kidneys are reported to be uncommon in acute intoxications.
- Chlorinated and non-chlorinated hydrocarbons may sensitize the heart to epinephrine and other circulating catecholamines so that arrhythmias may occur. Careful consideration of this potential adverse effect should precede administration of epinephrine or other cardiac stimulants and the selection of bronchodilators.

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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">▶ Alert Fire Brigade and tell them location and nature of hazard.▶ May be violently or explosively reactive.▶ Wear breathing apparatus plus protective gloves.▶ Prevent, by any means available, spillage from entering drains or water course. Slight hazard when exposed to heat, flame and oxidisers.
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. Combustion products include: , carbon monoxide (CO) Combustible. Will burn if ignited. , carbon dioxide (CO2) , other pyrolysis products typical of burning organic material. Contains low boiling substance: Closed containers may rupture due to pressure buildup under fire conditions. Articles and manufactured articles may constitute a fire hazard where polymers form their outer layers or where combustible packaging remains in place. Certain substances, found throughout their construction, may degrade or become volatile when heated to high temperatures. This may create a secondary hazard.

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">▶ 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

Safe handling	<p>The conductivity of this material may make it a static accumulator., A liquid is typically considered nonconductive if its conductivity is below 100 pS/m and is considered semi-conductive if its conductivity is below 10 000 pS/m., Whether a liquid is nonconductive or semi-conductive, the precautions are the same., A number of factors, for example liquid temperature, presence of contaminants, and anti-static additives can greatly influence the conductivity of a liquid.</p> <p>Radon and its radioactive decay products are hazardous if inhaled or ingested</p> <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.

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- ▶ No smoking, naked lights, heat or ignition sources.
- ▶ Keep containers securely sealed.
- ▶ Store away from incompatible materials.

Conditions for safe storage, including any incompatibilities

Suitable container	Generally packaging as originally supplied with the article or manufactured item is sufficient to protect against physical hazards. If repackaging is required ensure the article is intact and does not show signs of wear. As far as is practicably possible, reuse the original packaging or something providing a similar level of protection to both the article and the handler. <ul style="list-style-type: none">▶ Aerosol dispenser.▶ Check that containers are clearly labelled.
Storage incompatibility	Low molecular weight alkanes are a type of chemical compounds that can be found in gases or liquids. These alkanes: <ul style="list-style-type: none">▶ Can cause a dangerous reaction with strong oxidizers, chlorine, chlorine dioxide, and dioxygenyl tetrafluoroborate when there is oxygen and heat present.▶ Are incompatible with halogens.▶ Can create static charges due to their low conductivity, leading to an accumulation of static charge. Butane / isobutane: <ul style="list-style-type: none">▶ reacts violently with strong oxidisers, acetylene, halogens, and nitrous oxides▶ does not mix with chlorine dioxide, nitric acid and some plastics▶ may generate electrostatic charges, due to low conductivity, which may ignite vapours. Store butane well away from nickel carbonyl in the presence of oxygen between 20-40°C Propane: <ul style="list-style-type: none">▶ reacts violently with strong oxidisers, barium peroxide, chlorine dioxide, dichlorine oxide, fluorine etc.▶ Dissolves some plastics, rubbers, 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

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)	naphtha petroleum, heavy, hydrotreated	Oil mist, mineral	5 mg/m3	10 mg/m3	Not Available	(om) - Sampled by a method that does not collect vapour
New Zealand Workplace Exposure Standards (WES)	pyrethrum	Pyrethrum	5 mg/m3	Not Available	Not Available	(dsen) - Dermal sensitiser
New Zealand Workplace Exposure Standards (WES)	butane	Butane	800 ppm / 1900 mg/m3	Not Available	Not Available	Not Available
New Zealand Workplace Exposure Standards (WES)	propane	Propane	Not Available	Not Available	Not Available	(sax) - Simple asphyxiant - may present an explosion hazard

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
butane	Not Available	Not Available	Not Available
propane	Not Available	Not Available	Not Available

