

Material Safety Data Sheet

This product is used by Homeowners
and Professionals

GARDENTECH® SEVIN® READY-TO-SPRAY BUG KILLER

July 2011

SECTION 1. CHEMICAL PRODUCT AND COMPANY INFORMATION

Product name GARDENTECH® SEVIN® READY-TO-SPRAY BUG KILLER
EPA Registration No. 264-334-71004
Product codes S7300, S7300D

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

For MEDICAL EMERGENCY: call 800-420-9347
For TRANSPORTATION or SPILL: call 800-424-9300
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, inhaled or absorbed through the skin. Moderate eye irritation. Avoid contact with skin, eyes and clothing. Avoid inhalation of vapour or mist. Wash thoroughly and put on clean clothing.

Physical State

liquid

Odor

weak

Appearance

white to light beige

Exposure routes

Ingestion, Inhalation, Skin Absorption, Eye contact

Immediate Effects

Eye

Causes redness, irritation, tearing. Moderate 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. 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 inhalation of vapour or mist.

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. Highly toxic to bees.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Hazardous Component Name</u>	<u>CAS-No.</u>	<u>Average % by Weight</u>
Carbaryl	63-25-2	22.50
1,2-Propanediol	57-55-6	3.50
Sulphonated aromatic polymer, sodium salt		1.50

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

The product inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system, and the somatic motor nerves.

The following antidote is generally accepted: atropine.

Do not use oximes such as 2-PAM unless organophosphate intoxication is suspected. Contraindications: derivatives of morphine. 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.

SECTION 5. FIRE FIGHTING MEASURES

Flash point

> 93.4 °C / > 200.1 °F

Fire and Explosion Hazards

In the event of fire the following may be released:
nitrogen oxides (NO_x)
Carbon monoxide (CO)

Suitable extinguishing media

Water spray, Foam, Carbon dioxide (CO₂), Dry powder

Fire Fighting Instructions

Evacuate personnel to safe areas. 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.

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

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. 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. Inform appropriate authorities immediately if contamination occurs.

SECTION 7. HANDLING AND STORAGE

Handling procedures	Maintain exposure levels below the exposure limit through the use of general and local exhaust ventilation.
Storing Procedures	<p>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. The 30-day storage temperature average must not exceed the recommended maximum.</p> <p>Keep away from food, drink and animal feedingstuffs.</p>
Work/Hygienic Procedures	<p>Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, using the toilet or applying cosmetics.</p> <p>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.</p>
Min/Max Storage Temperatures	<p>Recommended minimum transport/storage temperature: -20 °C / -4 °F</p> <p>Recommended maximum transport/storage temperature: 40 °C / 104 °F</p>

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General Protection	<p>Follow all label instructions. Train employees in safe use of the product.</p> <p>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.</p> <p>Do not allow children or pets to enter the treated area until it has dried.</p>
Eye/Face Protection	Tightly fitting safety goggles
Hand protection	Chemical resistant nitrile rubber gloves
Body Protection	Wear long-sleeved shirt and long pants and shoes plus socks.
Respiratory protection	<p>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.</p> <p>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.</p>

Exposure Limits

Carbaryl	63-25-2	ACGIH ACGIH NIC NIOSH	TWA TWA REL	5 mg/m3 0.5 mg/m3 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
1,2-Propanediol	57-55-6	WEEL	TWA	10 mg/m3
		TX ESL	ST ESL	20 ug/m3
		TX ESL	ST ESL	500 ppm
		TX ESL	AN ESL	2 ug/m3
Synthetic amorphous silica	112926-00-8	TX ESL	AN ESL	50 ppm
		OSHA Z1A	TWA	6 mg/m3
		TX ESL	ST ESL	40 ug/m3
		TX ESL	AN ESL	4 ug/m3
			TWA	6 mg/m3

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

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	white to light beige
Physical State	liquid
Odor	weak
pH	4.0 - 5.0 (100 %) at 23 °C
Density	1.05 g/cm ³ at 20 °C
Water solubility	miscible
Viscosity	500 - 700 cps

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid	Heat, flames and sparks.
Hazardous Decomposition Products	Thermal decomposition nitrogen oxides (NO _x) 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 normal conditions.

SECTION 11. TOXICOLOGICAL INFORMATION

Only acute toxicity studies have been performed on the formulated product. The non-acute information pertains to the technical-grade active ingredient, carbaryl.

Acute oral toxicity	male/female combined rat: LD50: ca. 1,820 mg/kg
Acute dermal toxicity	rabbit: LD50: > 2,000 mg/kg
Acute inhalation toxicity	male rat: LC50: 3.1 mg/l Exposure time: 1 h Determined in the form of liquid aerosol.
Skin irritation	rabbit: slight irritation
Eye irritation	rabbit: Minimally irritating.
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

Carbaryl

63-25-2

Overall evaluation: 3

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	Oncorhynchus mykiss (rainbow trout) 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.

Toxicity to other organisms Anas platyrhynchos (Mallard duck)
LC50: > 5,000 mg/kg
Exposure time: 8 d
The value mentioned relates to the active ingredient carbaryl.

Colinus virginianus (Bobwhite quail)
LC50: > 5,000 mg/kg
Exposure time: 8 d
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. Do not apply when weather conditions favor runoff or drift. Drift or runoff from treated areas may adversely affect non-target plants. Apply this product as specified on the label.

Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Inform appropriate authorities immediately if contamination occurs.

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 Follow advice on product label and/or leaflet. Do not re-use empty containers. Triple rinse containers. Puncture container to avoid re-use. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State/Provincial and local authorities, by burning. If burned, stay out of smoke.

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	3082
Class	9
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCES, LIQUID, N.O.S. (CARBARYL)
RQ	Reportable Quantity is reached with 444 lb of product.

IMDG

UN-Number	3082
Class	9
Packaging group	III
Marine pollutant	Marine Pollutant
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CARBARYL SOLUTION)

IATA

UN-Number	3082
Class	9
Packaging group	III
Description of the goods	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (CARBARYL SOLUTION)

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

US Federal Regulations

TSCA list

Carbaryl	63-25-2
1,2-Propanediol	57-55-6
Sulphonated aromatic polymer, sodium salt	

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
----------	---------	------------------------

1,2-Propanediol 57-55-6 MN, RI

Canadian Regulations

Canadian Domestic Substance List

1,2-Propanediol 57-55-6
Sulphonated aromatic polymer, sodium salt

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 - 2 Flammability - 1 Reactivity - 1 Others - none

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

Health - 1 Flammability - 1 Physical Hazard - 0 PPE -

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

The information contained herein is offered only as a guide to the handling of this specific material. Since such information does not relate to use of the material with any other material or in any process, any person using this information must determine for himself its suitability for any particular application. The buyer and user assumes all risk and liability of use, storage and/or handling of this product not in accordance with the terms of the product label.