

88347-2

6/9/2014

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JUN 09 2014

Mr. John Libs
Co-Founder/Chief Executive Officer
Phyllom BioProducts Corporation (Phyllom)
484 Lake Park Avenue, #23
Oakland, CA 94610

Re: Phyllom; grubGONE![®] G
EPA Registration No.: 88347-2
Non-Fast Track Label Amendment (B680)
Original Application Dated December 12, 2013
OPP-Decision No.: 485905

Dear Mr. Libs:

The U.S. Environmental Protection Agency (EPA) has reviewed your request to amend the subject product registration, which included the following changes to the product label:

- 1) Correction of minor formatting inconsistencies and typographical errors.
- 2) Revision of the primary product name from "Phyllom grubGONE! G" to "grubGONE![®] G."
- 3) As supported by the conclusions made in the EPA's March 13, 2014, Memorandum (re: acute eye irritation study), revision of the Signal Word from "WARNING - AVISO" to "CAUTION."
- 4) As supported by the conclusions made in the EPA's March 13, 2014, Memorandum (re: acute eye irritation study), removal of the following Worker Protection Standard statements associated with the Signal Word:

"Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)"

CONCURRENCES

SYMBOL	7511P	7511P	7511P				
SURNAME	KAUSCH	Borges	Urew				
DATE	06/09/2014	6/9/14	6/9/14				

John Libs
EPA Registration No. 88347-2

- 5) Revision of the EPA Registration Number from "EPA Reg. No. 88347-E" to "EPA Reg. No. 88347-2."
- 6) Addition of another EPA Establishment Number: 9198-OH-2.
- 7) Update to Phyllom's name, address, and email contact information.
- 8) As supported by the conclusions made in the EPA's March 13, 2014, Memorandum (re: acute eye irritation study), removal of the First Aid statements related to eye exposure.
- 9) As supported by the conclusions made in the EPA's March 13, 2014, Memorandum (re: acute eye irritation study), removal of the following three Hazards to Humans and Domestic Animals statements:

"Causes substantial but temporary eye injury"

"Do not get in eyes or on clothing."

"Wear protective eyewear."

- 10) As supported by the conclusions made in the EPA's March 13, 2014, Memorandum (re: acute eye irritation study), modification of the following Hazards to Humans and Domestic Animals statement (changes emphasized):

"Avoid contact with skin, eyes, or clothing and breathing dust."

- 11) As supported by the conclusions made in the EPA's March 13, 2014, Memorandum (re: acute eye irritation study), removal of protective eyewear from the handler and early-entry Personal Protective Equipment sections.
- 12) As supported by the conclusions made in the EPA's March 13, 2014, Memorandum (re: acute eye irritation study) and the information described in Pesticide Registration Notice 95-3, reduction of the Restricted-entry Interval from 12 hours to 4 hours:
- 13) Modification of certain statements in the Directions for Use for clarification purposes (i.e., timing for applications to turf grass; landscape ornamental plants; and ornamental plants grown in nurseries, fields, greenhouses or interior landscapes).
- 14) Modification of rates for all pesticide applications from "42 – 55 oz of grubGONE!® G per 1,000 sq ft of turf grass or ornamental plants (equivalent to 115 – 150 lb of grubGONE!® G per acre of turf grass or ornamental plants)" to "37 – 55 oz of grubGONE!® G per 1,000 sq ft of turf grass or ornamental plants (equivalent to 100 – 150 lb of grubGONE!® G per acre of turf grass or ornamental plants)."

John Libs
EPA Registration No. 88347-2

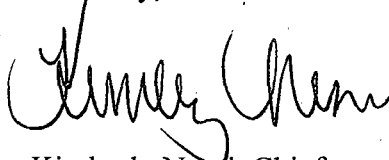
- 15) Addition of "To the extent consistent with applicable law" to a sentence in the Warranty and Limitation of Damages section to align with information presented in Chapter 12, Section IX of the EPA's Label Review Manual (Revised November 2013).

All the changes referred to above, submitted in connection with registration under section 3(c)(5) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), are acceptable provided that you submit two (2) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for further description of final printed labeling.

Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions. If you have any questions regarding this letter, please contact Ms. Jeannine Kausch of my staff by telephone (703-347-8920) or email (*kausch.jeannine@epa.gov*).

For your records, we have enclosed the associated March 13, 2014, EPA Memorandum and a stamped, accepted copy of the label.

