Material Safety Data Sheet

grubGONE®G

1. Chemical Product and Company Information
   - Product Name: grubGONE®
   - EPA Registration No.: 88347-2
   - Ingredient Name: Bacillus thuringiensis serovar galleriae strain SDS-502
   - Class: Microbial

2. Composition/Information on Ingredients
   - Ingredient name: Bacillus thuringiensis serovar galleriae strain SDS-502
   - Concentration: 9.0% w/w
   - CAS number: 68038-71-1
   - OSHA PEL: Not established
   - TWA: Not established
   - STEL: Not established
   - Inert/Other Ingredients: 91.0% wtw identity a trade secret
   - CAS number: NA
   - OSHA PEL: Not established
   - TWA: Not established
   - STEL: Not established

3. Hazardous Identification
   - Emergency Overview
     This product is a tan to dark colored granule with a slightly sweet odor, which is intended for use as a biological insect control. If poisoning is suspected, contact a physician, the nearest hospital, or the nearest Poison Control Center. There is no specific antidote for the product, treat symptomatically.

   HOT LINE NUMBER
   Have the product container or label with you when calling your local poison control center or doctor, or going for treatment. You may also contact the American Association of Poison Control Centers at 1-800-222-1222 for emergency medical treatment information.

   - EPA Signal Word: Caution
   - Potential Health Effects
     - Route(s) of Entry: Eyes, skin, oral, inhalation
     - Human Effects and
     - Symptoms of Overexposure: May cause irritation of eyes, skin, or respiratory tract
     - Acute Eye Contact: May cause minimal eye irritation
     - Chronic Eye Contact: Chronic exposure not likely from normal use
     - Acute Skin Contact: A skin sensitization (allergic) reaction may occur in sensitive individuals
     - Chronic Skin Contact: Chronic exposure not likely from normal use
     - Chronic Ingestion: Chronic exposure not likely from normal use
     - Acute Inhalation: May cause some irritation, shortness of breath
     - Chronic Inhalation: Chronic exposure not likely from normal use

   Carcinogenicity
4. First Aid Measures

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.

| If on skin or clothing: | • 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:            | • 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:          | • 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. |

5. Fire Fighting Measures

NFPA Hazard Classification

<table>
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<tr>
<th>nfpa_hazard_classification</th>
<th>Health Hazard</th>
<th>Fire Hazard</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Extinguishing Media: Dry chemical, foam, or carbon dioxide

Unusual Fire Fighting Explosion Hazards

Thermal decomposition products may include, but are not limited to, CO₂, H₂O, and particulate fillers.

Special Fire Fighting Procedures: None

6. Accidental Release Measures

Spill or Leak Procedure: Recover product and place in an appropriate container for disposal. Avoid breathing dust. Ventilate and wash the spill area.

7. Storage and Disposal

Storage Temperature (Min/Max): 32 / 80 F 0 / 27 C

Shelf Life: Stable at Room Temperature

Special Sensitivity: Avoid UV/sunlight, heat and strong alkali conditions to maintain activity

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

Store in a cool, dry place inaccessible to children.

Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

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.
8. Personal Protection Equipment (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.

   Exposure Limit: N/A

9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Physical Appearance</td>
<td>Tan Granule</td>
</tr>
<tr>
<td>Odor</td>
<td>Slightly sweet</td>
</tr>
<tr>
<td>Boiling Point Range</td>
<td>N/A</td>
</tr>
<tr>
<td>Melt Point / Freeze Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Auto Ignition</td>
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<tr>
<td>Upper Explosive Limits (UEL)</td>
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<tr>
<td>Lower Explosive Limits (LEL)</td>
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<tr>
<td>pH</td>
<td>6-8</td>
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<tr>
<td>Solubility in Water</td>
<td>relatively insoluble</td>
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<tr>
<td>Specific Gravity/ Density</td>
<td>52 lbs/cubic foot</td>
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<tr>
<td>Bulk Density</td>
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<tr>
<td>% Volatile by Weight</td>
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<tr>
<td>Vapor Pressure at 20 C</td>
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<tr>
<td>Vapor Density</td>
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10. Stability and Reactivity

<table>
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<th>Value</th>
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<tbody>
<tr>
<td>Stability</td>
<td>Stable</td>
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<tr>
<td>Hazardous Polymerization</td>
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</tr>
<tr>
<td>Incompatibilities</td>
<td>None known</td>
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<tr>
<td>Decomposition Products</td>
<td>None known</td>
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<tr>
<td>Conditions to Avoid</td>
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</tbody>
</table>

11. Toxicological Information

Acute Toxicity/ Irritation Studies:

**Ingestion or Oral:** Test substance Phyllom SDS-502 MP LD 50 Rat >3,000 mg/kg body weight

**Dermal:** Test substance Phyllom SDS-502 MP LD 50 Rabbit >2.020 mg/kg body weight

**Eye Contact:** Test substance grubGONE! G end use granule. The test substance is rated minimally irritating and assigned to Toxicity Category IV

**Inhalation:** Not Available

**Skin Contact:** See Dermal above
Skin Sensitization: See Dermal above

Mutagenic Potential

* Bacillus thuringiensis * Not Available

Reproductive Hazard Potential

* Bacillus thuringiensis * Not Available

Chronic/ Subchronic Toxicity Studies

* Bacillus thuringiensis * Not Available

Carcinogenic Potential

* Bacillus thuringiensis * Not Available

Other Toxicity Information

Not Available

Target Organs

Active Ingredients

* Bacillus thuringiensis * Not Available

12. Transportation Information

D.O.T. Proper Shipping Name: N/A

Technical Shipping Name: grubGONE! G

D.O.T. Hazard Class: Not Regulated

U.N./ N.A. Number: N/A

Product RQ (lbs.): N/A

D.O.T. Label: N/A

D.O.T. Placard: N/A

13. Regulatory Information

OSHA: N/A

TSCA Status: Exempt

CERCLA Reportable Quantity: None

SARA Title III

Section 302 Extremely Hazardous: N/A

Section 311/312 Hazard Categories: N/A

Section 313 Toxic Chemicals: N/A

RCRA Status: N/A

State Regulatory Information

The following chemicals are specially listed by individual state; other product specific health and safety data in other sections of the MSDS may also be applicable for state requirements. For detail on your regulatory requirements you should contact the appropriate agency in your site.