

## 1. Identification of Substance & Company

### Product

<b>Product name</b>	Cannon®
<b>ACVM</b>	ACVM approval: P007604
<b>HSNO approval</b>	HSR007654,
<b>Approval description</b>	TNL2165
<b>UN number</b>	2902
<b>Proper Shipping Name</b>	PESTICIDE LIQUID, TOXIC, N.O.S. (Chlorothalonil and Difenconazole)
<b>DG class</b>	6.1
<b>Packaging group</b>	II
<b>Hazchem code</b>	2X
<b>Uses</b>	Fungicide – A systemic and protectant fungicide for control of various diseases in potato, vegetable brassica and carrot seed crops. Use according to manufacturer's directions.

### Company Details

<b>Company:</b>	<b>Arxada NZ Limited</b>
<b>Address:</b>	13-15 Hudson Rd Bell Block New Plymouth New Zealand
<b>Telephone:</b>	+64 6 755 9234
<b>Fax:</b>	+64 6 755 1174
<b>Website:</b>	www.arxada.co.nz
<b>Email:</b>	office-newplymouth@arxada.com

**Emergency Telephone Number: 0800CHEMCALL (0800 243 622)**  
**International Emergency Phone: +64 4 917 9888**

## 2. Hazard Identification

### Approval

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR007654, TNL2165). The substance has been classified as hazardous according to the criteria in the Hazardous substances (Hazard Classification) Notice 2020.

### GHS Classes

Acute Toxicity cat 2 (inhalation)  
Eye Damage cat 1  
Skin sensitiser cat 1  
Carcinogen cat 2  
STOT RE cat 1  
Chronic aquatic cat 1  
Acute Aquatic cat 1  
Hazardous to soil organisms  
Hazardous to terrestrial vertebrates

### Hazard Statements

H330 - Fatal if inhaled.  
H318 - Causes serious eye damage.  
H317 - May cause an allergic skin reaction.  
H341 - Suspected of causing cancer.  
H372 - Causes damage to organs through prolonged or repeated exposure.  
H410 - Very toxic to aquatic life with long lasting effects.  
H400 - Very toxic to aquatic life.  
H422 - Toxic to the soil environment.  
H432 - Toxic to terrestrial vertebrates.

\*STOT – System Target Organ Toxicity

### SYMBOLS

# DANGER



### Other Classifications

There are no other classifications that are known to apply.

## Precautionary Statements

<b>Prevention</b>	<p>P102 - Keep out of reach of children.  P103 - Read label before use.  P201 - Obtain special instructions before use.  P202 - Do not handle until all safety precautions have been read and understood.  P260 - Do not breathe vapours.  P264 - Wash hands thoroughly after handling.  P270 - Do not eat, drink or smoke when using this product.  P271 - Use only outdoors or in a well-ventilated area.  P272 - Contaminated work clothing should not be allowed out of the workplace.  P273 - Avoid release to the environment.  P280 - Wear protective gloves/eye protection/face protection.  P284 - Wear respiratory protection.</p>
<b>Response</b>	<p>P101 - If medical advice is needed, have product container or label at hand.  P308+P313 - IF exposed or concerned: Get medical advice/ attention.  P304+P340 - IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  P310 - Immediately call a POISON CENTRE or doctor/physician.  P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  P310 - Immediately 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.</p>
<b>Storage</b>	<p>P403+P233 - Store in a well-ventilated place. Keep container tightly closed.  P405 - Store locked up.</p>
<b>Disposal</b>	<p>P501 - Dispose of contents/container in accordance with local/regional/national/international regulation.</p>

## 3. Composition / Information on Ingredients

Component	CAS/ Identification	Concentration
Difenoconazole	119446-68-3	62.5g/L
Chlorothalonil	1897-45-6	450g/L
ingredients not contributing to GHS classes	mixture	balance

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

## 4. First Aid

### General Information

Arxada NZ Limited has an emergency contact phone number: 0800 243 622, +64 4 917 9888

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 recommended. Accessible eyewash is recommended.

### Exposure

<b>Swallowed</b>	IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting. Give a glass of water to drink.
<b>Eye contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE or doctor/physician.
<b>Skin contact</b>	IF ON SKIN: Wash with plenty of soap and water. If skin irritation or rash occurs: Get medical advice/ attention. Take off contaminated clothing and wash before re-use.
<b>Inhaled</b>	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing - avoid becoming a casualty. Immediately call a POISON CENTRE or doctor/physician. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep victim at rest until fully recovered. If breathing is laboured and patient cyanotic (blue), ensure airways are clear and have a qualified person give oxygen through a face mask. If breathing has stopped, apply artificial respiration at once. In event of cardiac arrest, apply cardiopulmonary resuscitation (CPR) if trained.

