

1. Identification of Substance & Company

Product

Product name	Stratos®
Product code	NA
ACVM	P008051
HSNO approval	HSR100088
Approval description	TNL 2644
UN number	3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Petroleum naphtha, heavy aromatic and Flamprop-M-isopropyl)
DG class	9
Packaging group	III
Hazchem code	3Z
Uses	Herbicide - For selective control of wild oats in wheat, barley and ryegrass seed crops

Company Details

Company:	Arxada NZ Limited
Address:	13-15 Hudson Rd Bell Block New Plymouth New Zealand
Telephone:	+64 6 755 9234
Fax:	+64 6 755 1174
Website:	www.arxada.co.nz
Email:	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 HSR100088, TNL 2644). The substance has been classified as hazardous according to the criteria in the Hazardous substances (Hazard Classification) Notice 2020.

GHS Classes

Flammable liquid cat 4
Aspiration hazard cat 1
Eye irritant cat 2
Chronic aquatic cat 2

Hazard Statements

H227 - Combustible liquid.
H304 - May be fatal if swallowed and enters airways.
H319 - Causes serious eye irritation.
H411: Toxic to aquatic life with long lasting effects.

SYMBOLS

DANGER



Other Classifications

There are no other classifications that are known to apply.

Precautionary Statements

Prevention	P101 - If medical advice is needed, have product container or label at hand. P102 - Keep out of reach of children. P103 - Read label before use. P210 - Keep away from flames and hot surfaces. No smoking.
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	P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves and eye/face protection. P273 - Avoid release to the environment.
Response	P301+P310 - IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. P331 - Do NOT induce vomiting. 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. P391 - Collect spillage.
Storage	P403+P235 - Store in a well-ventilated place. Keep cool. P405 - Store locked up.
Disposal	P501 - Dispose of contents/container in accordance with local/regional/national/international regulation.

3. Composition / Information on Ingredients

Component	CAS/ Identification	Concentration
Flamprop-M-isopropyl	57973-67-8	10-30%
Petroleum naphtha, heavy aromatic	64742-94-5	>60%
Calcium alkyl benzene sulphonate	proprietary	1-10%
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

Swallowed	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.
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 Inhaled	This product is non-irritating to skin. No further measures should be required. Generally, inhalation of fumes/vapours/dusts 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:	This product is a combustible liquid. This product has the potential to cause fire or to create an additional hazard during fire
Suitable extinguishing substances:	Carbon dioxide, extinguishing powder, foam.
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:	Self-contained breathing apparatus. Safety boots, non-flammable overalls, gloves, hat and eye protection.
Hazchem code:	3Z

6. Accidental Release Measures

Containment	If greater than 1000L 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.
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. 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).
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. Containers (and outer packaging) must bear the prescribed labelling, including the Hazchem code, UN number, ecotoxicity warning and name of contents. Store locked up.
Handling	Store in accordance with NZS 8409 Management of Agrichemicals. Read entire label before use. Shake well before use. 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/m³ for respirable particulates and 10mg/m³ for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds	Ingredient	WES-TWA	WES-STEL
	Xylene	50ppm, 217mg/m ³	data unavailable

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	Avoid contact with eyes. Use safety glasses and or chemical splash goggles if splashes are possible. Select eye protection in accordance with AS/NZS 1337.
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

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

Appearance	liquid
Odour	not specified
pH	3.5-5.0
Vapour pressure	no data
Viscosity	no data
Boiling point	no data
Volatile materials	no data
Freezing / melting point	no data
Solubility	product emulsifies in water
Specific gravity / density	no data
Flash point	>61°C
Danger of explosion	no data
Auto-ignition temperature	no data
Upper & lower flammable limits	no data
Corrosiveness	no data

10. Stability & Reactivity

Stability	Stable
Conditions to be avoided	Flammable substance. Keep away from sources of ignition at all times. Containers should be kept closed in order to avoid contamination.
Incompatible groups	Strong oxidisers
Substance Specific Incompatibility	none known
Hazardous decomposition products	Thermal decomposition products include toxic oxides of carbon.
Hazardous reactions	none known

11. Toxicological Information

Summary

IF SWALLOWED: may cause aspiration into the lungs which may cause chemical pneumonitis (coughing, difficulty breathing and cyanosis). Ingestion may also cause irritation of the gastrointestinal tract, with nausea and vomiting.

IF IN EYES: direct contact may cause eye irritation.

IF ON SKIN: prolonged or repeated exposure may cause skin irritation, dryness and defatting of the skin.

