SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name: GARDENTECH® SEVIN® LAWN INSECT GRANULES
Product codes: S7033, S7201, S7202, S7204, S7205, S7230, S7235, S7236, S7240, S7240D, S7244, 100508223, 100508224, 100509314, 100509315, 100047725, 100047727, 100047726
EPA Registration No.: 432-1212-71004

For MEDICAL EMERGENCY: call 800-420-9347
For Transportation or Spill: call 800-420-9300
For Product Information: call 866-945-5033

SECTION 2. HAZARDS IDENTIFICATION

NOTE: Please refer to Section 11 for detailed toxicological information.

Emergency Overview
Caution! Harmful if swallowed. Harmful if inhaled. Harmful if absorbed through skin. Avoid contact with skin, eyes and clothing. Avoid breathing dust.

Physical State
granular

Odor
slight

Appearance
dark brown

Exposure routes
Ingestion, Inhalation, Eye contact, Skin Absorption

Immediate Effects

Eye
Causes eye irritation. Avoid contact with eyes.

Skin
Harmful if absorbed through skin. May produce symptoms similar to those from ingestion. Avoid contact with skin and clothing.

Ingestion
Harmful if swallowed. This product causes reversible cholinesterase inhibition without long term effects. Repeated overexposure may cause more severe cholinesterase inhibition with more pronounced symptoms. May lead to rapid onset of nausea, vomiting, diarrhea, abdominal pain, involuntary shaking, excess salivation, pinpoint pupils, blurred vision, profuse sweating, temporary paralysis, respiratory depression, and convulsions. Do not take internally.

Inhalation
Harmful if inhaled. May produce symptoms similar to those from ingestion. Avoid breathing dust.

Chronic or Delayed Long-Term
This product or its components may have target organ effects. This product or its components may have long term (chronic) health effects.
Medical Conditions Aggravated by Exposure

Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.

Potential Environmental Effect

Extremely toxic to aquatic and estuarine invertebrates.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Hazardous Component Name</th>
<th>CAS-No.</th>
<th>Average % by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbaryl</td>
<td>63-25-2</td>
<td>2.00</td>
</tr>
</tbody>
</table>

SECTION 4. FIRST AID MEASURES

General
When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.

Eye
Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control center immediately.

Skin
Take off contaminated clothing and shoes immediately. Wash off immediately with plenty of water for at least 15 minutes. Call a physician or poison control center immediately.

Ingestion
Call a physician or poison control center immediately. Rinse out mouth and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim unattended.

Inhalation
Move 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 physician or poison control center immediately.

Notes to physician

Signs and Symptoms
Temporary blurred vision due to contraction of the pupils (miosis) following contact with the eyes.

- Bradycardia
- Low blood pressure
- Salivation
- Bronchial hypersecretion
- Vomiting
- Diarrhoea
- Sweating
- Muscular fasciculation
- Spasm
- Breathing difficulties
- Respiratory paralysis
- Somnolence
- Coma
- Respiratory failure
- Hypothermia
Convulsions
Nausea

**Hazards**
This product is a cholinesterase inhibitor carbamate.

**Treatment**
Monitor: respiratory, cardiac and central nervous system. Monitor: blood picture. Monitor: red blood cell and plasma cholinesterase. ECG - monitoring (Electrocardiogram). Oxygen or artificial respiration if needed. Keep respiratory tract clear. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. The following antidote is generally accepted: atropine. Before antidote is administered, either clear symptoms of poisoning have to be present or the cholinesterase activity is inhibited to below 30% of normal. In case of convulsions, a benzodiazepine (e.g. diazepam) should be given according to standard regimens. Contraindications: oximes (pralidoxime, obidoxime).

Do not use oximes such as 2-PAM unless organophosphate intoxication is suspected. Watch for pulmonary edema, which may develop in serious cases of poisoning even after 24-48 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically. Contraindications: derivatives of morphine.

