

**ReTain Plant Growth Regulator For CA Soluble Powder**

SDS# VBC-0066 Revision 2

ISSUED 01/16/2020

[Classification according to OSHA; 29 CFR § 1910.1200, (3/12/2012)]

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY****1.1 Product Identifier****MATERIAL NAME:** ReTain Plant Growth Regulator For CA Soluble Powder**Synonyms:** N/A**EPA Reg No.:** 73049-58**Code Number:** 54870**List Number:** 12017-04-03**Chemical Family:** Plant Growth Regulator**1.2 Relevant Identified Uses and Uses Advised Against****Identified Uses:** Plant growth regulator**1.3 Details of the supplier of the Safety Data Sheet****Supplied By:** Valent BioSciences LLC  
1910 Innovation Way, Suite 100  
Libertyville, Illinois 60048**1.4 EMERGENCY TELEPHONE NUMBERS****Emergency Health or Spill:**

Outside the United States: 651-632-6184

Within the United States: 877-315-9819

**2. HAZARDS IDENTIFICATION****2.1 Classification of the Substance or Mixture**

Specific Target Organ Toxicity Repeat Dose - Category 2

Reproductive toxin - Category 1B

Hazardous to the aquatic environment, Acute Category 1

**2.2 Labeling Elements****Symbol(s)**

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**Signal Word**

DANGER

**Hazard Statement(s)**

May damage the unborn child (route of exposure is oral)

Causes damage to the liver through prolonged or repeated exposure (route of exposure is oral)

Harmful to aquatic life (algae)

**2.3 Precautionary Statement:****Prevention**

Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood

Do not breathe dust

Wear dust mask when handling

Wash hands and face thoroughly after handling

Do not eat, drink, or smoke when using this product

Contaminated work clothing should not be allowed out of the workplace.

Wear protective clothing/eye protection/gloves

Avoid release to the environment

**Response**

If exposed or concerned: Get medical attention

If you feel unwell: Get medical advice/attention

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.

**Storage & Disposal**

Store locked up

Dispose of contents/container in accordance with local/regional/national regulations.

**Safety**

Avoid contact with eyes

Avoid ingestion

**2.4 Other Hazards**

None identified.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

CAS #	Component Name	Percent
55720-26-8	Aminoethoxyvinylglycine Hydrochloride (AVG) (86%)	17.5
Trade Secret	Other ingredients	82.5

**4. FIRST AID MEASURES****4.1 Description of First Aid Measures**

**GENERAL:** In all cases of doubt, seek medical attention.

**EYES:** Remove from source of exposure. Flush with copious amounts of water. Remove contact lenses, if present and easy to do, after the first 5 minutes, then continue rinsing. If irritation persists or signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

**SKIN:** Remove from source of exposure. Take off contaminated clothing. Flush with copious amounts of water. If irritation occurs or signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary.

**INGESTION:** Remove from source of exposure. Move person to fresh air. Do NOT induce vomiting. If signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.

**INHALATION:** Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. If person is not breathing, call 911, then give artificial respiration.

**4.2 Most important Symptoms and Effects, both Acute and Delayed****Acute**

None

**Delayed**

No information on significant adverse effects

**4.3 Indication of any Immediate Medical Attention and Special Treatment Needed**

Treat symptomatically and supportively

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**5. FIRE FIGHTING PROCEDURES****5.1 Extinguisher Media****Suitable Extinguisher Media**

Dry chemical, water spray, foam or carbon dioxide. Use appropriate medium for the underlying cause of the fire.

**Unsuitable Extinguisher Media**

None known

**5.2 Specific Hazards Arising from the Chemical****Thermal decomposition products**

Hydrochloric acid (HCl), Carbon oxides, and nitrogen oxides

**5.3 Advice to Firefighters****Protective Equipment and precautions for firefighters**

Fire fighter should wear full-face, self-contained breathing apparatus and protective clothing. Fire fighters should avoid inhaling combustion products. See Section 8 (Exposure Controls / Personal Protection)

**Fire & Explosive hazard**

Not expected to be flammable.

**6. ACCIDENTAL RELEASE MEASURES****6.1 Personal Precautions, Protective Equipment and Emergency Procedures**

Use in a well-ventilated area. For respiratory protection wear a dust mask. Wear eye protection appropriate to handling activities. Wear gloves. See personal protection as recommended in Section 8.

**6.2 Environmental Precautions**

Keep out of drains, sewers, ditches and waterways. Avoid runoff to waterways and sewers.

**6.3 Methods and Materials for Containment and Cleaning Up**

Ventilate area. Wear appropriate personal protective equipment. Recover product and place into appropriate container for disposal. Do not flush to sewer.

**6.4 Reference to Other Sections**

See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations. See Section 13 for Disposal Considerations.

US Regulations may require reporting spills of hazardous materials: See Section 15: REGULATORY INFORMATION for details on reportable quantities, if any.

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**7. HANDLING AND STORAGE****7.1 Precautions for Safe handling**

Use in a well-ventilated area. For respiratory protection wear a dust mask. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Do not eat, drink, chew gum or smoke while working with product, obey reasonable safety precautions and practice good housekeeping.

