

ProTone SG Plant Growth Regulator Soluble Granule

SDS# VBC-0006 Revision 1

ISSUED 06/03/15

[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:** ProTone SG Plant Growth Regulator Soluble Granule**Synonyms:** VBC-30051, ProTone FW Plant Growth Regulator**EPA Reg No.:** 73049-461**Code Number:** 10154**List Number:** 05710**Chemical Family:** Plant Growth Regulator**Substance Registration Number(s)[REACH]:****1.2 Relevant Identified Uses and Uses Advised Against****Identified Uses:** Pesticide (Plant Growth Regulator)**Uses Advised Against:** It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.**1.3 Details of the supplier of the Safety Data Sheet****Supplied By:** Valent BioSciences Corporation
870 Technology Way
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**

Hazardous to the aquatic environment, Acute Category 1

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

WARNING

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Hazard Statement(s)

Harmful to aquatic life (lemna)

Precautionary Statement:

Prevention

Wash thoroughly after handling
Avoid release to the environment

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.
IF ON SKIN: Wash with plenty of water.
If skin irritation or rash occurs: 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 |
|------------|---------------------------|---------|
| 21293-29-8 | S-Abscisic acid | 20% |

| CAS # | Component Other-Ingredient Name | Percent |
|--------------|---------------------------------|---------|
| Trade Secret | Other ingredients | 80% |

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.

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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

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

Active ingredient is flammable in presence of open flames and sparks. Formulated product is not expected to be flammable.

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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 impervious 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.

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)

Pesticide manufacture

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

None

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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. Wear gloves made of impervious material. 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

| | | | |
|---------------------------------|---|--------------------------------|---|
| Appearance/Color: | White granules | Odor: | Sweet |
| pH: | 3.17 (1% dilution in water) | Boiling Point: | Not applicable (solid) |
| Melting Point: | 154 – 162 °C (TGA) with decomposition | Solubility (H ₂ O): | 3.8 g/L below pH 7 >250 g/L above pH 7 |
| Octanol/H ₂ O Coeff: | Log P _{ow} = 0.94 (ionized) Log P _{ow} = 1.8 (non-ionized) | Density: | 0.53 g/cm ³ @ °C |
| Auto Ignition: | No self-ignition below 400°C [TGA] | Evaporation Rate: | Not applicable (solid) |
| Flash Point:: | Not Determined | Decomposition Temp.: | 162 °C (TGA) |
| | | LFL: | Not applicable |
| Vapor Density: | Not applicable (solid) | UFL: | Not applicable |
| VOC: | 0% by weight | Vapor Pressure: | Not applicable (solid) |
| Kinematic Viscosity: | Not applicable (solid) | Flammability Class: | Not highly flammable |

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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

Carbon oxides and unidentified organic compounds.

11. TOXICOLOGICAL INFORMATION**11.1 Information on Toxicological Effects****Likely Routes of Exposure**

- Inhalation: Dilute spray during application
- Eye Contact: Dilute spray during application
- Skin Contact: Dilute spray during application
- Ingestion: Dilute spray during application

Product (or TGA) where noted) Toxicology**Acute Effects**

- Oral Toxicity: LD₅₀ > 5,000 mg/kg (rat)
- Dermal Toxicity: LD₅₀ > 5,000 mg/kg (rabbit)
- Inhalation Toxicity: LC₅₀ > 5.1 mg/L air (nose-only)
- Corrosiveness: Not corrosive.
- Dermal Irritation: Slightly-irritating, (Primary Dermal Irr. Index = 1, category IV)
- Ocular Irritation: Mildly-irritating, (MMTS. Index = 14.3, category IV)
- Dermal Sensitization: Not a sensitizer (guinea pig)

Mutagenicity Information: Components of this product are not listed as mutagens. Negative in chromosomal aberration in CHO [TGA]. Negative in E-coli reverse mutation AMES test [TGA]

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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 Determined

12. ECOLOGICAL INFORMATION**12.1 Ecotoxicity**

This product has not been tested for ecotoxicological effects. Test results for the Technical Grade Active Ingredient [TGAI] are given below. Do not allow into waterways or lakes.