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### SECTION 5. FIRE FIGHTING MEASURES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flash point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>not applicable</td>
</tr>
<tr>
<td>Lower Flammability Limit</td>
<td>not applicable</td>
</tr>
<tr>
<td>Upper Flammability Limit</td>
<td>not applicable</td>
</tr>
<tr>
<td>Fire and Explosion Hazards</td>
<td>Dangerous gases are evolved in the event of a fire.</td>
</tr>
<tr>
<td>Suitable extinguishing media</td>
<td>Water spray, Foam, Dry chemical, Carbon dioxide (CO2)</td>
</tr>
<tr>
<td>Fire Fighting Instructions</td>
<td>Keep out of smoke. Fight fire from upwind position. Cool closed containers exposed to fire with water spray. Do not allow run-off from fire fighting to enter drains or water courses. Whenever possible, contain fire-fighting water by diking area with sand or earth. Firefighters should wear NIOSH approved self-contained breathing apparatus and full protective clothing.</td>
</tr>
</tbody>
</table>

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### SECTION 6. ACCIDENTAL RELEASE MEASURES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal precautions</td>
<td>Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.</td>
</tr>
</tbody>
</table>
Methods for cleaning up
Avoid dust formation. Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean contaminated floors and objects thoroughly, observing environmental regulations.

Additional advice
Use personal protective equipment. Do not allow to enter soil, waterways or waste water canal.

SECTION 7. HANDLING AND STORAGE

Handling procedures
Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation. Handle and open container in a manner as to prevent spillage.

Storing Procedures
Store in a cool, dry place and in such a manner as to prevent cross contamination with other crop protection products, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Work/Hygienic Procedures
Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Before removing gloves clean them with soap and water. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection
Follow all label instructions. Train employees in safe use of the product.

Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and warm/tepid water. Keep and wash PPE separately from other laundry.

Eye/Face Protection
Safety glasses with side-shields

Hand protection
Chemical resistant nitrile rubber gloves

Body Protection
Wear long-sleeved shirt and long pants and shoes plus socks.

Respiratory protection
When respirators are required, select NIOSH approved equipment based on actual or potential airborne concentrations and in accordance with the appropriate regulatory standards and/or industry recommendations.

Under conditions immediately dangerous to life or health, or emergency conditions with unknown concentrations, use a full-face positive pressure air-supplied respirator equipped with an emergency escape air supply unit or use a self-contained breathing apparatus unit.

Exposure Limits
### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>dark brown</td>
</tr>
<tr>
<td>Physical State</td>
<td>granular</td>
</tr>
<tr>
<td>Odor</td>
<td>slight</td>
</tr>
<tr>
<td>pH</td>
<td>5 - 6 (10 %) at 25 °C</td>
</tr>
<tr>
<td>Water solubility</td>
<td>miscible</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>no data available</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>no data available</td>
</tr>
<tr>
<td>Bulk density</td>
<td>25 - 35 lb/ft³</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>no data available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Melting / Freezing Point</td>
<td>not applicable</td>
</tr>
<tr>
<td>Water solubility</td>
<td>miscible</td>
</tr>
<tr>
<td>Minimum Ignition Energy</td>
<td>no data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>no data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>no data available</td>
</tr>
</tbody>
</table>

*OES BCS: Internal Bayer CropScience "Occupational Exposure Standard"

### SECTION 10. STABILITY AND REACTIVITY

**Conditions to avoid**
- Elevated temperatures
- Heat, flames and sparks.

**Incompatibility**
- Strong acids
Strong oxidizing agents
Bases

**Hazardous Decomposition Products**

Thermal decomposition can lead to release of:
- nitrogen oxides (NOx)
- Carbon oxides
- Methyl isocyanate
  (trace; no adverse effects expected)

**Hazardous reactions**

No hazardous reactions when stored and handled according to prescribed instructions.

**Chemical Stability**

Stable under recommended storage conditions.

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**SECTION 11. TOXICOLOGICAL INFORMATION**

Acute toxicity data have been bridged from a similar granular formulation containing a slightly higher percentage of the active ingredient, carbaryl. The non-acute information pertains to the technical-grade active ingredient.

**Acute oral toxicity**

- male rat: LD50: 3,310 mg/kg
- female rat: LD50: 2,330 mg/kg
- male/female combined rat: LD50: 3,240 mg/kg

**Acute dermal toxicity**

- rabbit: LD50: > 2,000 mg/kg

**Acute inhalation toxicity**

- rat: LC50: > 4.9 mg/l
  Exposure time: 4 h
  Determined in the form of dust.
- rat: LC50: > 19.6 mg/l
  Exposure time: 1 h
  Determined in the form of dust.
  Extrapolated from the 4 hr LC50.

**Skin irritation**

- rabbit: No skin irritation

**Eye irritation**

- rabbit: Mild eye irritation.

**Sensitisation**

- guinea pig: Non-sensitizing.

**Chronic toxicity**

- Carbaryl causes reversible cholinesterase inhibition. Changes in urinary bladder, thyroid, kidney and liver were observed in chronic studies in rats.