**7.2 Conditions for Safe Storage, Including Incompatibilities**

Store in a cool, dry place.

**Incompatibilities**

None Known

**7.3 Specific End Use(s)**

Plant growth regulator for apples, pears and other stone fruit.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION****8.1 Control Parameters****Component Exposure Limits**

None

**Derived No Effect Levels (DNELs)**

No DNELs available

**Predicted No Effect Concentrations (PNECs)**

No PNECs available

**8.2 Exposure Controls****Appropriate Engineering Controls**

Provide general ventilation. Where adequate general ventilation is unavailable use local exhaust ventilation, or other engineering controls.

**SKIN PROTECTION:**

Wear protective clothing, including boots and gloves. Wear a dust mask. Wash thoroughly with soap and water after handling.

**EYE PROTECTION:**

Wear goggles, safety glasses with side shields or full-face shield when splashing or spraying of materials is likely.

**RESPIRATORY PROTECTION:**

Where respiratory protection is warranted, use dust/mist filtering respirator (MSHA/NIOSH approved number prefix TC-21C or a NIOSH approved respirator with any N, P, R or HE filter.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance:	Grey to White powder	Odor:	Not Determined
pH:	6.4 (0.1% sol'n)	Boiling Point:	Not Applicable
Melting Point:		Solubility (H <sub>2</sub> O):	Not Determined
Specific Gravity:	Not Determined	Bulk Density:	Not Determined
Octanol/H <sub>2</sub> O Coeff:	Not Determined	Evaporation Rate:	Not Determined
Molecular Weight:	Not Applicable	Decomposition Temp.:	Not Determined
Auto Ignition:	204 °C	LFL:	Not Determined
Flash Point:	Not Determined	UFL:	Not Determined
Vapor Density:	Not Determined	Vapor Pressure:	Not Determined
VOC:	Not Determined	Flammability Class:	Not flammable
Kinematic Viscosity:	Not Determined		

**10. CHEMICAL STABILITY AND REACTIVITY**

**10.1 Reactivity**

Material does not pose a significant reactivity hazard.

**10.2 Chemical Stability**

Stable under ordinary conditions of use and storage. Spontaneous reaction not possible.

**10.3 Possibility of Hazardous Reactions**

Does not undergo hazardous polymerization

**10.4 Conditions to Avoid**

None known

**10.5 Incompatible Materials**

None known

**10.6 Hazardous Decomposition Products**

Hydrochloric acid (HCl), carbon oxides and unidentified organic compounds.

**11. TOXICOLOGICAL INFORMATION**

**11.1 Information on Toxicological Effects**

**LIKELY ROUTES OF EXPOSURE**

Eye Contact:	Yes
Skin Contact:	Yes
Inhalation:	Yes
Ingestion:	Unlikely

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## ACUTE EFFECTS Product Toxicology Studies

ORAL TOXICITY: LD<sub>50</sub> > 7000 mg/kgDERMAL TOXICITY: LD<sub>50</sub> > 5,000 mg/kgINHALATION TOXICITY: LC<sub>50</sub> > 5.16 mg/L

CORROSIVENESS: Not corrosive.

DERMAL IRRITATION: Not an irritant

OCULAR IRRITATION: Minimally irritating (Not categorized)

DERMAL SENSITIZATION: Not a skin sensitizer

MUTAGENICITY INFORMATION: Negative. No evidence of genotoxic potential indicated following a battery of in vivo and in vitro mutagenicity tests.

CARCINOGENICITY INFORMATION: Not likely to be carcinogenic to Humans at dose levels that do not cause enzyme induction or cell proliferation.

DEVELOPMENTAL/REPRODUCTIVE TOXICITY: In long-term studies, decreased weight and histopathological changes in the testes were observed in rats.

SPECIAL TARGET ORGAN EFFECTS: None.

ASPIRATION HAZARD: Not Applicable

REPEAT DOSE STUDIES: In repeat dose oral studies transient liver, kidney, testes, and immune-suppression effects were observed. These reversible effects were only observed at high doses that produced general toxicity in the animals.

**12. ECOLOGICAL INFORMATION****12.1 Ecotoxicity**

Fish: LC<sub>50</sub> >139 mg/L (96-H, Rainbow Trout)

LC<sub>50</sub> >100 mg/L (96-H, Bluegill)

Bird: LC<sub>50</sub> >121 mg /kg (Acute Oral - Bobwhite)

LC<sub>50</sub> >230 ppm (Dietary - Bobwhite)

LC<sub>50</sub> >459 ppm (Dietary - Mallard)

Invertebrates: EC<sub>50</sub> >135 (48-H) (Daphnia)TGAI

EC<sub>50</sub> >11.98 mg/L (48-H) (Daphnia)ReTain

Bees: LD<sub>50</sub> >100 (48-H) (Oral and Contact)

**12.2 Persistence and Degradability**

No data available

**12.3 Bioaccumulation potential**

No data available

**12.4 Mobility in Soil**

No data available

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**12.5 Results of PBT and vPvB assessment**

Assessments not performed

**12.6 Other adverse effects**

None known

**13. DISPOSAL CONSIDERATIONS****13.1 Waste Disposal Methods**

Dispose of product in accordance with federal, state, provincial, and local regulations. Prevent contamination of environment by wastes.