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

Exposure controls

Appropriate engineering controls	Articles or manufactured items, in their original condition, generally don't require engineering controls during handling or in normal use. Exceptions may arise following extensive use and subsequent wear, during recycling or disposal operations where substances, found in the article, may be released to the environment. Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection. The basic types of engineering controls are: Process controls which involve changing the way a job activity or process is done to reduce the risk. Enclosure and/or isolation of emission source which keeps a selected hazard "physically" away from the worker and ventilation that strategically "adds" and "removes" air in the work environment.
Individual protection measures, such as personal protective equipment	   
Eye and face protection	<ul style="list-style-type: none">▶ Safety glasses with side shields.▶ Chemical goggles. [AS/NZS 1337.1, EN166 or national equivalent]

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	<div><div>▶ 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.</div><div>▶ Close fitting gas tight goggles</div><div>DO NOT wear contact lenses.</div><div>▶ 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.</div><div>No special equipment required due to the physical form of the product.</div></div>
Skin protection	See Hand protection below
Hands/feet protection	<div><div>▶ No special equipment needed when handling small quantities.</div><div>▶ OTHERWISE:</div><div>▶ For potentially moderate exposures:</div><div>▶ Wear general protective gloves, eg. light weight rubber gloves.</div><div>▶ For potentially heavy exposures:</div><div>▶ Wear chemical protective gloves, eg. PVC. and safety footwear.</div><div>No special equipment required due to the physical form of the product.</div></div>
Body protection	See Other protection below
Other protection	<div><div>▶ 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.</div><div>▶ Avoid dangerous levels of charge by ensuring a low resistivity of the surface material worn outermost.</div><div>BREThERICK: Handbook of Reactive Chemical Hazards.</div><div>No special equipment needed when handling small quantities.</div><div>OTHERWISE:</div><div>▶ Overalls.</div><div>▶ Skin cleansing cream.</div><div>▶ Eyewash unit.</div><div>No special equipment required due to the physical form of the product.</div></div>

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 P2	-	AX-PAPR-AUS / Class 1 P2
up to 50 x ES	-	AX-AUS / Class 1 P2	-
up to 100 x ES	-	AX-2 P2	AX-PAPR-2 P2 ^

^ - 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)

Respiratory protection not normally required due to the physical form of the product.

▶ 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	Packed as liquid under pressure and remains liquid only under pressure. Sudden release of pressure or leakage may result in rapid vapourisation with generation of a large volume of highly flammable / explosive gas. Clear colourless flammable liquid with a mild odour; not miscible with water.		
Physical state	Article	Relative density (Water = 1)	0.58-0.62
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)	-1	Taste	Not Available
Evaporation rate	Not Available BuAC = 1	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	VOC g/L	Not Available
Heat of Combustion (kJ/g)	Not Available	Ignition Distance (cm)	Not Available
Flame Height (cm)	Not Available	Flame Duration (s)	Not Available

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Enclosed Space Ignition Time Equivalent (s/m3)	Not Available	Enclosed Space Ignition Deflagration Density (g/m3)	Not Available
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SECTION 10 Stability and reactivity

