

## 1. Identification of Substance & Company

<b>Product</b>	
Product name	Pyrethrum
Product code	NA
HSNO approval	HSR000301
UN number	3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PYRETHRUM)
DG class	9
Packaging group	III
Hazchem code	3Z
Uses	insecticide
<b>Company Details</b>	
Company	<b>Amalgamated Hardware Merchants Ltd (AHM)</b>
Address	8 Hautu Drive, PO Box 97162 Wiri, Manukau Manukau, 2241 New Zealand New Zealand
Telephone	+64 9 2511310
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**Emergency Telephone Number: 0800 764 766**

## 2. Hazard Identification

### Approval

This product has been approved under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR000301) and is classified as follows:

Classes	Hazard Statements
3.1D	H227 - Combustible liquid.
6.1E (oral)	H303 - May be harmful if swallowed
6.3B	H316 - Causes mild skin irritation.
6.4A	H320 - Causes eye irritation.
6.5A	H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
6.5B	H317 - May cause an allergic skin reaction.
6.9B	H373 - May cause damage to organs through prolonged or repeated exposure
9.1A	H410 - Very toxic to aquatic life with long lasting effects.
9.4A	H441 - Very toxic to terrestrial invertebrates.

### SYMBOLS

**DANGER**



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### Other Classifications

There are no other Classifications that are known to apply.

### Precautionary Statements

- P103 - Read label before use.
- P102 - Keep out of reach of children.
- P210 - Keep away from flames and hot surfaces\*. No smoking.
- P264 - Wash hands thoroughly after handling.
- P280 - Wear protective gloves/protective clothing/eye protection/face protection.
- P285 - In case of inadequate ventilation wear respiratory protection.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P260 - Do not breathe vapours/spray.

P270 - Do not eat, drink or smoke when using this product."

P273 - Avoid release to the environment.

P308+P313 - IF exposed or concerned: Get medical advice/ attention.

P101 - If medical advice is needed, have product container or label at hand.

P312 - Call a POISON CENTRE or doctor/physician if you feel unwell.

P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P337+P313 - If eye irritation persists: Get medical advice/attention.

P304+P341 - IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.

P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

P302+P352 - IF ON SKIN: Wash with plenty of soap and water.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P363 - Wash contaminated clothing before reuse.

P391 - Collect spillage.

P403+P235 - Store in a well-ventilated place. Keep cool.

P405 - Store locked up

### 3. Composition / Information on Ingredients

Component	CAS/ Identification	Class for ingredient(s)	Conc (%)
Petroleum solvent	68442-69-3	6.4A,9.1B	>60%
Piperonyl butoxide	51-03-6	6.1E (oral), 6.3B, 6.4A, 9.1A (crustacean), 9.1B (fish)	7%
Pyrethrum 50%	8003-34-7	3.1D, 6.1D (oral), 6.1E (dermal), 6.1E (inhalation), 6.3B, 6.4A, 6.5A, 6.5B, 6.9B, 9.1A (All), 9.1A, 9.3B, 9.4A	>3%

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

### 4. First Aid

#### General Information

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

**Recommended first aid facilities** Ready access to running water is required. Accessible eyewash is required.

#### Exposure

**Swallowed** Do NOT induce vomiting. Give a glass of water to drink. Contact a doctor if you feel unwell.

**Eye contact** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Skin contact** IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**Inhaled** IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTRE or doctor/physician.

#### Advice to Doctor

Treat symptomatically

### 5. Firefighting Measures

**Fire and explosion hazards:** This product is combustible liquid, flashpoint >61°C. This product has the potential to cause fire or to create an additional hazard during fire  
Carbon dioxide, extinguishing powder, foam.

**Suitable extinguishing substances:**

**Unsuitable extinguishing substances:** Unknown.

<b>Products of combustion:</b>	Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.
<b>Protective equipment:</b>	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.
<b>Hazchem code:</b>	3Z

### 6. Accidental Release Measures

<b>Containment</b>	If greater than 100L is stored, secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to stormwater.
<b>Emergency procedures</b>	In the event of spillage alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Shut off all possible sources of ignition. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).
<b>Clean-up method</b>	Use absorbent (soil, sand or other inert material). Rags are not recommended for the clean-up of spills, as they may create fire or environmental hazard. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.
<b>Disposal</b>	Mop up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
<b>Precautions</b>	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation.

### 7. Storage & Handling

<b>Storage</b>	Avoid storage of harmful substances with food. Store out of reach of children. Containers should be kept closed in order to minimise contamination. Keep from extreme heat and open flames. Avoid contact with incompatible substances as listed in Section 10. Containers (and outer packaging) must bear the prescribed labelling, including the Hazchem code, UN number, flammability warning and name of contents.
<b>Handling</b>	Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements. Avoid skin and eye contact and inhalation of vapour, mist or aerosols.