**14. TRANSPORTATION INFORMATION**

DOT STATUS: Not regulated for domestic ground transport by US DOT  
UN PROPER SHIPPING NAME: N/A  
REMARKS: N/A

IATA/ICAO STATUS: Regulated  
PROPER SHIPPING NAME: UN3077 Environmentally Hazardous Substance, Solid, N.O.S.  
(Aminoethoxyvinylglycine), 9, III, Marine Pollutant  
REMARKS: Single or inner packaging less 5 kg net (solids) excepted from  
Dangerous Goods regulations – see IATA Special Provision A197

IMDG STATUS: Regulated  
PROPER SHIPPING NAME: UN3077 Environmentally Hazardous Substance, Solid, N.O.S.  
(Aminoethoxyvinylglycine), 9, III, Marine Pollutant  
REMARKS: Single or inner packaging less 5 kg net (solids) excepted from  
Dangerous Goods regulations – see IMDG 2.10.2.7

**15. REGULATORY INFORMATION****15.1 Safety, Health and Environmental Regulations / Specific Legislation**

TSCA STATUS: Exempt  
CERCLA STATUS: N/D  
SARA STATUS: Acute: No Chronic: No Fire: No CDT: No  
RCRA STATUS: N/D  
State Right-To-Know: Not Listed

Consult applicable national, state provincial or local laws to determine regulations, laws or ordinances which may be applicable.



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OSHA HAZARD COMMUNICATION STANDARD: Not defined by the OSHA Hazard Communication Standard, 29 CFR

**15.2 EPA Pesticide Regulations**

EPA Registration Number: 73049-58

EPA Pesticide Label signal word: CAUTION

Product must have EPA Approved Pesticide Label attached to or accompanying all containers.

This chemical is a pesticide product registered by the United States Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets (SDS), and for workplace labels of non-pesticide chemicals. The hazard information required on the pesticide label is reproduced below. The pesticide label also includes other important information, including directions and limitations for its use.

**KEEP OUT OF REACH OF CHILDREN  
CAUTION****PRECAUTIONARY STATEMENTS  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS****CAUTION**

Harmful if inhaled or absorbed through skin. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

**Environmental Hazards**

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate. This product is moderately toxic to avian species and exposure to birds must be avoided.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the State/Tribal agency responsible for pesticide regulation.

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**STORAGE AND DISPOSAL**

Do not contaminate water, food, or feed by storage or disposal.

**Pesticide Storage:** Store product in a cool and dry place. Avoid extended storage conditions at temperatures above 25° C (77° F).**Pesticide Disposal:** Wastes resulting from the use of this product may be disposed of on-site or at an approved waste disposal facility.**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Completely empty container into applicable equipment. If recycling is not available dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.**16. OTHER INFORMATION****NFPA Hazard Ratings**Health: N/D  
Flammability: N/D  
Instability: N/D**HMIS Hazard Ratings**Health: N/D  
Flammability: N/D  
Instability: N/D0 = Minimal  
1 = Slight  
2 = Moderate  
3 = Serious  
4 = Extreme

REASON FOR ISSUE: Address Change

APPROVAL DATE: 01/16/2020

SUPERSEDES DATE: 03/08/2019

LEGEND: N/A = Not Applicable

N/L = Not Listed

C = Ceiling

(R) = Registered Trademark of Valent BioSciences LLC

(TM) = Registered Trademark of Valent BioSciences LLC

N/D = Not Determined

L = Listed

S = Short-term

The information provided in this Safety Data Sheet (SDS) is provided in good faith and believed to be accurate at the time of preparation of the SDS. However, to the extent consistent with applicable law, Valent BioSciences LLC and its subsidiaries or affiliates extend no warranties, make no representations, and assume no responsibility as to the accuracy, suitability, or completeness of such information. Additionally, to the extent consistent with applicable law, neither Valent BioSciences LLC nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be

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used without infringing the intellectual property rights of others. Except to the extent a particular use and particular information are expressly stated on the product label, it is the users' own responsibility to determine the suitability of this information for their own particular use of this product. If necessary, contact Valent BioSciences LLC to confirm that you have the most current product label and SDS.

This Safety Data Sheet (SDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABEL (attached to and accompanying the product container). This SDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use as required by the Occupational Health and Safety Act (29 CFR 1910.1200, "Hazcom"). The product label provides information specifically for product use in the ordinary course. Use, storage and disposal of pesticide products is regulated by the EPA under the authority of FIFRA through the product label. All necessary hazard classification and appropriate precautionary use, storage, and disposal information is set forth on that label or labeling accompanying the pesticide or to which reference is made on the label. It is a violation of federal law to use an EPA-registered pesticide product in any manner inconsistent with its labeling.