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. ▶ Presence of heat source ▶ Presence of an ignition source
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>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>Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepiness, reduced alertness, loss of reflexes, lack of co-ordination, and vertigo.</p> <p>Isobutane produces a dose dependent action and at high concentrations may cause numbness, suffocation, exhilaration, dizziness, headache, nausea, confusion, incoordination and unconsciousness in severe cases.</p> <p>The paraffin gases are practically not harmful at low doses. Higher doses may produce reversible brain and nerve depression and irritation. The vapour is discomforting</p> <p>WARNING: Intentional misuse by concentrating/inhaling contents may be lethal.</p> <p>Inhalation hazard is increased at higher temperatures.</p> <p>Inhaling high concentrations of mixed hydrocarbons can cause narcosis, with nausea, vomiting and lightheadedness. Low molecular weight (C2-C12) hydrocarbons can irritate mucous membranes and cause incoordination, giddiness, nausea, vertigo, confusion, headache, appetite loss, drowsiness, tremors and stupor.</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>Nerve damage can be caused by some non-ring hydrocarbons. Symptoms are temporary, and include weakness, tremors, increased saliva, some convulsions, excessive tears with discolouration and inco-ordination lasting up to 24 hours.</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>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>Exposure to the piperidines may result in increased blood pressure and heart rate, nausea, vomiting, salivation, laboured breathing, muscular weakness, paralysis and convulsions. It may also excite the senses of hearing and touch.</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>Isoparaffinic hydrocarbons cause temporary lethargy, weakness, inco-ordination and diarrhoea.</p> <p>Ingestion of petroleum hydrocarbons can irritate the pharynx, oesophagus, stomach and small intestine, and cause swellings and ulcers of the mucous. Symptoms include a burning mouth and throat; larger amounts can cause nausea and vomiting, narcosis, weakness, dizziness, slow and shallow breathing, abdominal swelling, unconsciousness and convulsions.</p>
Skin Contact	<p>Repeated exposure may cause skin cracking, flaking or drying following normal handling and use.</p> <p>Skin exposure to isoparaffins may produce slight to moderate irritation in animals and humans. Rare sensitisation reactions in humans have occurred.</p> <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> <p>The liquid may be able to be mixed with fats or oils and may degrease the skin, producing a skin reaction described as non-allergic contact dermatitis. The material is unlikely to produce an irritant dermatitis as described in EC Directives.</p> <p>The material may accentuate any pre-existing dermatitis condition</p>
Eye	<p>This material can cause eye irritation and damage in some persons.</p> <p>Instillation of isoparaffins into rabbit eyes produces only slight irritation.</p> <p>Not considered to be a risk because of the extreme volatility of the gas.</p> <p>Direct eye contact with petroleum hydrocarbons can be painful, and the corneal epithelium may be temporarily damaged. Aromatic species can cause irritation and excessive tear secretion.</p>
Chronic	<p>There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment.</p> <p>Prolonged or repeated skin contact may cause drying with cracking, irritation and possible dermatitis following.</p> <p>Constant or exposure over long periods to mixed hydrocarbons may produce stupor with dizziness, weakness and visual disturbance, weight loss and anaemia, and reduced liver and kidney function. Skin exposure may result in drying and cracking and redness of the skin.</p> <p>Main route of exposure to the gas in the workplace is by inhalation.</p> <p>Repeated application of mildly hydrotreated oils (principally paraffinic), to mouse skin, induced skin tumours; no tumours were induced with severely hydrotreated oils.</p> <p>Steam-cracked residues can increase the incidence of skin tumours.</p> <p>Long-term exposure to methylenedioxyphenols (piperonyls or piperonylbutoxide) in animals causes reduced platelets (blood cells responsible for blood clotting), weight increase to the liver and thyroid, and damage to the liver, thyroid and nerves. They are reported not to cause genetic damage but affects body immune system, internal regulation, reproduction and development. Animal testing suggests that they can cause gut ulcers and bleeding from the gut, abdominal swelling, bleeding from the nose, accumulation of fluid in the lung, laboured breathing and inco-ordination. A cancer-causing effect has been noted in animal studies but this is unproven in humans.</p>

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	Not Available	Not Available
naphtha petroleum, heavy, hydrotreated	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >1900 mg/kg ^[1]	Not Available
	Inhalation (Rat) LC50: >4.42 mg/L4h ^[1]	
	Oral (Rat) LD50: >4500 mg/kg ^[1]	
pyrethrum	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: 300 mg/kg ^[2]	Not Available
	Oral (Rat) LD50: 200 mg/kg ^[2]	
piperonyl butoxide	TOXICITY	IRRITATION
	Dermal (rabbit) LD50: >2000 mg/kg ^[1]	Not Available
	Inhalation (Rat) LC50: >5.2 mg/l4h ^[1]	
	Oral (Rat) LD50: >2000 mg/kg ^[1]	
butane	TOXICITY	IRRITATION
	Inhalation (Rat) LC50: 658 mg/l4h ^[2]	Not Available
propane	TOXICITY	IRRITATION
	Inhalation (Rat) LC50: 364726.819 ppm4h ^[2]	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

