1. Identification of Substance & Company

Product

Product name	DERRIS DUST
Product code	NA
HSNO approval	HSR000194
UN number	3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Rotenone)
DG class	9
Packaging group	III
Hazchem code	2Z
Uses	insecticide

Company Details

Company	**Amalgamated Hardware Merchants Ltd (AHM)**	
Address	8 Hautu Drive, Wiri, Manukau, New Zealand	PO Box 97162 Manukau 2241 New Zealand
Telephone	+64 9 2511310	
Fax	+64 9 2511311	

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 HSR000194, Dustable powder containing 5.0 - 7.5 g/kg rotenone), and is classified as follows:

Classes	Hazard Statements
9.1A	H410 - Very toxic to aquatic life with long lasting effects.

SYMBOLS

WARNING

Other Classifications

There are no other classifications that are known to apply.

Precautionary Statements

P273 - Avoid release to the environment.
P391 - Collect spillage.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Class for ingredient(s)	Conc (%)
Rotenone	83-79-4	6.1B (dermal), 6.1C (oral), 6.3A , 6.4A, 6.9A (oral), 9.1A (fish), 9.1A (crustacean), 9.3B 9.4C	0.5%
ingredients not contributing to HSNO classes	mixture	Not available	balance

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. In case of persistent symptoms, contact a Doctor.

Eye contact If product gets in eyes, wash material from them with running water for several minutes. If symptoms persist, seek medical advice.

Skin contact This product is non-irritating to skin. No further measures should be required.

Inhaled Generally, inhalation of dust is unlikely to result in adverse health effects. If coughing, dizziness or shortness of breath is experienced, remove the patient to fresh air immediately. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor.

Advice to Doctor

Treat symptomatically

5. Firefighting Measures

Fire and explosion hazards: There are no specific risks for fire/explosion for this chemical. It is non-flammable.

Suitable extinguishing substances: Carbon dioxide, extinguishing powder, foam, fog sprays.

Unsuitable extinguishing substances: Unknown.

Products of combustion: 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.

Protective equipment: No special measures are required.

Hazchem code: 2Z

6. Accidental Release Measures

Containment If greater than 100kg 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.

Emergency procedures 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. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Contain using sand, earth or vermiculite. Do not use sawdust on concentrate. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).

Clean-up method 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.

Disposal 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.

Precautions Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation.

7. Storage & Handling

Storage 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.

Handling Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements.

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^3 for respirable particulates and 10mg/m^3 for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds (2016)	Ingredient	WES-TWA*	WES-STEL*
	Rotenone	data unavailable	data unavailable

* 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	Protective eyewear is not normally necessary when using this product. However, it always prudent to use protective eyewear if splashes are likely.
Skin	Protective gloves and clothing are not normally necessary. However, it is prudent to wear gloves when handling chemicals in bulk or for an extended period of time.
Respiratory	Respirator is not required under normal use. Ensure adequate natural ventilation. If product is being used in confined conditions, the use of a mask or respirator may be preferred.

WES Additional Information

Not applicable

9. Physical & Chemical Properties

Appearance	White to off-white powder.
Odour	characteristic odour
pH	no data
Vapour pressure	no data
Viscosity	no data
Boiling point	no data
Volatile materials	no data
Freezing / melting point	no data
Solubility	Insoluble in water
Specific gravity / density	no data
Flash point	not flammable
Danger of explosion	not explosive
Auto-ignition temperature	no data
Upper & lower flammable limits	no data
Corrosiveness	non corrosive

10. Stability & Reactivity

Stability	Stable
Conditions to be avoided	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.
Incompatible groups	Oxidising agents (e.g. hypochlorites, peroxides) and strong alkalis
Substance Specific Incompatibility	none known
Hazardous decomposition products	Toxic substances may be formed during thermal decomposition.
Hazardous reactions	none known

11. Toxicological Information

Summary

IF SWALLOWED: no known acute effect
IF IN EYES: dust may be irritating.
IF ON SKIN: no known effect.
IF INHALED: dust may be irritating
CHRONIC TOXICITY: Rotenone may cause liver and kidney damage at high doses and repeated exposure. (not classified by EPA as a target organ toxicant)

