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PROLIANT Plant Growth Regulator, Water Soluble Granule

SDS# VBC-0104 Revision 1

ISSUED 03/20/17

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

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY

1.1 Product Identifier

MATERIAL NAME: PROLIANT Plant Growth Regulator, Water Soluble Granule

Synonyms: None

Fertilizers Act Reg #: 2015077A

Code Number: None

Chemical Family: Gibberellin, naturally occurring plant growth regulators

1.2 Relevant Identified Uses and Uses Advised Against

Identified Uses: Pesticide (Plant Growth Regulator)

Uses Advised Against: None

1.3 Details of the supplier of the Safety Data Sheet

Supplied By: Valent BioSciences Corporation

870 Technology Way Libertyville, Illinois 60048

Canadian Agent: Valent Canada, Inc.

3-728 Victoria Road South Guelph, Ontario N1L1C6

1.4 EMERGENCY TELEPHONE NUMBERS

Emergency Health or Spill:

Outside the United States: (01) 651-632-6184

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture

Eye Irritation, Category 2B

2.2 Labeling Elements

Symbol(s)

None

Signal Word

WARNING

Hazard Statement(s)

Causes eye irritation



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Precautionary Statement:

Prevention

Wash hands and face thoroughly after handling

Response

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.

Disposal

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

2.3 Other Hazards

None identified.

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS#	Active Ingredients - Name	Percent
77-06-5	Gibberellic Acid (GA3)	40%

CAS#	Other Ingredients	Percent
Trade Secret	Other ingredients	60%

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 persists 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. Give large quantities of water. If signs of toxicity occur, seek medical attention. Provide symptomatic /supportive care as necessary.



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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, and then give artificial respiration.

4.2 Most important Symptoms and Effects, both Acute and Delayed

Acute

Eye irritation

Delayed

No information on significant adverse effects

4.3 Indication of any Immediate Medical Attention and Special Treatment Needed

Treat symptomatically and supportively

5. FIRE FIGHTING PROCEDURES

5.1 Extinguisher Media

Suitable Extinguisher Media

Dry chemical, water spray, foam or carbon dioxide.

Unsuitable Extinguisher Media

None known

5.2 Specific Hazards Arising from the Chemical

None known

Thermal decomposition products

Carbon oxides, nitrogen oxides

5.3 Advice to Firefighters

Protective Equipment and precautions for firefighters

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

Fire & Explosive hazard

Formulated product is not expected to be flammable.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Where exposure level is known, wear respirator suitable for level of exposure. Where exposure



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level is not known, wear approved, positive pressure, self-contained respirator. In addition to the 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. Do not discharge effluent containing this product into natural bodies of water.

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.

7. HANDLING AND STORAGE

7.1 Precautions for Safe handling

Ventilate. Avoid breathing dust. Avoid contact with eyes, skin or clothing. Wash thoroughly after handling. Do not eat, drink or smoke while working with product. Obey reasonable safety precautions and practice good housekeeping. For filling operations respiratory protection may be recommended particularly in enclosed areas.

7.2 Conditions for Safe Storage, Including Incompatibilities

Protect against physical damage. Close containers of unused material. Store in a dry, cool place.

Incompatibilities

None Known

7.3 Specific End Use(s)

Pesticide, Plant Growth Regulator.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control Parameters

Component Exposure Limits

None established.

Derived No Effect Levels (DNELs)

No DNELs available



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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 process enclosure, local exhaust ventilation, or other engineering controls to control dust.

SKIN PROTECTION:

Wear impervious protective clothing, including boots and gloves. Wear gloves made of impervious materials. Wash thoroughly with soap and water after handling.

EYE PROTECTION:

Wear goggles or safety glasses with side shields when handling.

RESPIRATORY PROTECTION:

For filling operations if dust is produced respiratory protection is recommended. 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).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Color:	White granules	Odor:	Odorless
pH:	2.9 (1% solution)	Odor Threshold:	Not determined
Density:	0.53 g/ mL	Upper/lower flammability or	Not determined
		explosive limits:	
Vapor pressure:	Not determined	Vapor density:	Not determined
Melting point/freezing point:	Not determined	Solubility:	Not determined
Initial boiling point and boiling	Not determined	Flash point:	Not determined
range:			
Evaporation rate:	Not determined	Flammability (solid, gas):	Not determined
Partition coefficient; n-	Not determined	Auto-ignition temperature:	Material does not self-ignite
octanol/water:			below 400 °C
Decomposition temperature:	Not determined	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.



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10.3 Possibility of Hazardous Reactions

Does not undergo hazardous polymerization

10.4 Conditions to Avoid

None known.

10.5 Incompatible Materials

None

10.6 Hazardous Decomposition Products

Carbon oxides and unidentified organic compounds.

11. TOXICOLOGICAL INFORMATION

11.1 Information on Toxicological Effects

Likely Routes of Exposure

Inhalation: Yes
Eye Contact: Yes
Skin Contact: Yes
Ingestion: No

Product (or TGAI, as noted) Toxicology

Acute Effects

Oral Toxicity: $LD_{50} > 5,000 \text{ mg/kg bw (rat)}$

Dermal Toxicity: $LD_{50} > 5,000 \text{ mg/kg bw (rat) [Limit Test]}$ Inhalation Toxicity: $LC_{50} > 2.269 \text{ mg/L air (rat) [Limit Test]}$

Corrosiveness: Not corrosive.