PYRETHRUM	ADI: 0.04 mg/kg/day Pyrethrins have low to moderate acute toxicity when swallowed, inhaled and on skin contact. They have a moderate irritant effect on the eye and skin (but do not sensitise the skin). The toxic effects of pyrethrin include tremors, laboured breathing, hyperactivity, thyroid disturbances, and liver effects. Animal testing has found that pyrethrins can cause tremors and convulsions before death and that pyrethrins are toxic to the axon. In testing involving animals, pyrethrins have been found to cause reproductive toxicity at sufficient doses, as well as benign liver tumours. There is not enough information to assess whether pyrethrins cause cancer in humans. There is evidence that pyrethrins are associated with disturbance of thyroid function.
PIPERONYL BUTOXIDE	Dermal (rabbit) LD50: >1880 mg/kg [Handbook of Toxicology] *Published value - probably not peer-reviewed ADI: 0.03 mg/kg 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.
Ecomist Insect Killer with Natural Pyrethrins Aerosol & NAPHTHA PETROLEUM, HEAVY, HYDROTREATED	Animal studies indicate that normal, branched and cyclic paraffins are absorbed from the 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. The major classes of hydrocarbons are well absorbed into the gastrointestinal tract in various species. In many cases, the hydrophobic hydrocarbons are ingested in association with fats in the diet. Some hydrocarbons may appear unchanged as in the lipoprotein particles in the gut lymph, but most hydrocarbons partly separate from fats and undergo metabolism in the gut cell. Petroleum contains aromatic (benzene, toluene, ethyl benzene, naphthalene) and aliphatic hydrocarbons (n-hexane), which can result in many detrimental health effects, including, cancer, tumour formation, hearing loss, and nervous system toxicity. Animal testing shows breathing in petroleum causes tumours of the liver and kidney; these are however not considered to be relevant in humans. Similarly, exposure to gasoline over a lifetime can cause kidney cancer in animals, but the relevance in humans is questionable. Most studies involving gasoline have shown that gasoline does not cause genetic mutation, including all recent studies in living human subjects (such as in petrol service station attendants). Animal studies show concentrations of toluene (>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. Prolonged contact with petroleum may result in skin inflammation and make the skin more sensitive to irritation and penetration by other materials.
PYRETHRUM & PROPANE	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

Ecomist Insect Killer with Natural Pyrethrins Aerosol	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available

Continued...

Ecomist Insect Killer with Natural Pyrethrins Aerosol

naphtha petroleum, heavy, hydrotreated	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	48h	Crustacea	>0.002mg/l	2
	EC50(ECx)	48h	Crustacea	>0.002mg/l	2
	EC50	96h	Algae or other aquatic plants	64mg/l	2
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
piperonyl butoxide	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50	72h	Algae or other aquatic plants	0.85mg/l	2
	EC50	48h	Crustacea	0.46-0.674mg/L	4
	LC50	96h	Fish	1-3.3mg/l	4
butane	Endpoint	Test Duration (hr)	Species	Value	Source
	EC50(ECx)	96h	Algae or other aquatic plants	7.71mg/l	2
	LC50	96h	Fish	24.11mg/l	2
	EC50	96h	Algae or other aquatic plants	7.71mg/l	2
propane	Endpoint	Test Duration (hr)	Species	Value	Source
	Not Available	Not Available	Not Available	Not Available	Not Available
Legend: <i>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</i>					

Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
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 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.
When released in the environment, alkanes don't undergo rapid biodegradation, because they have no functional groups (like hydroxyl or carbonyl) that are needed by most organisms in order to metabolize the compound.
However, some bacteria can metabolise some alkanes (especially those linear and short), by oxidizing the terminal carbon atom. The product is an alcohol, that could be next oxidised to an aldehyde, and finally to a carboxylic acid. The resulting fatty acid could be metabolised through the fatty acid degradation pathway.
For petroleum distillates:
Environmental fate:
When petroleum substances are released into the environment, four major fate processes will take place: dissolution in water, volatilization, biodegradation and adsorption. These processes will cause changes in the composition of these UVCB substances. In the case of spills on land or water surfaces, photodegradation-another fate process-can also be significant.
As noted previously, the solubility and vapour pressure of components within a mixture will differ from those of the component alone.
For Butane (Synonym: n-Butane): Log Kow: 2.89; Koc: 450-900; Henry s Law Constant: 0.95 atm-cu m/mole, Vapor Pressure: 1820 mm Hg; BCF: 1.9.
Atmospheric Fate: Butane is expected to exist only as a gas in the ambient atmosphere. Gas-phase n-butane is degraded in the atmosphere by reaction with hydroxyl radicals; the half-life for this reaction in air is estimated to be 6.3 days, (@ 25 C). Butane is not expected to absorb UV light and probably will probably not be broken down directly by sunlight in the atmosphere.
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
piperonyl butoxide	HIGH	HIGH
butane	LOW	LOW
propane	LOW	LOW