### 8. Exposure Controls / Personal Protective Equipment

#### Workplace Exposure Standards

A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m<sup>3</sup> for respirable particulates and 10mg/m<sup>3</sup> for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds (2016)	Ingredient	WES-TWA*	WES-STEL*
	No ingredient listed		

\* These workplace exposure standards are also Prescribed Exposure Standards (PES) under the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016.

#### Engineering Controls

In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016.

#### Personal Protective Equipment

##### Eyes



Avoid contact with eyes. Use safety glasses and or chemical splash goggles if splashes are possible.

##### Skin

Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves. Rubber or nitrile gloves are recommended. Replace frequently. Gloves should be checked for tears or holes before use. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking. Wash hands after handling.

##### Respiratory

A respirator when airborne concentrations approach the WES (section 8). Use an organic vapour cartridge with a particulate filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order.

#### WES Additional Information

Not applicable

## 9. Physical & Chemical Properties

<b>Appearance</b>	clear yellow liquid
<b>Odour</b>	characteristic odour
<b>pH</b>	7
<b>Vapour pressure</b>	no data
<b>Viscosity</b>	no data
<b>Boiling point</b>	170°C
<b>Volatile materials</b>	No data
<b>Freezing / melting point</b>	no data
<b>Solubility</b>	Practically insoluble in water
<b>Partition coefficient</b>	Pyrethrum log <sub>10</sub> K <sub>ow</sub> = 5.90 at 20°C
<b>Specific gravity / density</b>	0.815 g/ml
<b>Flash point</b>	>61°C
<b>Danger of explosion</b>	not explosive
<b>Auto-ignition temperature</b>	no data
<b>Upper &amp; lower flammable limits</b>	no data
<b>Corrosiveness</b>	non corrosive

## 10. Stability & Reactivity

<b>Stability</b>	Stable
<b>Conditions to be avoided</b>	Flammable substance. Keep away from sources of ignition at all times. Containers should be kept closed in order to avoid contamination.
<b>Incompatible groups</b>	ENTER INCOMPATIBLES
<b>Substance Specific Incompatibility</b>	none known
<b>Hazardous decomposition products</b>	Thermal decomposition may release ammonia, carbon monoxide and carbon dioxide and oxides of nitrogen
<b>Hazardous reactions</b>	none known

## 11. Toxicological Information

### Summary

IF SWALLOWED: may be harmful,

IF IN EYES: may cause irritation.

IF ON SKIN: may cause irritation. Some sensitised individuals may experience allergic skin reactions. (Pyrethrum)

IF INHALED: some sensitised individuals may experience allergic reactions such as asthma.

CHRONIC TOXICITY: may cause organ damage from repeated oral exposure at high doses.

### Supporting Data

<b>Acute</b>	<b>Oral</b>	Using LD <sub>50</sub> 's for ingredients, the calculated LD <sub>50</sub> (oral, rat) for the mixture is >5,000 mg/kg. Data considered includes: Piperonyl butoxide 4570mg/kg (rat), Pyrethrum 50%
	<b>Dermal</b>	No evidence of dermal toxicity.
	<b>Inhaled</b>	No evidence of inhalation toxicity.
	<b>Eye</b>	The mixture is considered to be an eye irritant, because some of the ingredients present are considered eye irritants in more concentrated form.
<b>Chronic</b>	<b>Skin</b>	The mixture is considered to be a skin irritant, because some of the ingredients present are considered skin irritants in more concentrated form.
	<b>Sensitisation</b>	The mixture is considered to be a contact and respiratory sensitizer, because Pyrethrum ingredients present in greater than 0.1% is known to be a contact and respiratory sensitizer.
	<b>Mutagenicity</b>	No ingredient present at concentrations > 0.1% is considered a mutagen.
	<b>Carcinogenicity</b>	No ingredient present at concentrations > 0.1% is considered a carcinogen.
	<b>Reproductive / Developmental</b>	No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
	<b>Systemic</b>	The mixture is considered to be a suspected target organ toxicant, because at least one of the ingredients present in greater than 1% is suspected to be a target organ toxicant.
	<b>Aggravation of existing conditions</b>	None known.

## 12. Ecological Data

### Summary

This mixture is very toxic towards aquatic organisms and towards terrestrial invertebrates.