Sincerely,



Kimberly Nesci, Chief
Microbial Pesticides Branch
Biopesticides and Pollution
Prevention Division (7511P)

Enclosures (3):

- grubGONE!® G Stamped, Accepted Label
- A-79 Enclosure
- March 13, 2014, EPA Memorandum

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MASTER LABEL

grubGONE!® G

Biological Insecticide Granule Controls Annual White Grubs in Turf and Ornamentals

ACTIVE INGREDIENT:

Bacillus thuringiensis subsp. *galleriae*, Strain SDS-502 fermentation
solids, spores and insecticidal toxins*..... 9.0% w/w

OTHER INGREDIENTS:..... 91.0% w/w

TOTAL:..... 100.0% w/w

*Contains a minimum of 1 x 10⁹ CFU per gram.

KEEP OUT OF REACH OF CHILDREN CAUTION

See side/back panel for additional precautionary statements.

Net Weight: _____ Lbs _____ Kg
Batch Number: _____

EPA Reg. No.: 88347-2
EPA Est. No.: 9198-OH-1, 9198-OH-2

Manufactured for:
Phyllom BioProducts Corp.
484 Lake Park Ave # 23
Oakland, CA 94610
Tel: (650) 322-5000
E-mail: products@phyllom.com

ACCEPTED

JUN 09 2014

Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended, for
the pesticide registered under
EPA Reg. No. 88347-2

FIRST AID	
If on skin or clothing:	<ul style="list-style-type: none"> ◦ Take off contaminated clothing. ◦ Rinse skin immediately with plenty of water for 15-20 minutes. ◦ Call a poison control center or doctor for treatment advice.
If inhaled:	<ul style="list-style-type: none"> ◦ Move person to fresh air. ◦ If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. ◦ Call a poison control center or doctor for further treatment advice.
If swallowed:	<ul style="list-style-type: none"> ◦ Call a poison control center or doctor immediately for treatment advice. ◦ Have person sip a glass of water if able to swallow. ◦ Do not induce vomiting unless told to by a poison control center or doctor. ◦ Do not give anything by mouth to an unconscious person.
HOT LINE NUMBER	
<p>Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. For emergency information concerning this product, call the National Pesticide Information Center (NPIC) at 1-800-858-7378 seven days a week, 6:30 am to 4:30 pm, Pacific Time (NPIC Web site: www.npic.orst.edu). During other times, call your poison control center at 1-800-222-1222.</p>	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if absorbed through the skin, inhaled, or swallowed. Avoid contact with skin, eyes, or clothing and breathing dust. 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.

PERSONAL PROTECTIVE EQUIPEMENT (PPE)

Applicators and handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks

Mixers/loaders and applicators must wear a dust/mist filtering respirator meeting NIOSH standards of at least N-95, R-95, or P-95. Repeated exposure to high concentrations of microbial proteins can cause allergic sensitization.

Follow the manufacturer's instructions for cleaning/maintaining PPE. If no such instructions are available for washables, use detergent and hot water. Keep and wash PPE separately from laundry.

USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

For terrestrial uses: 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 washwaters or rinsate.

No manual application can be made within 300 feet of any threatened or endangered Lepidoptera or Coleoptera.

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.

Read the entire label before use.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 4 hours.

PPE required for early entry to treated areas (that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water) is:

- Coveralls
- Waterproof gloves
- Shoes plus socks

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard (WPS) for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

Keep children and pets out of treated areas until dusts have settled.

GrubGONE!® G is for control of annual white grubs in landscape and recreational turf grasses and ornamental plants and to prevent their damage. Use sites include golf courses, residential lawns, commercial grounds (e.g., office and shopping complexes and airports), parks, schools, playgrounds, athletic fields, day care facilities, pet care facilities, cemeteries, sod farms, interior landscapes, greenhouses, nurseries, fields, and other turf grass-covered or landscape ornamental-planted areas.

PRODUCT USE INFORMATION

GrubGONE!® G is a broad-spectrum biological insecticide. When applied at label rates, it is active against annual white grubs of the Asiatic garden beetle (*Maladera castanea*), European chafer (*Rhizotroqus majalis*), green June beetle (*Cotinis nitida*), Japanese beetle (*Popillia japonica*), May or June beetle (*Phyllophaga sp.*), northern masked chafer (*Cyclocephala borealis*), oriental beetle (*Anomala orientalis*) and southern masked chafer (*Cyclocephala lurida*). Rainfall or irrigation causes the active ingredient of grubGONE!® G, *Bacillus thuringiensis (Bt)* subspecies *galleriae* strain SDS-502, to be released from the granule. Once released, *Bt* subspecies *galleriae* strain SDS-502 is carried into the soil and root zone of turf and ornamentals. In the soil, GrubGONE!® G will control annual white grubs upon ingestion of *Bt* subspecies *galleriae* strain SDS-502. Insect mortality varies with larval size (instar), grub species, and dose of active ingredient consumed.

