

Infosafe No™ 3NUCM	Issue Date : January 2018	APPROVED by NUFARMNZ
--------------------	---------------------------	----------------------

 Product Name **RETAIN®**

1. Identification

GHS Product Identifier	RETAIN®
Product Code	04527
Product Type	Plant Growth Regulator
Company Name	Nufarm NZ
Address	6 Manu Street, Otahuhu Auckland 2024 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150 Fax: 0-9-270 4159
Emergency phone number	0800 651 911
Email	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

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

Chemical Characterization	Solid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	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.
First Aid Facilities	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.
Advice to Doctor	Treat symptomatically.

Infosafe No™ 3NUCM	Issue Date : January 2018	APPROVED by NUFARMNZ
--------------------	---------------------------	----------------------

Product Name **RETAIN®**

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

Form	Solid
Appearance	Off-white to pale yellow fine powder
Odour	Odourless
Solubility in Water	Soluble

Infosafe No™ 3NUCM	Issue Date : January 2018	APPROVED by NUFARMNZ
--------------------	---------------------------	----------------------

 Product Name **RETAIN®**

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.
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

Infosafe No™ 3NUCM	Issue Date : January 2018	APPROVED by NUFARMNZ
--------------------	---------------------------	----------------------

Product Name **RETAIN®**

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 HSN0 Act 1996, Approval Code HSR000763 See www.epa.govt.nz for approval controls.
Packaging & Labelling	ECOTOXIC
Hazard Rating Systems	NFPA/HMIS: 1-1-0
Hazard Category	ECOTOXIC

16. Other Information

Date of preparation or last revision of SDS	February 2013
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 5 yearly review carried out. Minor updates made to the document.
Revisions Highlighted	...End Of MSDS...

© Copyright ACOHS 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 Acohs Pty Ltd.

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