

| | | |
|--------------------|---------------------------|--------------------|
| Infosafe No™ 3NUCM | Issue Date : January 2023 | ISSUED by NUFARMNZ |
|--------------------|---------------------------|--------------------|

 Product Name **RETAIN®**

1. Identification

| | |
|--|--|
| GHS Product Identifier | RETAIN® |
| Product Code | 04527 |
| Product Type | Plant Growth Regulator |
| Company Name | Nufarm NZ |
| Address | Central Park, Building 3, Level 4, 666 Great South Road Ellerslie Auckland 1051 New Zealand |
| Telephone/Fax Number | Tel: 0-9-270 4150 |
| Emergency phone number | 0800 651 911 |
| E-mail Address | info@nufarm.com |
| Recommended use of the chemical and restrictions on use | A naturally occurring plant growth regulator for apples and stonefruit (except cherries) which can improve harvest management, fruit quality and enhance storage potential. |
| Other Information | This SDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe. |

2. Hazard Identification

| | |
|--|--|
| GHS classification of the substance/mixture | DANGEROUS GOODS. |
| Other Information | 6.9A target organ toxicant, 9.1A aquatic toxicant, 9.3C terrestrial vertebrate toxicant, TOXICITY Harmful - may cause organ damage from repeated oral exposure at high doses. ECOTOXIC Very toxic to aquatic organisms. Harmful to terrestrial vertebrates. |

3. Composition/information on ingredients

| Ingredients | Name | CAS | Proportion |
|-------------|---|------------|------------|
| | Aminoethoxyvinylglycine (AVG) hydrochloride | 55720-26-8 | 150 g/kg |
| | Ingredients determined to be non-hazardous | - | Balance |

4. First-aid measures

| | |
|---------------------------|---|
| First Aid Measures | For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth-to-nose rather than mouth-to-mouth. Obtain medical attention. |
| Inhalation | Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately. |
| Ingestion | Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre (0800 764 766). Seek medical assistance immediately. |
| Skin | Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. If a large area is affected seek medical assistance. |
| Eye contact | Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Seek medical assistance. Remove contact lenses, if present and easy to do. |

| | | |
|--------------------|---------------------------|--------------------|
| Infosafe No™ 3NUCM | Issue Date : January 2023 | ISSUED by NUFARMNZ |
|--------------------|---------------------------|--------------------|

 Product Name **RETAIN®**

First Aid Facilities Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Advice to Doctor Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media Choose extinguishing media to suit the burning material.
Water fog, foam, carbon dioxide or dry chemical.

Special Protective Equipment for fire fighters Full protective clothing and self-contained breathing apparatus.

Specific Methods Keep up wind. Do not allow washings to reach sewage or effluent systems.

Hazchem Code 2X

Other Information Location Certificate: Not applicable
Hazardous Atmosphere Zone: Not applicable
Number of Fire Extinguishers: Not applicable

6. Accidental release measures

Spills & Disposal Wear protective clothing. Clear area of unprotected personnel. Sweep up solids without generating dust (use water to dampen). Contain and absorb liquid spills with inert material and place in waste containers. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill.

Personal Protection For appropriate personal protective equipment (PPE), refer Section 8.

Environmental Precautions Prevent from entering drains, waterways or sewers.

7. Handling and storage

Precautions for Safe Handling Avoid breathing spray mist.
APPROVED HANDLER: This product must be under the control of an approved handler when used by a commercial contractor.
TRACKING: Is not required
RECORD KEEPING: Records of use as described in the NZS 8409 Management of Agrichemicals must be kept.
Do not apply onto or into water.

Conditions for safe storage, including any incompatibilities Keep out of reach of children.
Store in original container tightly closed and in a locked, dry, cool area away from foodstuffs. Storage must be in accordance with NZS 8409 Management of Agrichemicals.

Stores containing 100kg of RETAIN PLANT GROWTH REGULATOR are subject to signage, and more than 100kg require emergency response plans.

Other Information Always read the label and any attached leaflet before use.

Aggregate Storage Volume Thresholds:
When stored with substances of the same hazard classification the aggregate quantity must be considered. For full details refer to the current NZS8409 Management of Agrichemicals and the HSNO Regulations.

8. Exposure controls/personal protection

Occupational exposure limit values No exposure limits (WES, TEL or EEL's) have been specifically assigned for this product.

Appropriate engineering controls Handle in well ventilated areas, generally natural ventilation is adequate.

Personal Protective Equipment When opening the container, preparing spray and using the prepared spray wear safety goggles, waterproof gloves, cotton overalls buttoned to the neck and wrist, and boots.

Hygiene Measures Do not eat, drink or smoke while using.
Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash protective clothing daily after work.