## Advice to Doctor

Treat symptomatically, no specific antidotes known.

## 5. Firefighting Measures

<b>Fire and explosion hazards:</b>	There are no specific risks for fire/explosion for this chemical. It is non-flammable.
<b>Suitable extinguishing substances:</b>	Carbon dioxide, extinguishing powder, foam.
<b>Unsuitable extinguishing substances:</b>	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>	2X

## 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 storm water.
<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. Do not use sawdust. 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>	Store locked up. 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.
<b>Handling</b>	Use according to manufacturer's directions. Read the entire label before mixing or use. Records of use must be kept. 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	Ingredient	WES-TWA	WES-STEL
	No ingredient listed	NA	NA

### 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. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

## Personal Protective Equipment

### General

Personal Protective Equipment (PPE) should not be used as the primary means of exposure protection, except in the event of an accident or emergency situation or where all other means of protection have proven to inadequate.

Clean PPE after use or dispose of as appropriate. Store PPE for re-use in a clean place. Regular training on the correct use of PPE should be provided. In particular the correct fitting and use of respirators and where applicable the cleaning of respirators should be undertaken.

### Eyes



Protect eyes with goggles, safety glasses or full face mask. Avoid wearing contact lenses. Select eye protection in accordance with AS/NZS 1337.

### Skin



Avoid any skin contact. Wear overalls, rubber boots and impervious gloves. Protective gloves or suitably resistant material must comply with AS 2161. Replace frequently. Gloves should be checked for tears or holes before use. Protective clothing must comply with AS 2919, AS3765.1 or AS3765.2. PVC or rubber boots must comply with AS/NZS 2210.2 and selected and maintained in accordance with AS/NS2210.1. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking.

### Respiratory



A respirator when airborne concentrations approach the WES (section 8). Respirators must have filters appropriate to the duty and comply with AS/NZS1716 and selected, used and maintained in accordance with AS/NS 1715. Use a respirator with an organic vapour cartridge. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Fit testing and clear guidelines and training for use and maintenance of PPE are necessary.

## WES Additional Information

Not applicable

## 9. Physical & Chemical Properties

<b>Appearance</b>	white liquid
<b>Odour</b>	not specified
<b>pH</b>	6.0-8.0 (5%)
<b>Vapour pressure</b>	no data
<b>Viscosity</b>	no data
<b>Boiling point</b>	no data
<b>Volatile materials</b>	no data
<b>Freezing / melting point</b>	no data
<b>Solubility</b>	water dispersible
<b>Specific gravity / density</b>	1.24
<b>Flash point</b>	no data
<b>Danger of explosion</b>	no data
<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>	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.
<b>Incompatible groups</b>	None known
<b>Substance Specific Incompatibility</b>	None known
<b>Hazardous decomposition products</b>	Oxides of sulphur, carbon and nitrogen.
<b>Hazardous reactions</b>	None known

## 11. Toxicological Information

### Summary

IF SWALLOWED: low acute toxicity.

IF ON SKIN: sensitised individuals may experience an allergic skin reaction. May cause skin irritation (mild).

IF IN EYES: may cause eye damage.

IF INHALED: Chlorothalonil is very toxic by inhalation.