RESISTANCE MANAGEMENT

GrubGONE!® G is a biological insecticide (Group 11 Insecticide) that is not known to be cross-resistant to any other class of insecticide. However, insect pests are known to develop resistance to pesticide products used repeatedly. Because resistance development cannot be predicted, the use of GrubGONE!® G should conform to sound resistance management strategies established for the crop and use area. Strategies should include rotation of treatments with different modes of action, limitation of the number of successive generations of the target insect pest being treated with the same compound, and adherence to label directions for use.

Consult your local pest control advisor or extension office for additional methods for preventing resistance development. Phyllom BioProducts Corp. encourages responsible product stewardship to ensure effective long-term control of the insect pests on this label.

APPLICATION TO TURF GRASS

Sites of Application: GrubGONE!® G can be used for applications to landscape and recreational turf grasses found in, on and/or adjacent to golf courses (e.g., greens, tees, collars, roughs, and fairways), residential lawns, commercial grounds (e.g., office and shopping complexes and airports), parks, schools, playgrounds, athletic fields, day care facilities, pet care facilities, cemeteries, sod farms, and other turf grass-covered areas.

GrubGONE!® G is not phytotoxic and can be used on all turf grass species.

Restriction: Do not apply more than 110 oz of GrubGONE!® G per 1,000 sq ft of turf grass per year (equivalent to 300 pounds of GrubGONE!® G per acre of turf grass per year).

Application Methods: Apply GrubGONE!® G as a broadcast application to turf grass for control of targeted insect pests and to prevent their damage to turf grasses. With calibrated granular equipment, uniformly broadcast GrubGONE!® G over the area

being treated. Maintain adequate soil moisture before and after application for optimum control of insect pests and healthy turf grass growth. Excessively wet or dry conditions may impact the performance of GrubGONE!® G against annual white grubs. GrubGONE!® G must move to the site of insect pest infestation, such as in the root zone of the host plant. Sprinkler irrigation of about 0.5 in or moderate rainfall shortly after application improves performance for all applications by moving GrubGONE!® G into the root zone where annual white grubs feed. Do not mow the turf until the treated area has been irrigated or moderate rainfall has occurred so that granules are not removed from the treated area.

Spreader Settings for GrubGONE!® G: Spreader settings are influenced by factors such as speed, equipment wear, and condition of spreader, but mainly by the type or brand of spreader. Use the adjustment chart provided with the kind of spreader used as a guide in establishing accurate calibration of your spreader and to properly apply GrubGONE!® G at label rates. Spreaders may also be calibrated by collecting deposited granules on a plastic sheet and comparing the amount of GrubGONE!® G applied on a given area with spreader adjustment settings.

Application Timing: GrubGONE!® G is effective when applied at label rates (see table directly below) to control annual white grubs and prevent their damage to turf. To control annual white grubs, apply GrubGONE!® G when target insects are present. For optimum annual white grub control, apply GrubGONE!® G from peak adult flight through peak egg hatch of the primary insect species being targeted. For specific information about developmental stages of the target insect pest, associated damage, and action thresholds to properly time applications, consult with your State Cooperative Extension Service.

Insect Pests	Application Timing of GrubGONE!® G to Turf Grass	Application Rate of GrubGONE!® G to Turf Grass
<p>Larvae (annual white grubs) of:</p> <p>Asiatic garden beetle (<i>Maladera castanea</i>)</p> <p>European chafer (<i>Rhizotroqus majalis</i>)</p> <p>Green June beetle (<i>Cotinis nitida</i>)</p> <p>Japanese beetle (<i>Popillia japonica</i>)</p> <p>May or June beetle (<i>Phyllophaga sp.</i>)</p> <p>Northern masked chafer (<i>Cyclocephala borealis</i>)</p> <p>Oriental beetle (<i>Anomala orientalis</i>)</p> <p>Southern masked chafer (<i>Cyclocephala lurida</i>)</p>	<p>Apply when insects of the insect species being targeted are present.</p> <p>For optimum control, apply from peak adult flight to peak egg hatch of the primary insect species being targeted.</p> <p>Additional applications may be made no earlier than 7 days after the preceding application as long as the annual maximum restriction on GrubGONE!® G used (i.e., 110 oz per 1,000 sq ft (equivalent to 300 pounds per acre)) is not exceeded.</p>	<p>Apply 37 to 55 oz of GrubGONE!® G per 1,000 sq ft of turf grass (equivalent to 100 to 150 pounds of GrubGONE!® G per acre of turf grass).</p>