Supporting Data

Acute	**Oral**	Using LD_{50}'s for ingredients, the calculated LD_{50} (oral, rat) for the mixture is >5,000 mg/kg. Data considered includes: Rotenone 60 mg/kg (rat).
	Dermal	Using LD_{50}'s for ingredients, the calculated LD_{50} (dermal, rat) for the mixture is >5000 mg/kg. Data considered includes: Rotenone 100 mg/kg (rabbit).
	Inhaled	No evidence of acute inhalation toxicity.
	Eye	The mixture is not considered to be an eye irritant.
	Skin	The mixture is not considered to be a skin irritant.
Chronic	**Sensitisation**	No ingredient present at concentrations > 0.1% is considered a sensitizer.
	Mutagenicity	No ingredient present at concentrations > 0.1% is considered a mutagen.
	Carcinogenicity	No ingredient present at concentrations > 0.1% is considered a carcinogen.
	Reproductive / Developmental	No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
	Systemic	No ingredient present at concentrations > 1% is considered a target organ toxicant.
	Aggravation of existing conditions	None known.

12. Ecological Data

Summary

This mixture is considered very toxic towards aquatic organisms and is designed to be used as an insecticide.

Supporting Data

Aquatic	Using EC_{50}'s for ingredients, the calculated EC_{50} for the mixture is < 1 mg/L. Data considered includes: Rotenone 0.021 mg/l (96hr, Atlantic salmon), 0.0037 mg/l (48hr, Daphnia magna).
Bioaccumulation	Not bioaccumulative
Degradability	In soil, rotenone is readily degraded by hydrolysis and microbial action. Rotenone degradation is highly accelerated in alkaline salts. This compound will degrade rapidly when exposed to direct sunlight.
Soil	EPA has not classified the mixture as ecotoxic in the soil environment.
Terrestrial vertebrate	EPA has not classified the mixture as ecotoxic to terrestrial vertebrates. See acute toxicity.
Terrestrial invertebrate	EPA has not classified the mixture as ecotoxic to terrestrial invertebrates.
Biocidal	no data
Environmental effect levels	No EELs are available for this mixture or ingredients

13. Disposal Considerations

Restrictions	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
Disposal method	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.
Contaminated packaging	Rinse containers with water before disposal. Preferably re-cycle container, otherwise send to landfill or similar.

14. Transport Information

There are no specific restrictions for this product (not a dangerous good).

UN number:	3077	**Proper shipping name:**	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Rotenone)
Class(es)	9	**Packing group:**	III
Precautions:	Ecotoxic.	**Hazchem code:**	2Z

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR000194, Dustable powder containing 5.0 - 7.5 g/kg rotenone.

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 > not required.
Labelling	No removal of labels and/or decanting of product into other containers can occur.
Emergency plan	Required if >100kg is stored.
Approved handler	Not required.
Tracking	Not required.
Bunding & secondary containment	Required if >100kg is stored.
Signage	Required if >100kg 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: P009212

16. Other Information

Abbreviations

Approval Code	Approval HSR000194, Dustable powder containing 5.0 - 7.5 g/kg rotenone Controls, EPA. www.epa.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
Ceiling	Ceiling Exposure Value: The maximum airborne concentration of a biological or chemical agent to which a worker may be exposed at any time.
EC_{50}	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
EPA	Environmental Protection Authority (New Zealand)
HAZCHEM Code	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO	Hazardous Substances and New Organisms (Act and Regulations)
IARC	International Agency for Research on Cancer
LEL	Lower Explosive Limit
LD_{50}	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC_{50}	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
MSDS (SDS)	Material Safety Data Sheet (or Safety Data Sheet)
PES	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).
STEL	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
TWA	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
UEL	Upper Explosive Limit
UN Number	United Nations Number
WES	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

Data	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
EPA Transfer Gazettes	Classifications and controls assigned for specific ingredients (consolidated gazette, 2004)
WES 2016	The NZ Workplace Exposure Standards Effective from 2016, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz.
WES 2002	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.
Other References:	Suppliers SDS

Review

Date	**Reason for review**
February 2017	Not applicable – new SDS

Disclaimer