### Supporting Data

<b>Aquatic</b>	Using EC <sub>50</sub> 's for ingredients, the calculated EC <sub>50</sub> for the mixture is < 1 mg/L. Data considered includes: Petroleum solvent 2.3-390mg/L (48hr, Daphnia magna), NOEC: 0.0075mg/L (21 day, Daphnia magna), 52mg/L (6hr, Selenastrum capricornutum (algae)), not bioaccumulative, BCF: 35, <i>Not rapidly bdegradable</i> , Piperonyl butoxide 0.51mg/L (48hr, Daphnia magna), NOEL: 0.03mg/L (Daphnia magna), Bioaccumulative estimated BCF 1100, 1.8mg/L (96hr, Sheepshead minnow (Cyprinodon variegatus)), NOEL: 0.04mg/L (Fathead minnow (Pimephales promelas))
<b>Bioaccumulation</b>	No data for mixture.
<b>Degradability</b>	Not rapidly degradable.
<b>Soil</b>	EPA has not classified the mixture as ecotoxic in the soil environment.
<b>Terrestrial vertebrate</b>	EPA has not classified the mixture as ecotoxic to terrestrial vertebrates.
<b>Terrestrial invertebrate</b>	The mixture has been classified by EPA as very ecotoxic to terrestrial vertebrates.
<b>Biocidal</b>	no data
<b>Environmental effect levels</b>	No EELs are available for this mixture or ingredients

### 13. Disposal Considerations

<b>Restrictions</b>	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
<b>Disposal method</b>	Disposal of this product must comply with the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
<b>Contaminated packaging</b>	Rinse containers with water before disposal. Preferably re-cycle container, otherwise send to landfill or similar.

### 14. Transport Information

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

<b>UN number:</b>	3082	<b>Proper shipping name:</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (PYRETHRUM)
<b>Class(es)</b>	9	<b>Packing group:</b>	III
<b>Precautions:</b>	Ecotoxic.	<b>Hazchem code:</b>	3Z

### 15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR000301).

#### Specific Workplace Controls (as per HSNO approval referenced to Controls Matrix)

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Labelling	No removal of labels and/or decanting of product into other containers can occur.
Emergency plan	Required if > 100L is stored.
Approved handler	Required if any quantity is handled or stored.
Tracking	Not required.
Bunding & secondary containment	Required if > 100L is stored.
Signage	Required if > 100L is stored.
Location test certificate	Not required.
Flammable zone	Not required.
Fire extinguisher	Not required.
Additional controls	The substance must not be applied onto or into water.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

#### Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

All aspects of storage, handling use, disposal and record keeping must be in accordance with NZS 8409:2004 "Management of Agrichemicals".

ACVM number: P008207

## 16. Other Information

### Abbreviations

<b>Approval Code</b>	Approval HSR000301, Controls, EPA. <a href="http://www.epa.govt.nz">www.epa.govt.nz</a>
<b>CAS Number</b>	Unique Chemical Abstracts Service Registry Number
<b>Ceiling</b>	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
<b>EC<sub>50</sub></b>	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
<b>EPA</b>	Environmental Protection Authority (New Zealand)
<b>HAZCHEM Code</b>	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
<b>HSNO</b>	Hazardous Substances and New Organisms (Act and Regulations)
<b>IARC</b>	International Agency for Research on Cancer
<b>LEL</b>	Lower Explosive Limit
<b>LD<sub>50</sub></b>	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
<b>LC<sub>50</sub></b>	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
<b>MSDS (SDS)</b>	Material Safety Data Sheet (or Safety Data Sheet)
<b>PES</b>	Prescribed Exposure Standard means a WES or a biological exposure standard that is prescribed in a regulation, a safe work instrument or an approval under HSNO (including group standards).
<b>STEL</b>	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
<b>TWA</b>	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
<b>UEL</b>	Upper Explosive Limit
<b>UN Number</b>	United Nations Number
<b>WES</b>	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

### References

<b>Data</b>	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
<b>EPA Transfer Gazettes</b>	Classifications and controls assigned for specific ingredients (consolidated gazette, 2004)
<b>WES 2016</b>	The NZ Workplace Exposure Standards Effective from 2016, published by WorkSafe NZ and available on their web site – <a href="http://www.worksafe.govt.nz">www.worksafe.govt.nz</a> .
<b>WES 2002</b>	Workplace Exposure Standards published by the Occupational Safety and Health Service, Department of Labour, January 2002, ISBN 0-477-03660-0. These are the WES referred to under the Group Standard (HSNO approval) and may constitute a PES.
<b>Other References:</b>	Suppliers SDS

### Review

<b>Date</b>	<b>Reason for review</b>
February 2017	Not applicable – new SDS

### Disclaimer

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely HSNO classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email [info@datachem.co.nz](mailto:info@datachem.co.nz) or phone: +64 9 940 30 80.