Note: For turf grass with heavy thatch (more than 0.75 in), use the higher rates within the specified rate range.

APPLICATION TO LANDSCAPE ORNAMENTAL PLANTS

Sites of Application: GrubGONE!® G can be used for applications to landscape ornamental plants found in, on and/or adjacent to residential plantings, commercial grounds (e.g., office and shopping complexes and airports), parks, schools, playgrounds, athletic fields, day care facilities, pet care facilities, cemeteries, and other landscape ornamental-planted areas.

GrubGONE!® G is not phytotoxic and can be used on all ornamental species.

Restriction: Do not apply more than 110 oz of GrubGONE!® G per 1,000 sq ft of landscape ornamental plants per year (equivalent to 300 pounds of GrubGONE!® G per acre of landscape ornamental plants per year).

Application Methods: Apply GrubGONE!® G as a broadcast application to soil for control of targeted insect pests and to prevent damage to ornamental plants. With calibrated granular equipment, uniformly broadcast GrubGONE!® G over the soil in the area being treated. Use the adjustment chart provided with the kind of spreader used as a guide in establishing accurate calibration of your spreader and to properly apply GrubGONE!® G at label rates. Maintain adequate soil moisture before and after application for optimum control of insect pests and healthy ornamental plant growth. Excessively wet or dry conditions may impact the performance of GrubGONE!® G against annual white grubs. GrubGONE!® G must move to the site of insect pest

infestation, such as in the root zone of the host plant. Sprinkler irrigation of about 0.5 in or moderate rainfall shortly after application improves performance for all applications by moving GrubGONE!® G into the root zone where annual white grubs feed.

Application Timing: GrubGONE!® G is effective when applied at label rates (see table directly below) to control annual white grubs and prevent their damage to ornamental plants. To control annual white grubs, apply GrubGONE!® G when target insects are present. For optimum annual white grub control, apply GrubGONE!® G from peak adult flight through peak egg hatch of the primary insect species being targeted. For specific information about developmental stages of the target insect pest, associated damage, and action thresholds to properly time applications, consult with your State Cooperative Extension Service.

Insect Pests	Application Timing of GrubGONE!® G to Landscape Ornamental Plants	Application Rate of GrubGONE!® G to Landscape Ornamental Plants
<p>Larvae (annual white grubs) of:</p> <p>Asiatic garden beetle (<i>Maladera castanea</i>)</p> <p>European chafer (<i>Rhizotrogus majalis</i>)</p> <p>Green June beetle (<i>Cotinis nitida</i>)</p> <p>Japanese beetle (<i>Popillia japonica</i>)</p> <p>May or June beetle (<i>Phyllophaga sp.</i>)</p> <p>Northern masked chafer (<i>Cyclocephala borealis</i>)</p> <p>Oriental beetle (<i>Anomala orientalis</i>)</p> <p>Southern masked chafer (<i>Cyclocephala lurida</i>)</p>	<p>Apply when insects of the insect species being targeted are present.</p> <p>For optimum control, apply from peak adult flight to peak egg hatch of the primary insect species being targeted.</p> <p>Additional applications may be made no earlier than 7 days after the preceding application as long as the annual maximum restriction on GrubGONE!® G used (i.e., 110 oz per 1,000 sq ft (equivalent to 300 pounds per acre)) is not exceeded.</p>	<p>Apply 37 to 55 oz of GrubGONE!® G per 1,000 sq ft of landscape ornamental plants (equivalent to 100 to 150 pounds of GrubGONE!® G per acre of landscape ornamental plants).</p>

APPLICATION TO ORNAMENTAL PLANTS GROWN IN NURSERIES, FIELDS, GREENHOUSES OR INTERIOR PLANTSCAPES

Sites of Application: GrubGONE!® G can be used for applications to nursery, field, greenhouse, or interior plantscape grown ornamental plants. The plants may be field or container grown.