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

### Supporting Data

<b>Acute</b>	<b>Oral</b>	Using LD <sub>50</sub> 's for ingredients, the Acute Toxicity Estimate (ATE) (oral) for the mixture is >2000 mg/kg. Data considered includes: Difenoconazole: 1453mg/kg, Chlorothalonil >2000 mg/kg.
	<b>Dermal</b>	Using LD <sub>50</sub> 's for ingredients, the Acute Toxicity Estimate (ATE) (dermal) for the mixture is >2000 mg/kg. Data considered includes: Difenoconazole >2010mg/kg, Chlorothalonil >2000 mg/kg (rat).
	<b>Inhaled</b>	Using LD <sub>50</sub> 's for ingredients, the Acute Toxicity Estimate (ATE) (inhalation) for the mixture is >5mg/L/4h. Data considered includes: Difenoconazole: no data, Chlorothalonil 0.0925 mg/L.
	<b>Eye</b>	The mixture is considered to be corrosive to the eye, because some of the ingredients present at >3% are considered eye corrosives.
<b>Chronic</b>	<b>Skin Sensitisation</b>	The mixture is not considered to be a skin irritant.
	<b>Mutagenicity</b>	The mixture is considered to be a contact sensitizer, because at least one of the ingredients (Chlorothalonil) present in greater than 0.1% is known to be a contact sensitizer.
	<b>Carcinogenicity</b>	No ingredient present at concentrations > 0.1% is considered a mutagen.
	<b>Reproductive / Developmental Systemic</b>	The mixture is considered to be a suspected carcinogen, because at least one of the ingredients (Chlorothalonil) present in greater than 0.1% is suspected to be a carcinogen. No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
	<b>Aggravation of existing conditions</b>	The mixture is considered to be a known or presumed target organ toxicant, because at least one of the ingredients (Chlorothalonil) present in greater than 1% is known or presumed to be a target organ toxicant. This product may affect Not applicable.

## 12. Ecological Data

### Summary

Very toxic to aquatic organisms. Toxic to the soil environment. Toxic to terrestrial vertebrates. Avoid contamination of any water supply with this product or empty container.

### Supporting Data

<b>Aquatic</b>	Using EC <sub>50</sub> 's for ingredients, the calculated EC <sub>50</sub> for the mixture is > 100 mg/L. Data considered includes: <b>Difenoconazole:</b> LC <sub>50</sub> 0.001329 mg/l (Danio rerio (zebra fish), 96 h), EC <sub>50</sub> 0.77 mg/l (Daphnia magna (Water flea), 48h), <b>Chlorothalonil</b> 0.0076 mg/L (96hr, Oncorhynchus mykiss), 0.059 mg/l (48hr, Daphnia magna), 0.17 mg/l (72hr, green algae).
<b>Bioaccumulation</b>	No data
<b>Degradability</b>	No data
<b>Soil</b>	This mixture is hazardous to soil organisms.
<b>Terrestrial vertebrate</b>	This mixture is hazardous to terrestrial vertebrates (birds)
<b>Terrestrial invertebrate</b>	No evidence of toxicity towards terrestrial invertebrates.
<b>Biocidal</b>	no data

## 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 Hazardous Substances (Disposal) Notice 2017 and 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** Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging.

## 14. Transport Information

### Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

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

<b>UN number:</b>	2902	<b>Proper shipping name:</b>	PESTICIDE LIQUID, TOXIC, N.O.S. (Chlorothalonil and Difenconazole)
<b>Class(es)</b>	6.1	<b>Packing group:</b>	II
<b>Precautions:</b>	Toxic, marine pollutant	<b>Hazchem code:</b>	2X

## 15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR007654, TNL2165. All ingredients appear on the NZIoC.

### Specific Controls

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency plan	Required if > 100L is stored.
Certified handler	Required for all quantities
Tracking	Tracking required. Records of use must be kept.
Bunding & secondary containment	Required if > 100L is stored.
Signage	Required if > 100L is stored.
Location compliance certificate	Required if > 250L is stored.
Flammable zone	Not required.
Fire extinguisher	Not required.
Hazardous property control	Restricted to workplaces only.
Application rate	See label for details. The maximum application rate of this substance is 2 L/ha (0.9 kg chlorothalonil per hectare and 0.125 kg difenoconazole per hectare), three applications per season, with a 14 day interval between applications.

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.

ACVM approval: P007604

## 16. Other Information

### Abbreviations

<b>Approval Code</b>	Approval HSR007654, TNL2165 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>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>GHS</b>	Globally Harmonised System of Classification and Labelling of Chemicals, 7 <sup>th</sup> revised edition, 2017, published by the United Nations.

<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>NZIoC</b>	New Zealand Inventory of Chemicals
<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>STOT RE</b>	System Target Organ Toxicity – Repeated Exposure
<b>STOT SE</b>	System Target Organ Toxicity – Single Exposure
<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>Controls</b>	EPA notices, <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> , Health and Safety at Work (Hazardous Substances) Regulations 2017, <a href="http://www.legislation.govt.nz">www.legislation.govt.nz</a>
<b>WES</b>	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – <a href="http://www.worksafe.govt.nz">www.worksafe.govt.nz</a> .
<b>Other References:</b>	Suppliers SDS

## Review

<b>Date</b>	Reason for review
<b>June 2022</b>	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 GHS 7 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 21 1040951.

