



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:

EPA Reg. No.: 88347-2

Net Weight: 10 lb 40 lb

EPA Est. No.: 9198-OH-1 or 9198-OH-2

Batch Number: _____

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	
Have the product container or label with you when calling a poison control center or doctor, or when going for treatment. For non-emergency information concerning this product, call the National Pesticide Information Center (NPIC) at 1-800-858-7378, Monday through Friday, 8:00 am to 12:00 pm Pacific Time (NPIC Web site: www.npic.orst.edu). For emergencies, call your poison control center at 1-800-222-1222.	

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 EQUIPMENT (PPE)	
Applicators and handlers must wear: <ul style="list-style-type: none"> Long-sleeved shirt and long pants Waterproof gloves Shoes plus socks A NIOSH-approved particulate respirator with any R or P filter with NIOSH approval number prefix TC-844; or a NIOSH-approved powered air purifying respirator with an HE filter with NIOSH approval number prefix TC-21C. (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: <ul style="list-style-type: none"> 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: <ul style="list-style-type: none"> 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 Annual bluegrass weevil (*Listronotus maculicollis*), Asiatic garden beetle (*Maladera castanea*), European chafer (*Rhizotrogus 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 6 lb 14 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
Larvae (annual white grubs) of: Annual bluegrass weevil (<i>Listronotus maculicollis</i>) Asiatic garden beetle (<i>Maladera castanea</i>) European chafer (<i>Rhizotrogus majalis</i>) Green June beetle (<i>Cotinis nitida</i>) Japanese beetle (<i>Popillia japonica</i>) May or June beetle (<i>Phyllophaga sp.</i>) Northern masked chafer (<i>Cyclocephala borealis</i>) Oriental beetle (<i>Anomala orientalis</i>) Southern masked chafer (<i>Cyclocephala lurida</i>)	Apply when insects of the insect species being targeted are present. For optimum control, apply from peak adult flight to peak egg hatch of the primary insect species being targeted. 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., 6 lb 14 oz per 1,000 sq ft (equivalent to 300 pounds per acre)) is not exceeded.	Apply 2 lb 5 oz to 3 lb 7 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).

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 turf grass species.

Restriction: Do not apply more than 6 lb 14 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 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
Larvae (annual white grubs) of: Asiatic garden beetle (<i>Maladera castanea</i>) European chafer (<i>Rhizotrogus majalis</i>) Green June beetle (<i>Cotinis nitida</i>) Japanese beetle (<i>Popillia japonica</i>) May or June beetle (<i>Phyllophaga sp.</i>) Northern masked chafer (<i>Cyclocephala borealis</i>) Oriental beetle (<i>Anomala orientalis</i>) Southern masked chafer (<i>Cyclocephala lurida</i>)	Apply when insects of the insect species being targeted are present. For optimum control, apply from peak adult flight to peak egg hatch of the primary insect species being targeted. 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., 6 lb 14 oz per 1,000 sq ft (equivalent to 300 pounds per acre)) is not exceeded.	Apply 2 lb 5 oz to 3 lb 7 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).

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 6 lb 14 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 plantscapes 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 $\pi(r)^2$, where π 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.

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
Larvae (annual white grubs) of: Asiatic garden beetle (<i>Maladera castanea</i>) European chafer (<i>Rhizotrogus majalis</i>) Green June beetle (<i>Cotinis nitida</i>) Japanese beetle (<i>Popillia japonica</i>) May or June beetle (<i>Phyllophaga sp.</i>) Northern masked chafer (<i>Cyclocephala borealis</i>) Oriental beetle (<i>Anomala orientalis</i>) Southern masked chafer (<i>Cyclocephala lurida</i>)	Apply when insects of the insect species being targeted are present. For optimum control, apply from peak adult flight to peak egg hatch of the primary insect species being targeted. 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., 6 lb 14 oz per 1,000 sq ft (equivalent to 300 pounds per acre)) is not exceeded.	Apply 2 lb 5 oz to 3 lb 7 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). 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.

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.	



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