Bioaccumulative potential

Ingredient	Bioaccumulation
piperonyl butoxide	HIGH (LogKOW = 4.75)
butane	LOW (LogKOW = 2.89)
propane	LOW (LogKOW = 2.36)

Mobility in soil

Ingredient	Mobility
piperonyl butoxide	LOW (Log KOC = 69.74)
butane	LOW (Log KOC = 43.79)
propane	LOW (Log KOC = 23.74)

Ecomist Insect Killer with Natural Pyrethrins Aerosol

SECTION 13 Disposal considerations

Waste treatment methods

Product / Packaging disposal	<ul style="list-style-type: none"> ▶ Recycle wherever possible or consult manufacturer for recycling options. ▶ Consult State Land Waste Management Authority for disposal. ▶ DO NOT allow wash water from cleaning or process equipment to enter drains. ▶ It may be necessary to collect all wash water for treatment before disposal. ▶ In all cases disposal to sewer may be subject to local laws and regulations and these should be considered first. ▶ Where in doubt contact the responsible authority. ▶ Consult State Land Waste Management Authority for disposal. ▶ Discharge contents of damaged aerosol cans at an approved site. ▶ Allow small quantities to evaporate. ▶ DO NOT incinerate or puncture aerosol cans.
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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 it is no longer hazardous.

SECTION 14 Transport information

Labels Required

	
Marine Pollutant	NO
HAZCHEM	Not Applicable

Land transport (UN)

14.1. UN number or ID number	1950				
14.2. UN proper shipping name	AEROSOLS				
14.3. Transport hazard class(es)	<table> <tr> <td>Class</td><td>2.1</td></tr> <tr> <td>Subsidiary Hazard</td><td>Not Applicable</td></tr> </table>	Class	2.1	Subsidiary Hazard	Not Applicable
Class	2.1				
Subsidiary Hazard	Not Applicable				
14.4. Packing group	Not Applicable				
14.5. Environmental hazard	Not Applicable				
14.6. Special precautions for user	<table> <tr> <td>Special provisions</td><td>63; 190; 277; 327; 344; 381</td></tr> <tr> <td>Limited quantity</td><td>1000ml</td></tr> </table>	Special provisions	63; 190; 277; 327; 344; 381	Limited quantity	1000ml
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)	<table> <tr> <td>ICAO/IATA Class</td><td>2.1</td></tr> <tr> <td>ICAO / IATA Subsidiary Hazard</td><td>Not Applicable</td></tr> <tr> <td>ERG Code</td><td>10L</td></tr> </table>	ICAO/IATA Class	2.1	ICAO / IATA Subsidiary Hazard	Not Applicable	ERG Code	10L								
ICAO/IATA Class	2.1														
ICAO / IATA Subsidiary Hazard	Not Applicable														
ERG Code	10L														
14.4. Packing group	Not Applicable														
14.5. Environmental hazard	Not Applicable														
14.6. Special precautions for user	<table> <tr> <td>Special provisions</td><td>A145 A167 A802; A1 A145 A167 A802</td></tr> <tr> <td>Cargo Only Packing Instructions</td><td>203</td></tr> <tr> <td>Cargo Only Maximum Qty / Pack</td><td>150 kg</td></tr> <tr> <td>Passenger and Cargo Packing Instructions</td><td>203; Forbidden</td></tr> <tr> <td>Passenger and Cargo Maximum Qty / Pack</td><td>75 kg; Forbidden</td></tr> <tr> <td>Passenger and Cargo Limited Quantity Packing Instructions</td><td>Y203; Forbidden</td></tr> <tr> <td>Passenger and Cargo Limited Maximum Qty / Pack</td><td>30 kg G; Forbidden</td></tr> </table>	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
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)

