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

1.1 Product Identifier
MATERIAL NAME: ProGibb® LV Plus Plant Growth Regulator Solution
Synonyms: ProGibb® LV Plus T&O Plant Growth Regulator Solution
EPA Reg No.: 73049-498
Code Number: N/A
List Number: 36611
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: It is a violation of Federal Law to use this product in a manner inconsistent with its Pesticide labeling.

1.3 Details of the supplier of the Safety Data Sheet
Supplied By: Valent BioSciences Corporation
870 Technology Way
Libertyville, Illinois 60048

Manufactured By: Valent BioSciences Corporation
870 Technology Way
Libertyville, Illinois 60048

1.4 EMERGENCY TELEPHONE NUMBERS
Emergency Health or Spill:
Outside the United States: (01) 651-632-6184
Within the United States: 877-315-9819

2. HAZARDS IDENTIFICATION

2.1 Classification of the Substance or Mixture
Not Classified

2.2 Labeling Elements
Symbol(s) None
Signal Word WARNING
Hazard Statement(s)
None

Precautionary Statement:
Prevention
Avoid breathing vapors/spray.
Wash thoroughly after handling.
Wear protective clothing / eye protection / face protection.

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.
Take off contaminated clothing and wash it before reuse.

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

Labeling
EPA Approved Pesticide Labeling required

2.3 Other Hazards
None identified

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Active Ingredients - Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>77-06-5</td>
<td>Gibberellic acid (GA3)</td>
<td>5.7%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CAS #</th>
<th>Component Other-Ingredient Name</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trade Secret</td>
<td>Other ingredients</td>
<td>94.3%</td>
</tr>
</tbody>
</table>

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
SAFETY DATA SHEET

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SDS# VBC-0008 Revision 1

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

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
Firefighter should wear full-face, self-contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling combustion products. See Section 8 (Exposure
6. ACCIDENTAL RELEASE MEASURES

6.1 Personal Precautions, Protective Equipment and Emergency Procedures
For respiratory protection wear a dust mask. Wear eye protection appropriate to handling activities. Wear impervious gloves. 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.

6.3 Methods and Materials for Containment and Cleaning Up
Ventilate area. Wear appropriate personal protective equipment. Recover product with inert material (earth, sand, vermiculite), 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
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 and Incompatibilities
Protect against physical damage. Close containers of unused material. Store in a dry, cool, place. Keep away from heat or open flame.

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

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

SKIN PROTECTION:
Wear impervious protective clothing, including boots and gloves. For filling operations respiratory protection is recommended. Wear gloves made impervious materials. 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:
Use mist filtering respirator (MSHA/NIOSH approved number prefix TC-21C) or a NIOSH approved respirator with any N, P, R or HE filter). Wash thoroughly with soap and water after handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>pH:</th>
<th>Dilution stability:</th>
<th>Free acidity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/Color</td>
<td>Clear colorless liquid</td>
<td>3.3 (1% w/v dilution)</td>
<td>Solutions stable for 18 hrs</td>
<td>0.87% w/w (as sulphuric acid)</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.14</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Persistent foaming</td>
<td>53 mL (2.27% w/v)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>Kinematic (at 20 °C) 86</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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.

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

Product (or TGAI as noted) Toxicology
Acute Effects
Oral Toxicity: LD$_{50}$ > 5,000 mg/kg bw (rat) [Limit test]
Dermal Toxicity: LD$_{50}$ > 5,050 mg/kg bw (rat) [Limit test]
Inhalation Toxicity: \( \text{LC}_{50} > 5.16 \text{ mg/L air} \) (rat)
Corrosiveness: Not corrosive (rabbit)
Dermal Irritation: No dermal irritation (rabbit)
Ocular Irritation: Minimally irritating, cleared by 24 hrs (rabbit)
Dermal Sensitization: Not a sensitizer (guinea pig)

Mutagenicity Information: Components of this product are not listed as mutagens. TGAI was negative in chromosomal aberration, sister chromatid exchange in CHO. TGAI did NOT induce Unscheduled DNA synthesis (UDS) in Rat hepatocytes in vivo (2000 mg/kg ;limit dose). TGAI was negative in E-coli reverse mutation AMES test, 10,000 mcg/dish.

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.

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.

Fish: \( \text{LC}_{50} > 150 \text{ mg a.i./L} \) (96-H, Rainbow trout) [TGAI Limit test]
Bird: \( \text{LC}_{50} > 2,250 \text{ mg a.i./kg bw} \) (Acute Oral - Bobwhite Quail) [TGAI limit test]
Bird: \( \text{LC}_{50} > 6,018 \text{ mg a.i./kg bw} \) (Feeding - Bobwhite Quail) [TGAI]
Aquatic Invertebrates: \( \text{EC}_{50} > 488 \text{ mg a.i./L} \) (48-H), No mortality level 360 mg/L (Daphnia)
Bees (Insects): \( \text{LC}_{50} > 25 \mu \text{g a.i./bee} \) (48-H), NOED 25 \( \mu \text{g a.i./bee} \) (acute contact)
Earthworm: \( \text{LC}_{50} > 1,111 \text{ mg a.i./kg dry soil} \) (Eisenia fetida), 14-D acute toxicity
Algae: Not tested. TGAI is naturally occurring plant growth regulator.

12.2 Persistence and Degradability
Active ingredient is naturally occurring plant growth regulator that has been shown in publications to be present in all plants. Active ingredient is not considered readily biodegradable and does not undergo aqueous photo-degradation.

12.3 Bioaccumulation potential
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
   None 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.

   **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

<table>
<thead>
<tr>
<th>DOT</th>
<th>STATUS: Not Regulated as Hazardous by DOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>IATA/ICA0</td>
<td>STATUS: Not Regulated</td>
</tr>
<tr>
<td>IMO</td>
<td>STATUS: Not Regulated</td>
</tr>
</tbody>
</table>

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

State Right-To-Know: Not listed.
Consult applicable national, state provincial or local laws to determine regulations, laws or ordinances which may be applicable.

15.2 EPA Pesticide Regulations

EPA Registration Number: 73049-498
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

ENVIRONMENTAL HAZARDS
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 disposing of equipment washwaters or rinsate.

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 Tribal agency responsible for pesticide regulation.
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ISSUED 05/04/15

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STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place. Keep containers tightly closed when not in use. Keep away from heat and open flame.

Pesticide Disposal: To avoid wastes, use all material in this container by application according to label directions. If wastes 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 Disposal: Non-refillable 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 and drain for 10 seconds after the flow begins to drip. 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

16. OTHER INFORMATION

NFPA Hazard Ratings

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

HMIS Hazard Ratings

<table>
<thead>
<tr>
<th>Health</th>
<th>Flammability</th>
<th>Instability</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

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

REASON FOR ISSUE: Updating Toxicology, Ecotoxicology, Biodegradability.

APPROVAL DATE: 05/04/15

SUPERSEDES DATE: 07/16/2014

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

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