

## 1. Identification

### 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<br>(Petroleum naphtha, heavy aromatic and Flamprop-M-isopropyl) |
| DG class             | 9                                                                                                                  |
| Packing group        | III                                                                                                                |
| Hazchem code         | 3Z                                                                                                                 |
| Uses                 | Herbicide - For selective control of wild oats in wheat, barley and ryegrass seed crops                            |

### Company Details

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

**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  
Carcinogen category 2  
Chronic aquatic cat 2

### Hazard Statements

H227 - Combustible liquid.  
H304 - May be fatal if swallowed and enters airways.  
H319 - Causes serious eye irritation.  
H351 - Suspected of causing cancer.  
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

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Prevention</b> | <p>P101 - If medical advice is needed, have product container or label at hand.</p> <p>P102 - Keep out of reach of children.</p> <p>P103 - Read label before use.</p> <p>P201 - Obtain special instructions before use.</p> <p>P202 - Do not handle until all safety precautions have been read and understood.</p> <p>P210 - Keep away from flames and hot surfaces. No smoking.</p> <p>P264 - Wash hands thoroughly after handling.</p> <p>P280 - Wear protective gloves and eye/face protection.</p> <p>P273 - Avoid release to the environment.</p> |
| <b>Response</b>   | <p>P308+P313 - IF exposed or concerned: Get medical advice/ attention.</p> <p>P301+P310 - IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.</p> <p>P331 - Do NOT induce vomiting.</p> <p>P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337+P313 - If eye irritation persists: Get medical advice/attention.</p> <p>P391 - Collect spillage.</p>                                                                           |
| <b>Storage</b>    | <p>P403+P235 - Store in a well-ventilated place. Keep cool.</p> <p>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 |
|-------------------------------------------------------------------------------|-----------------------|---------------|
| Flamprop-M-isopropyl                                                          | 57973-67-8            | 10-30%        |
| Solvent naphtha (petroleum), heavy arom.<br>May include:<br>Naphthalene (<1%) | 64742-94-5<br>91-20-3 | >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

|                     |                                                                                                                                                                                                                                                                                                                      |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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. If eye irritation persists: Get medical advice/attention.                                                                                                                           |
| <b>Skin contact</b> | This product is non-irritating to skin. No further measures should be required.                                                                                                                                                                                                                                      |
| <b>Inhaled</b>      | 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

|                                             |                                                                                                                                                                                                                         |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Fire and explosion hazards:</b>          | This product is a combustible liquid. This product has the potential to cause fire or to create an additional hazard during fire                                                                                        |
| <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>                        | 3Z                                                                                                                                                                                                                      |

## 6. Accidental Release Measures

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Containment</b>          | 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.                                                                                                                                                                                                                                                                                                                                            |
| <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. Handling and Storage

|                 |                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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, ecotoxicity warning and name of contents. Store locked up. |
| <b>Handling</b> | 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/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                                 |
|----------------------------|-------------|---------------------------------------------|------------------------------------------|
|                            | Xylene      | 50ppm, 217mg/m <sup>3</sup>                 | data unavailable                         |
|                            | Naphthalene | 0.5ppm, 2.6mg/m <sup>3</sup> (carc 2, skin) | 2ppm, 10mg/m <sup>3</sup> (carc 2, skin) |

### 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               |
| Odour Threshold                | no data                     |
| pH                             | 3.5-5.0                     |
| Freezing/melting point         | no data                     |
| Boiling Point                  | no data                     |
| Flashpoint                     | >61°C                       |
| Flammability                   | no data                     |
| Upper & lower flammable limits | no data                     |
| Vapour pressure                | no data                     |
| Vapour density                 | no data                     |
| Specific gravity/density       | no data                     |
| Solubility                     | product emulsifies in water |
| Partition coefficient          | no data                     |
| Auto-ignition temperature      | no data                     |
| Decomposition temperature      | no data                     |
| Viscosity                      | no data                     |
| Particle Characteristics       | 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