14.1. UN number	1950
14.2. UN proper shipping name	AEROSOLS

Ecomist Insect Killer with Natural Pyrethrins Aerosol

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	Not Applicable	
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
pyrethrum	Not Available
piperonyl butoxide	Not Available
butane	Not Available
propane	Not Available

14.7.3. Transport in bulk in accordance with the IGC Code

Product name	Ship Type
naphtha petroleum, heavy, hydrotreated	Not Available
pyrethrum	Not Available
piperonyl butoxide	Not Available
butane	Not Available
propane	Not Available

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
HSR000352	Flammable aerosol containing 5.5 g/litre - 9 g/kg pyrethrins and 27.6 g/litre - 80 g/kg piperonyl butoxide

Please refer to Section 8 of the SDS for any applicable tolerable exposure limit or Section 12 for environmental exposure limit.

naphtha petroleum, heavy, hydrotreated is found on the following regulatory lists

- 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
- New Zealand Approved Hazardous Substances with controls
- New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
- New Zealand Inventory of Chemicals (NZIoC)
- New Zealand Land Transport Rule; Dangerous Goods 2005 - Schedule 2 Dangerous Goods in Limited Quantities and Consumer Commodities
- New Zealand Workplace Exposure Standards (WES)

pyrethrum is found on the following regulatory lists

- New Zealand Approved Hazardous Substances with controls
- New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
- New Zealand Inventory of Chemicals (NZIoC)
- New Zealand Workplace Exposure Standards (WES)

piperonyl butoxide is found on the following regulatory lists

- International Agency for Research on Cancer (IARC) - Agents Classified by the IARC Monographs - Not Classified as Carcinogenic
- New Zealand Approved Hazardous Substances with controls
- New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
- New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
- New Zealand Inventory of Chemicals (NZIoC)
- New Zealand Land Transport Rule: Dangerous Goods 2005 - Schedule 1 Quantity limits for dangerous goods

butane is found on the following regulatory lists

- Chemical Footprint Project - Chemicals of High Concern List
- New Zealand Approved Hazardous Substances with controls
- New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
- New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
- New Zealand Inventory of Chemicals (NZIoC)
- New Zealand Workplace Exposure Standards (WES)

propane is found on the following regulatory lists

- New Zealand Approved Hazardous Substances with controls

New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals
New Zealand Hazardous Substances and New Organisms (HSNO) Act - Classification of Chemicals - Classification Data
New Zealand Inventory of Chemicals (NZIoC)
New Zealand Workplace Exposure Standards (WES)

Additional Regulatory Information
Not Applicable

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

Hazard Class	Quantity (Closed Containers)	Quantity (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
Not Applicable	Not Applicable

Refer Group Standards for further information

Maximum quantities of certain hazardous substances permitted on passenger service vehicles
Subject to Regulation 13.14 of the Health and Safety at Work (Hazardous Substances) Regulations 2017.

Hazard Class	Gas (aggregate water capacity in mL)	Liquid (L)	Solid (kg)	Maximum quantity per package for each classification
6.5A or 6.5B	120	1	3	
2.1.2A				1L (aggregate water capacity)

Tracking Requirements
Not Applicable

National Inventory Status

National Inventory	Status
Australia - AIC / Australia Non-Industrial Use	Yes
Canada - DSL	Yes
Canada - NDSSL	No (naphtha petroleum, heavy, hydrotreated; pyrethrum; piperonyl butoxide; butane; propane)
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
Legend:	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

Revision Date	25/08/2023
Initial Date	20/05/2016

SDS Version Summary

Version	Date of Update	Sections Updated
3.8	24/08/2023	Hazards identification - Classification, Composition / information on ingredients - Ingredients

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

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- ▶ 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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