

**Material Safety Data Sheet**

This product is used by  
Homeowners and Professionals  
July 2011

**GARDENTECH® SEVIN® LAWN INSECT GRANULES**

**SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION**

**Product name** GARDENTECH® SEVIN® LAWN INSECT GRANULES  
**Product codes** S7201, S7202, S7204, S7205, S7236, S7240, S7240D  
**EPA Registration No.** 432-1212-71004

TechPac, LLC.  
P.O. Box 24830  
Lexington, KY 40524  
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

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Carbaryl	63-25-2	2.00

### SECTION 4. FIRST AID MEASURES

<b>General</b>	When possible, have the product container or label with you when calling a poison control center or doctor or going for treatment.
<b>Eye</b>	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.
<b>Skin</b>	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.
<b>Ingestion</b>	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.
<b>Inhalation</b>	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.
<b>Notes to physician Signs and Symptoms</b>	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.

**SECTION 5. FIRE FIGHTING MEASURES**

**Flash point** not applicable

**Autoignition temperature** not applicable

**Lower Flammability Limit** not applicable

**Upper Flammability Limit** not applicable

**Fire and Explosion Hazards** Dangerous gases are evolved in the event of a fire.

**Suitable extinguishing media** Water spray, Foam, Dry chemical, Carbon dioxide (CO<sub>2</sub>)

**Fire Fighting Instructions** 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.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions** Keep unauthorized people away. Isolate hazard area. Avoid contact with spilled product or contaminated surfaces.

**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

Carbaryl	63-25-2	ACGIH	TWA	5 mg/m3
		ACGIH NIC	TWA	0.5 mg/m3
		NIOSH	REL	5 mg/m3
		OSHA Z1	PEL	5 mg/m3

OSHA Z1A	TWA	5 mg/m3
US CA OEL	TWA PEL	5 mg/m3
TX ESL	ST ESL	50 ug/m3
TX ESL	AN ESL	5 ug/m3
OES BCS*	TWA	5 mg/m3
ACGIH	TWA	0.5 mg/m3
TN OEL	TWA	5 mg/m3

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

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance</b>	dark brown
<b>Physical State</b>	granular
<b>Odor</b>	slight
<b>pH</b>	5 - 6 (10 %) at 25 °C aqueous suspension
<b>Vapor Pressure</b>	no data available
<b>Vapor Density (Air = 1)</b>	no data available
<b>Bulk density</b>	25 - 35 lb/ft <sup>3</sup>
<b>Evaporation rate</b>	no data available
<b>Boiling Point</b>	not applicable
<b>Melting / Freezing Point</b>	not applicable
<b>Water solubility</b>	miscible
<b>Minimum Ignition Energy</b>	no data available
<b>Decomposition temperature</b>	no data available
<b>Partition coefficient: n-octanol/water</b>	no data available

## SECTION 10. STABILITY AND REACTIVITY

<b>Conditions to avoid</b>	Elevated temperatures Heat, flames and sparks.
<b>Incompatibility</b>	Strong acids Strong oxidizing agents Bases
<b>Hazardous</b>	Thermal decomposition can lead to release of:

<b>Decomposition Products</b>	nitrogen oxides (NOx) Carbon oxides Methyl isocyanate (trace; no adverse effects expected)
<b>Hazardous reactions</b>	No hazardous reactions when stored and handled according to prescribed instructions.
<b>Chemical Stability</b>	Stable under recommended storage conditions.

## 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.

<b>Acute oral toxicity</b>	male rat: LD50: 3,310 mg/kg  female rat: LD50: 2,330 mg/kg  male/female combined rat: LD50: 3,240 mg/kg
<b>Acute dermal toxicity</b>	rabbit: LD50: > 2,000 mg/kg
<b>Acute inhalation toxicity</b>	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.
<b>Skin irritation</b>	rabbit: No skin irritation
<b>Eye irritation</b>	rabbit: Mild eye irritation.
<b>Sensitisation</b>	guinea pig: Non-sensitizing.
<b>Chronic toxicity</b>	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

Carbaryl

63-25-2

Overall evaluation: 3

#### OSHA

None.

<b>Reproductive toxicity</b>	<p>REPRODUCTION: Carbaryl was not a reproductive toxicant in a two-generation study in rats.</p> <p>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.</p>
<b>Assessment neurotoxicity</b>	<p>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.</p>
<b>Mutagenicity</b>	<p>Carbaryl poses only a slight mutagenic risk based on the overall weight of evidence in a battery of in vitro and in vivo tests.</p>

## SECTION 12. ECOLOGICAL INFORMATION

<b>Toxicity to fish</b>	<p>Rainbow trout (<i>Oncorhynchus mykiss</i>)  LC50: 3.3 mg/l  Exposure time: 96 h  The value mentioned relates to the active ingredient carbaryl.</p>
<b>Toxicity to aquatic plants</b>	<p><i>Pseudokirchneriella subcapitata</i>  Growth rate  EC50: = 1.75 mg/l  Exposure time: 72 h  The value mentioned relates to the active ingredient carbaryl.</p>
<b>Acute Toxicity to Aquatic Invertebrates</b>	<p>Water flea (<i>Daphnia magna</i>)  EC50: 0.0164 mg/l  Exposure time: 48 h  The value mentioned relates to the active ingredient carbaryl.</p>
<b>Environmental precautions</b>	<p>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.</p>

## SECTION 13. DISPOSAL CONSIDERATIONS

<b>General Disposal Guidance</b>	<p>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.</p>
<b>Container Disposal</b>	<p>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.</p>

**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.

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**SECTION 14. TRANSPORT INFORMATION**


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**49CFR**

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

**IATA**

UN-Number	<b>3077</b>
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.

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**SECTION 15. REGULATORY INFORMATION**


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**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

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**SECTION 16. OTHER INFORMATION**

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NFPA 704 (National Fire Protection Association):

Health - 1 Flammability - 1 Instability - 1 Others - none

HMIS (Hazardous Materials Identification System, based on the Third Edition Ratings Guide)

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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