Dermal Irritation: Slightly irritating. All dermal irritation cleared within 48 hrs (rabbit)
Ocular Irritation: Mildly irritating. All ocular irritation cleared within 72 hrs (rabbit)
Dermal Sensitization: Not a sensitizer [Magnusson-Kligman method] (quinea pig)

Mutagenicity Information: Components of this product are not listed as mutagens. Negative in

chromosomal aberration, sister chromatid exchange in CHO. Did NOT induce Unscheduled DNA synthesis (UDS) in Rat hepatocytes in vivo (2000 mg/kg; limit dose). Negative in E-coli reverse mutation AMES test,

10,000 mcg/dish. [TGAI]

Carcinogenicity Information: Components of this product are not listed as carcinogenic by

NTP. IARC or OSHA.

Developmental / Reproductive Toxicity: This material is not a teratogenic compound.

Special Target Organ: None identified Aspiration Hazard: Not Applicable

Repeat Dose Studies: Not Applicable, Acute toxicity testing was all negative.



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12. ECOLOGICAL INFORMATION

12.1 Ecotoxicity of the Mixture

Fish: LC₅₀ >100 mg a.i./L (96-H, *Cyprinus carpio*)

Bird: $LC_{50} > 5,000 \text{ mg a.i./kg bw (Acute Oral - Pigeon)}$

 $LC_{50} > 5,000 \text{ mg a.i./kg bw (Acute Oral - Chicken)}$

Invertebrates: $EC_{50} > 140 \text{ mg a.i./L } (48-H, Daphnia), NOEC 140 mg/L } (48-H, Daphnia)$

Bees (insect): $LD_{50} > 285.05 \,\mu g$ a.i./bee (24-H, 48-H) (Oral toxicity, honey bee)

 $LD_{50} > 250.00 \,\mu g$ a.i./bee (24-H, 48-H) (Contact toxicity, honey bee)

Algae: Cell density EC50 > 92 mg/L (72-H, Freshwater alga)

Growth rate $E_rC50 > 92 \text{ mg/L}$ (72-H, Freshwater alga)

Area under the growth curve $E_bC50 > 92 \text{ mg/L}$ (72-H, Freshwater alga)

12.2 Persistence and Degradability

Active ingredient is naturally occurring plant growth regulator. Active ingredient does not undergo aqueous photo-degradation. Active ingredient is not considered readily biodegradable.

12.3 Bioaccumulation potential

No data available. Bio-concentration Factor (BCF): Given that the log P_{OW} for the active ingredient (0.45) is much less than 3, there is no potential for bio-concentration in fatty tissues and no potential for aquatic bio-magnification.

12.4 Mobility in Soil

No data available

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.



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14. TRANSPORTATION INFORMATION

DOT STATUS: Not regulated by US DOT

UN PROPER SHIPPING NAME: N/A REMARKS: N/A

IATA/ICA0 STATUS: Not Regulated

PROPER SHIPPING NAME: N/A

REMARKS: N/A

IMDG STATUS: Not Regulated

PROPER SHIPPING NAME: N/A REMARKS: N/A

15. REGULATORY INFORMATION

15.1 Safety, Health and Environmental Regulations / Specific Legislation

TSCA STATUS: N/L

CERCLA STATUS: Not regulated as hazardous

SARA STATUS: Acute: No Chronic: Yes Fire: No CDT: No

RCRA STATUS: Not regulated as hazardous

15.2 Fertilizers Act Regulations

Fertilizers Act Registration Number: 2015077A

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

This chemical is a pesticide product registered by the Fertilizers Act 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.

16. OTHER INFORMATION

NFPA Hazard Katings HMIS Hazard Katings

Health:	0	Health:	0	0 = minimal
Flammability:	0	Flammability:	0	1 = slight
Instability:	0	Instability:	0	2 = moderate
				3 = serious

4 = Extreme



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REASONS FOR ISSUE: Update Product Brand Name

APPROVAL DATE: 03/20/17 SUPERSEDES DATE: 09/01/15

LEGEND: N/A = Not Applicable N/D = Not Determined

N/L = Not Listed L = Listed
C = Ceiling S = Short-term
(R) = Registered Trademark of Valent BioSciences
(TM) = Registered Trademark of Valent BioSciences

The information and recommendations contained herein are based upon tests believed to be reliable. However, 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 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 nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be 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 to confirm that you have the most current product label and SDS.

This Safety Data Sheet (SDS) may provide more information than the product label but does not replace or modify the product labeling (attached to and accompanying the product container). The product SDS and the product label both provide consistent and important health, safety, and environmental information as required. This requirement covers employers, employees, emergency responders, users and others handling the product. All necessary hazard classification and appropriate precautionary, use, storage, and disposal information is set forth on the labeling and the SDS.



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