**Assessment Carcinogenicity**

Carbaryl has been shown to cause tumors in laboratory animals in lifetime feeding studies.

**ACGIH**

- Carbaryl: 63-25-2, Group A4

**NTP**

- None.

**IARC**

- None.
Carbaryl
OSHA
None.

Reproductive toxicity
REPRODUCTION: Carbaryl was not a reproductive toxicant in a two-generation study in rats.
DEVELOPMENTAL: Carbaryl was not a primary developmental toxicant in rats and rabbits. Developmental effects were observed in both species but were considered secondary to maternal toxicity.

Assessment neurotoxicity
Carbaryl caused tradevent neurobehavioral effects (e.g., tremors) related to cholinergic toxicity without correlating neuropathological changes in acute and subchronic neurotoxicity studies in rats. Carbaryl did not cause developmental neurotoxic effects in offspring in a one-generation developmental neurotoxicity study in rats.

Mutagenicity
Carbaryl poses only a slight mutagenic risk based on the overall weight of evidence in a battery of in vitro and in vivo tests.

SECTION 12. ECOLOGICAL INFORMATION

Toxicity to fish
Rainbow trout (Oncorhynchus mykiss)
LC50: 3.3 mg/l
Exposure time: 96 h
The value mentioned relates to the active ingredient carbaryl.

Toxicity to aquatic plants
Pseudokirchneriella subcapitata
Growth rate
EC50: = 1.75 mg/l
Exposure time: 72 h
The value mentioned relates to the active ingredient carbaryl.

Acute Toxicity to Aquatic Invertebrates
Water flea (Daphnia magna)
EC50: 0.0164 mg/l
Exposure time: 48 h
The value mentioned relates to the active ingredient carbaryl.

Environmental precautions
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 surface or ground water by cleaning equipment or disposal of wastes, including equipment wash water. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Apply this product as specified on the label.
SECTION 13. DISPOSAL CONSIDERATIONS

General Disposal Guidance
It is best to use all of the product in accordance with label directions. If it is necessary to dispose of unused product, please follow container label instructions and applicable local guidelines. Never place unused product down any indoor or outdoor drain.

Container Disposal
Completely empty container into application equipment, then dispose of empty container in a sanitary landfill, by incineration or by other procedures approved by state/provincial and local authorities. If burned, stay out of smoke. Follow advice on product label and/or leaflet.

RCRA Information
Characterization and proper disposal of this material as a special or hazardous waste is dependent upon Federal, State and local laws and are the user's responsibility. RCRA classification may apply.

SECTION 14. TRANSPORT INFORMATION

49CFR
UN-Number 3077
Class 9
Packaging group III
Marine pollutant Marine pollutant
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (CARBARYL)
RQ Reportable Quantity is reached with 5,000 lb of product.

IMDG
UN-Number 3077
Class 9
Packaging group III
Marine pollutant YES
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CARBARYL MIXTURE)

IATA
UN-Number 3077
Class 9
Packaging group III
Environm. Hazardous Mark YES
Description of the goods ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CARBARYL MIXTURE )

This transportation information is not intended to convey all specific regulatory information relating to this product. It does not address regulatory variations due to package size or special transportation requirements.

SECTION 15. REGULATORY INFORMATION

EPA Registration No. 432-1212-71004
US Federal Regulations

TSCA list
Carbaryl 63-25-2

US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)
None.

SARA Title III - Section 302 - Notification and Information
None.

SARA Title III - Section 313 - Toxic Chemical Release Reporting
Carbaryl 63-25-2 1.0%

US States Regulatory Reporting

CA Prop65
This product does not contain any substances known to the State of California to cause cancer.

This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
Carbaryl 63-25-2 Male reproductive toxin.

US State Right-To-Know Ingredients
Carbaryl 63-25-2 CA, CT, IL, MN, NJ, RI

Canadian Regulations

Canadian Domestic Substance List
None.

Environmental

CERCLA
Carbaryl 63-25-2 100 lbs

Clean Water Section 307 Priority Pollutants
None.

Safe Drinking Water Act Maximum Contaminant Levels
None.

International Regulations

European Inventory of Existing Commercial Substances (EINECS)
Carbaryl 63-25-2

SECTION 16. OTHER INFORMATION

NFPA 704 (National Fire Protection Association):
Health - 1  Flammability - 1  Instability - 1  Others - none

Health - 1  Flammability - 1  Physical Hazard - 1  PPE -

0 = minimal hazard, 1 = slight hazard, 2 = moderate hazard, 3 = severe hazard, 4 = extreme hazard

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