IF INHALED: high vapour concentration may cause dizziness and drowsiness.

Supporting Data

Acute	Oral	Using LD ₅₀ 's for ingredients, the Acute Toxicity Estimate (ATE) (oral) for the mixture is >2,000 mg/kg. Data considered includes: flamprop-M-isopropyl >4000mg/kg (rat), Petroleum naphtha, heavy aromatic: low acute toxicity, aspiration hazard, Calcium alkyl benzene sulphonate 1086 to 1980 mg/kg bw (rat).
	Dermal	Using LD ₅₀ 's for ingredients, the Acute Toxicity Estimate (ATE) (dermal) for the mixture is >2,000 mg/kg. Data considered includes: flamprop-M-isopropyl >1600mg/kg (rat).
	Inhaled	Using LD ₅₀ 's for ingredients, the Acute Toxicity Estimate (ATE) (inhalation) for the mixture is >5mg/L/4h.
	Eye	The mixture is considered to be an eye irritant.
	Skin	The mixture is not considered to be a skin irritant. Petroleum naphtha may dry out skin.

Chronic	Sensitisation Mutagenicity Carcinogenicity Reproductive / Developmental Systemic Aggravation of existing conditions	No ingredient present at concentrations > 0.1% is considered a sensitizer. No ingredient present at concentrations > 0.1% is considered a mutagen. No ingredient present at concentrations > 0.1% is considered a carcinogen. No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation. No ingredient present at concentrations > 1% is considered a target organ toxicant. None known.
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12. Ecological Data

Summary

This mixture is considered to be toxic towards aquatic organisms with long lasting effects. Avoid contamination of any water supply with this product or empty container. This mixture is a selective herbicide and is toxic to some plant species (certain plants may be killed or damaged from root uptake of this product).

Supporting Data

Aquatic	Using EC ₅₀ 's for ingredients, the calculated EC ₅₀ for the mixture is between 1 and 10 mg/L. Data considered includes: flamprop-M-isopropyl no data, Petroleum naphtha, heavy aromatic 9.1B class.
Bioaccumulation	No data
Degradability	No data
Soil	EPA has not classified the mixture as ecotoxic to the soil environment.
Terrestrial vertebrate	EPA has not classified the mixture as hazardous to terrestrial vertebrates including birds. Using LD ₅₀ 's for ingredients, the calculated LD ₅₀ (oral, rat) for the mixture is >5,000 mg/kg.
Terrestrial invertebrate	EPA has not classified the mixture as ecotoxic to terrestrial invertebrates.
Biocidal	Herbicide

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 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. Triple rinse empty container placing rinse water in the spray tank. If recycling, discard cap and deliver clean container to an Agrecovery depot or crush and bury in an approved landfill.

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.

UN number:	3082	Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S (Petroleum naphtha, heavy aromatic and Flamprop-M-isopropyl)
Class(es)	9	Packing group:	III
Precautions:	Marine Pollutant	Hazchem code:	3Z

15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR100088, TNL 2644. All ingredients appear on the New Zealand Inventory of Chemicals 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 > 1000L is stored.
Certified handler	Persons mixing, loading, applying, or otherwise handling this product must meet qualification requirements as set out in the current EPA Hazardous Substances (Hazardous Property Controls) Notice.
Record keeping	Records of use must be kept in accordance with the current Health and Safety at Work (Hazardous Substances) Regulations.
Bunding & secondary containment	Required if > 1000L is stored.
Signage	Required if > 1000L is stored.
Location compliance certificate	Not required.
Flammable zone	Not required.
Fire extinguisher	If > 500L present.
Additional controls	This substance must be applied using ground based methods only.

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: P008051

16. Other Information

Abbreviations

Approval Code	Approval HSR100088, TNL 2644 Controls, EPA. www.epa.govt.nz
CAS Number	Unique Chemical Abstracts Service Registry Number
EC₅₀	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)
GHS	Globally Harmonised System of Classification and Labelling of Chemicals, 7 th revised edition, 2017, published by the United Nations.
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
LD₅₀	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
LC₅₀	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
NZIoC	New Zealand Inventory of Chemicals
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
STOT RE	System Target Organ Toxicity – Repeated Exposure
STOT SE	System Target Organ Toxicity – Single Exposure
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).
Controls EPA notices, www.epa.govt.nz, Health and Safety at Work (Hazardous Substances) Regulations 2017, www.legislation.govt.nz
WES The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – www.worksafe.govt.nz.
Other References: Suppliers SDS

Review

Date Reason for review
 March 2022 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 or phone: **+64 21 1040951**.