GrubGONE!® G is not phytotoxic and can be used on all ornamental species.

Restriction: Do not apply more than 110 oz of GrubGONE!® G per 1,000 sq ft of ornamental plants grown in nurseries, fields, greenhouses, or interior plantscapes per

year (equivalent to 300 pounds of GrubGONE!® G per acre of ornamental plants grown in nurseries, fields, greenhouses, or interior landscapes per year).

Application Methods: If the plants are in large numbers of closely grouped pots or in the field, it may be possible to use a granular applicator followed by watering in with about 0.5 in water applied with overhead sprinklers. If there are individual pots, use 0.42 to 0.55 oz of GrubGONE!® G per 10 sq ft of combined surface area of the closely arranged containers. For individual planting pots or plant containers, the area of a pot surface is π (pi) r^2 , where pi is 3.142 and r is the radius or half the diameter. For example, a 12 in diameter pot surface is 113 sq in, which is about 0.8 sq ft. At the higher rate of GrubGONE!® G application, the application rate is then 0.04 oz. GrubGONE!® G must then be watered in as described earlier in this paragraph; do not drench, as excessive watering may reduce the effectiveness of grubGONE!® G.

Application Timing: GrubGONE!® G is effective when applied at label rates (see table directly below) to control annual white grubs and prevent their damage. To control annual white grubs, apply GrubGONE!® G when target insects are present. For optimum annual white grub control, apply GrubGONE!® G from peak adult flight through peak egg hatch of the primary insect species being targeted. For specific information about developmental stages of the target insect pest, associated damage, and action thresholds to properly time applications, consult with your State Cooperative Extension Service.

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Insect Pests	Application Timing of GrubGONE!® G for Ornamental Plants Grown in Nurseries, Fields, Greenhouses, or Interior Plantscapes	Application Rate of GrubGONE!® G for Ornamental Plants Grown in Nurseries, Fields, Greenhouses, or Interior Plantscapes
<p>Larvae (annual white grubs) of:</p> <p>Asiatic garden beetle (<i>Maladera castanea</i>)</p> <p>European chafer (<i>Rhizotrogus majalis</i>)</p> <p>Green June beetle (<i>Cotinis nitida</i>)</p> <p>Japanese beetle (<i>Popillia japonica</i>)</p> <p>May or June beetle (<i>Phyllophaga sp.</i>)</p> <p>Northern masked chafer (<i>Cyclocephala borealis</i>)</p> <p>Oriental beetle (<i>Anomala orientalis</i>)</p> <p>Southern masked chafer (<i>Cyclocephala lurida</i>)</p>	<p>Apply when insects of the insect species being targeted are present.</p> <p>For optimum control, apply from peak adult flight to peak egg hatch of the primary insect species being targeted.</p> <p>Additional applications may be made no earlier than 7 days after the preceding application as long as the annual maximum restriction on GrubGONE!® G used (i.e., 110 oz per 1,000 sq ft (equivalent to 300 pounds per acre)) is not exceeded.</p>	<p>Apply 37 to 55 oz of GrubGONE!® G per 1,000 sq ft of ornamental plants (equivalent to 100 to 150 pounds of GrubGONE!® G per acre of ornamental plants).</p> <p>For individual plant containers, measure the soil surface area, apply GrubGONE!® G at a proportional rate equivalent to that listed above, and water in to disperse the product into the soil substrate.</p>

STORAGE AND DISPOSAL	
Do not contaminate water, food or feed by storage or disposal.	
PESTICIDE STORAGE	Store in a cool, dry place inaccessible to children.
PESTICIDE DISPOSAL	Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.
CONTAINER HANDLING	Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then, offer for recycling if available, dispose of empty bag in a sanitary landfill or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY AND LIMITATION OF DAMAGES

Phyllom BioProducts Corp. warrants that the material contained in this package conforms to the description on this label and is reasonably fit for the purposes referred to in the directions for use. Timing and method of application, weather, watering practices, nature of soil, the insect problem, condition of the crop, incompatibility with other chemicals not specifically recommended, and other influencing factors in use of this product are beyond the control of the seller. To the extent consistent with applicable law, buyer assumes all risks of use, storage, or handling of this material not in accordance with the directions on this label. To the extent consistent with applicable law, Phyllom BioProducts Corp. makes no other express or implied warranty of the fitness or merchantability of this product.