Fish: LC₅₀ >121 mg a.i./L (96-H, rainbow trout) [TGAI]

Bird: LC₅₀ > 2250 mg a.i./kg bw (Acute Oral - Bobwhite Quail) [TGAI]

Invertebrates (Daphnia): EC₅₀ > 116 mg a.i./L (48-H) (Daphnia) [TGAI]

Aquatic Plants: EC₅₀: >0.040 mg a.i./L (Lemna) [TGAI]

EC₅₀: >95.3 mg a.i./L (Green Algae) [TGAI]

12.2 Persistence and Degradability

Naturally occurring Plant Growth regulator that has been shown in publications to be present in all plants and to degrade naturally in the environment. Active ingredient readily degraded 10-Hours (photolysis), biodegradable.

Hydrolysis: Not hydrolytically active [TGAI]

Photolysis: DT₅₀ 34 hours (air) [TGAI]

DT₅₀ 0.1 days at pH 4, 2.5 days at pH 7 or 9 (aqueous) [TGAI]

12.3 Bioaccumulation potential

Partition coefficient n-octanol/water

Non-ionized form: Log Pow = 1.8 [TGAI]

ionized form: Log Pow = 0.94 [TGAI]

Bio-concentration Factor (BCF): Given that the log P_{OW} for the active ingredient 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

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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.

US EPA WASTE NUMBER & DESCRIPTIONS:

There is no applicable EPA waste number. This product, if discarded, is not expected to be a characteristic or listed hazardous waste.

14. TRANSPORTATION INFORMATION

DOT STATUS: Not regulated for domestic ground transport by US DOT

UN PROPER SHIPPING NAME: N/A

REMARKS: N/A

IATA/ICA0 STATUS: Regulated

PROPER SHIPPING NAME: UN3077 Environmentally Hazardous Substance, Solid, N.O.S.
(S-Abscisic acid), 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.
(S-Abscisic acid), 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: 73049-461

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 & DOMESTIC ANIMALS**

Caution: Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS

For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning or disposing of equipment washwaters or rinsate.

Do not use treated seed for food, feed, or oil purposes. Exposed treated seed may be hazardous to birds and other wildlife. Treat only those seeds needed for immediate use and planting. Do not store excess treated seed beyond planting time. Dispose of all excess treated seed and seed packaging by burial away from bodies of water.

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 or Tribe agency responsible for pesticide regulation.

Use only as directed. Read the label thoroughly and make sure it is understood before making applications. Keep out of reach of children.

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STORAGE AND DISPOSAL

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

Pesticide Storage: Keep container tightly closed when not in use. Store product in a cool and dry place. Avoid extended storage conditions at temperatures above 25°C (77°F). Avoid exposure of product to light.

Pesticide Disposal: To avoid waste, use all material in this container by application according to label directions. If waste cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Container Handling: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available or puncture and dispose of the container in a sanitary landfill, or by other procedures approved by state and local authorities.

16. OTHER INFORMATION**NFPA Hazard Ratings**

Health: 0
Flammability: 0
Instability: 0

HMIS Hazard Ratings

Health: 0
Flammability: 0
Instability: 0

0 = minimal
1 = slight
2 = moderate
3 = serious
4 = Extreme

REASON FOR ISSUE: Update shipping classification and Ecotoxicity data

APPROVAL DATE: 6/03/15

SUPERSEDES DATE: 7/23/14

LEGEND: N/A = Not Applicable

N/L = Not Listed

C = Ceiling

(R) = Registered Trademark of Valent BioSciences

(TM) = Registered Trademark of Valent BioSciences

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 Corporation 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 Corporation nor any of its subsidiaries or affiliates represents or guarantees that this information or product may be used without infringing the intellectual property

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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 Corporation 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.