9. Physical and chemical properties

| | | |
|--------------------|---------------------------|--------------------|
| Infosafe No™ 3NUCM | Issue Date : January 2023 | ISSUED by NUFARMNZ |
|--------------------|---------------------------|--------------------|

 Product Name **RETAIN®**

| | |
|----------------------------------|--------------------------------------|
| Form | Solid |
| Appearance | Off-white to pale yellow fine powder |
| Odour | Odourless |
| Solubility in Water | Soluble |
| pH | 5.6 in 10% aqueous solution |
| Density | Bulk density = 0.78g/cm ³ |
| Flammability | Non flammable. |
| Auto-Ignition Temperature | >400°C |
| Other Information | (SP) Water Soluble Powder |

10. Stability and reactivity

| | |
|---------------------------------|---|
| Chemical Stability | Stable under normal conditions of handling and storage. |
| Hazardous Polymerization | Not known to occur. |

11. Toxicological Information

| | |
|------------------------------------|--|
| Acute Toxicity - Oral | LD50 (rat) >7,000mg/kg |
| Acute Toxicity - Dermal | LD50 (rabbit) >5,000mg/kg |
| Acute Toxicity - Inhalation | LC50 (4h) (rat) 5.16mg/L. Nose only exposure at maximum attainable concentration. |
| Inhalation | Available information suggests respiratory changes from prolonged inhalation and may aggravate pre-existing respiratory ailments. |
| Skin | Produced slight redness in several animals at site of application. Effects disappeared within 24 hours after treatment. Not classified as a skin irritant. |
| Eye | Slight, transient conjunctival irritation was observed in all rabbits. All effects disappeared within 72 hours after treatment. Not classified as an eye irritant. |
| Skin Sensitisation | Not a skin sensitizer in guinea pigs. |
| Carcinogenicity | No evidence of carcinogenicity or genotoxicity. |
| Subchronic/Chronic Toxicity | Target organ - liver, kidney, testes. |

12. Ecological information

| | |
|---|--|
| Basis for Assessment | Ecotoxicological data have not been determined specifically for this product. Data below is for the active ingredient unless otherwise stated. |
| Acute Toxicity - Fish | LC50 (96h) trout >139mg/L for aminoethoxyvinylglycine hydrochloride |
| Acute Toxicity - Daphnia | EC50 (48h) = >135mg/L for aminoethoxyvinylglycine hydrochloride |
| Acute Toxicity - Algae | Highly toxic to both algae and duckweed for aminoethoxyvinylglycine hydrochloride |
| Acute Toxicity - Other Organisms | Oral LD50 northern bobwhite quail = 121mg/kg for aminoethoxyvinylglycine hydrochloride Dietary LC50 (5 days) northern bobwhite quail 230 ppm for aminoethoxyvinylglycine hydrochloride LD50 (48h) honeybees = >100µg/bee for aminoethoxyvinylglycine hydrochloride LC50 earthworm = >1,000ppm |

13. Disposal considerations

| | |
|-------------------------|--|
| Product Disposal | Dispose of product only by using according to the label, or at an approved landfill. |
|-------------------------|--|

| | | |
|--------------------|---------------------------|--------------------|
| Infosafe No™ 3NUCM | Issue Date : January 2023 | ISSUED by NUFARMNZ |
|--------------------|---------------------------|--------------------|

 Product Name **RETAIN®**

Container Disposal Ensure container is completely empty. Burn in an appropriate incinerator if circumstances, such as wind direction, permit. Otherwise crush and bury in an appropriate landfill.

14. Transport information

Transport Information It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.

U.N. Number 3077

UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. - (aminoethoxyvinylglycine hydrochloride, 15%)

Transport hazard class(es) 9

Hazchem Code 2X

Packaging Method -

Packing Group III

EPG Number -

IERG Number 47

IMO Marine Pollutant Yes. Environmentally Hazardous Substance mark required.

IMDG EMS F-A, S-F

Other Information Segregation: Check the latest Land Transport Rule Dangerous Goods Rule 45001 for additional information. Sea transport may require additional segregation. Refer NZS5433 sea segregation for details.

15. Regulatory information

National and or International Regulatory Information Registered pursuant to the ACVM Act 1997, No. P4890
See www.foodsafety.govt.nz for registration conditions
Approved pursuant to the HSNO Act 1996, Approval Code HSR000763
See www.epa.govt.nz for approval controls.

Packaging & Labelling ECOTOXIC

Hazard Rating Systems NFPA/HMIS: 1-1-0

16. Other Information

Date of preparation or last revision of SDS Jan 2018

Contact Person/Point IN AN EMERGENCY, DIAL 111 - FIRE OR POLICE
24Hr Tollfree Emergency No: 0800 651 911
24Hr Emergency No: National Poisons Centre Phone: 0800 764 766

Revisions Highlighted 5 yearly review carried out.

...End Of MSDS...

© Copyright Chemical Safety International Pty Ltd

Copyright in the source code of the HTML, PDF, XML, XFO and any other electronic files rendered by an Infosafe system for Infosafe MSDS displayed is the intellectual property of Chemical Safety International Pty Ltd.

Copyright in the layout, presentation and appearance of each Infosafe MSDS displayed is the intellectual property of Chemical Safety International Pty Ltd. The compilation of MSDS's displayed is the intellectual property of Chemical Safety International Pty Ltd.

Copying of any MSDS displayed is permitted for personal use only and otherwise is not permitted. In particular the MSDS's displayed cannot be copied for the purpose of sale or licence or for inclusion as part of a collection of MSDS without the express written consent of Chemical Safety International Pty Ltd.