|                |                                           |                                                                                                                                                                                                                                                                                                                               |
|----------------|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Acute</b>   | <b>Oral</b>                               | Using LD <sub>50</sub> '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). |
|                | <b>Dermal</b>                             | Using LD <sub>50</sub> '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).                                                                                                                                       |
| <b>Chronic</b> | <b>Inhaled</b>                            | Using LD <sub>50</sub> 's for ingredients, the Acute Toxicity Estimate (ATE) (inhalation) for the mixture is >5mg/L/4h.                                                                                                                                                                                                       |
|                | <b>Eye</b>                                | The mixture is considered to be an eye irritant.                                                                                                                                                                                                                                                                              |
|                | <b>Skin</b>                               | The mixture is not considered to be a skin irritant. Petroleum naphtha may dry out skin.                                                                                                                                                                                                                                      |
|                | <b>Sensitisation</b>                      | No ingredient present at concentrations > 0.1% is considered a sensitizer.                                                                                                                                                                                                                                                    |
|                | <b>Mutagenicity</b>                       | No ingredient present at concentrations > 0.1% is considered a mutagen.                                                                                                                                                                                                                                                       |
|                | <b>Carcinogenicity</b>                    | The mixture is considered to be a suspected carcinogen, because at least one of the ingredients(traces of naphthalene in solvent naphtha (petroleum) heavy aromatic) present in greater than 0.1% is suspected to be 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>                           | No ingredient present at concentrations > 1% is considered a target organ toxicant.                                                                                                                                                                                                                                           |
|                | <b>Aggravation of existing conditions</b> | None known.                                                                                                                                                                                                                                                                                                                   |

## 12. Ecological Information

### 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

|                                 |                                                                                                                                                                                                                            |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Aquatic</b>                  | Using EC <sub>50</sub> 's for ingredients, the calculated EC <sub>50</sub> 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. |
| <b>Bioaccumulation</b>          | No data                                                                                                                                                                                                                    |
| <b>Degradability</b>            | No data                                                                                                                                                                                                                    |
| <b>Soil</b>                     | EPA has not classified the mixture as ecotoxic to the soil environment.                                                                                                                                                    |
| <b>Terrestrial vertebrate</b>   | EPA has not classified the mixture as hazardous to terrestrial vertebrates including birds. Using LD <sub>50</sub> 's for ingredients, the calculated LD <sub>50</sub> (oral, rat) for the mixture is >5,000 mg/kg.        |
| <b>Terrestrial invertebrate</b> | EPA has not classified the mixture as ecotoxic to terrestrial invertebrates.                                                                                                                                               |
| <b>Biocidal</b>                 | Herbicide                                                                                                                                                                                                                  |

## 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. |
| <b>Contaminated packaging</b> | 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 5433:2020:

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<br>(Petroleum naphtha, heavy aromatic and Flamprop-M-isopropyl) |
| <b>Class(es)</b>    | 9                | <b>Packing group:</b>        | III                                                                                                                |
| <b>Precautions:</b> | Marine Pollutant | <b>Hazchem code:</b>         | 3Z                                                                                                                 |

### IMDG

|                     |                  |                              |                                                                                                                    |
|---------------------|------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>UN number:</b>   | 3082             | <b>Proper shipping name:</b> | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S<br>(Petroleum naphtha, heavy aromatic and Flamprop-M-isopropyl) |
| <b>Class(es)</b>    | 9                | <b>Packing group:</b>        | III                                                                                                                |
| <b>Precautions:</b> | Marine Pollutant | <b>EMS Code</b>              | F-A, S-F                                                                                                           |

### IATA

|                     |                  |                              |                                                                                                                    |
|---------------------|------------------|------------------------------|--------------------------------------------------------------------------------------------------------------------|
| <b>UN number:</b>   | 3082             | <b>Proper shipping name:</b> | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S<br>(Petroleum naphtha, heavy aromatic and Flamprop-M-isopropyl) |
| <b>Class(es)</b>    | 9                | <b>Packing group:</b>        | III                                                                                                                |
| <b>Precautions:</b> | Marine Pollutant | <b>ERG code:</b>             | 9L                                                                                                                 |

## 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

|                        |                                                                                                                                                                                                                                                                                                                                    |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Approval Code</b>   | Approval HSR100088, TNL 2644 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        |
| March 2022     | Not applicable - New SDS |
| September 2026 | Review formulation       |

### 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.

