



PMRA Approved Label, July 11, 2014
Submission 2014-0175, G.G.

GROUP	1A	INSECTICIDE
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SEVIN T&O INSECTICIDE

LIQUID SUSPENSION

COMMERCIAL

GUARANTEE: CARBARYL43% BY WT.
(CONTAINS 480 GRAMS CARBARYL PER LITRE)
Contains 1,2-benzisothiazolin-3-one at 0.02% as a preservative or
Contains 1,2-benzisothiazolin-3-one at 0.04% as a preservative

REGISTRATION NUMBER: 16653 PEST CONTROL PRODUCTS ACT

WARNING

POISON

**READ THE LABEL, DIRECTIONS FOR USE AND OTHER
PRECAUTIONARY STATEMENTS IN BOOKLET BEFORE USING**

Bayer CropScience Inc.
Suite 200
160 Quarry Park Blvd SE.
CALGARY, ALBERTA
T2C 3G3
Telephone: 1 888 283- 6847

IN CASE OF SPILLS, POISONING OR FIRE, TELEPHONE EMERGENCY
RESPONSE NUMBER (1-888-283-6847) (24 HOURS A DAY)
DO NOT REMOVE BOOKLET FROM CONTAINER

NET CONTENTS : 10 LITRES

SEVIN are registered trademarks of TKE.

Sevin T&O Insecticide is a suspension of microfine SEVIN carbaryl insecticide in an aqueous medium. It readily disperses in water to form a spray which may be applied by air or ground equipment. **READ THIS LABEL AND USE IN STRICT ACCORDANCE WITH DIRECTIONS AND CAUTIONS.**

PRECAUTIONS:

KEEP OUT OF REACH OF CHILDREN.

HARMFUL IF INHALED OR SWALLOWED. Avoid Breathing of Spray Mist. Do Not Take Internally. Avoid Contact with Skin and Eyes. Wear regular long-sleeved work clothing. Change to clean clothing daily. Wash hands and face before eating. Wash thoroughly after handling.

AVOID CONTAMINATION OF FOOD, FEED, WATER SUPPLIES, STREAMS AND PONDS.

BEE CAUTION: MAY KILL HONEYBEES IN SUBSTANTIAL NUMBERS. This product is highly toxic to bees exposed to direct treatment or residues on crops. Do not use when value of honeybees as pollinators is more important than insect control. Before applying, warn beekeepers to locate hives beyond bee flight range until one week after application or to take other equally effective precautions.

PLANT RESPONSE PRECAUTIONS: To avoid possible injury to tender foliage, do not apply to wet foliage or when rain or high humidity is expected during the next two days. Sevin T&O Insecticide injures Boston ivy, Virginia creeper and Maidenhair fern. During early season, it may also injure Virginia and sand pines.

FIRST AID:

IF ON SKIN OR CLOTHING, take off contaminated clothing. Rinse skin immediately with plenty of water for 15–20 minutes. Call a poison control centre or doctor for treatment advice.

IF IN EYES, hold eye open and rinse slowly and gently with water for 15–20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

IF SWALLOWED, call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

Take container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION

NOTE FOR PHYSICIAN: Sevin T&O Insecticide is a moderate, reversible, cholinesterase inhibitor. Atropine is antidotal. Do Not Use 2-PAM, opiates, or cholinesterase inhibiting drugs.

STORAGE AND DISPOSAL

Store unused SEVIN® T&O Insecticide in original container only, in cool, dry area out of reach of children and animals. Do not store in areas where temperatures frequently exceed 38°C.

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

Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank. Follow provincial instructions for any required additional cleaning of the container prior to its disposal. Make the empty container unsuitable for further use. Do not burn container. Dispose of the container in accordance with local and provincial requirements. For information on disposal of unused, unwanted

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product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, and for clean-up of spills.

If container is damaged and/or contents spilled, contact manufacturer for instructions. Wear protective clothing, approved respirator and impervious gloves before handling spills or damaged product. For spills, do not allow product to spread. Prevent entry into ditches and waterways. Cover spill with sweeping compound and place contaminated material into an approved waste container. Place damaged container into waste containers and mark with contents.

NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.



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DIRECTIONS FOR USE

IMPORTANT: The directions on this label are based on tests and field experience relating to (a) effectiveness; and (b) possible injury to plants and animals. Follow directions for most effective use.

SPRAY PREPARATION

TO ASSURE A UNIFORM PRODUCT, AGITATE, STIR OR RECIRCULATE ALL SEVIN T&O INSECTICIDE CONTAINERS PRIOR TO USE. Remove oil, rust, scale, pesticide residues and other foreign matter from mix tanks and entire spray system. Flush with clean water.

Fill spray or mix tank with 1/2 to 3/4 the desired amount of water. Start mechanical or hydraulic agitation. Slowly add the required amount of Sevin T&O Insecticide, and then the remaining volume of water. Include rinse water from container. Prepare only as much spray mixture as is needed on the day of mixing. MAINTAIN CONTINUOUS AGITATION DURING MIXING AND APPLICATION TO ASSURE A UNIFORM SUSPENSION. DO NOT STORE SPRAY MIXTURES OVERNIGHT.

AERIAL APPLICATION:

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rate and conditions of this label. Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label. Where no rate for aerial application appears for the specific use, this product cannot be applied by any type of aerial equipment. Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices.

USE PRECAUTIONS:

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the National Aerial Pesticide Application Manual, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in fine particles (mist). Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelter-belt) or aquatic habitat.

OPERATOR PRECAUTIONS

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted. It is desirable that the pilots have communication capabilities at each treatment site at the time of application. The field crew and the mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

PRODUCT SPECIFIC PRECAUTIONS:

Read and understand the entire label before opening this product. If you have questions, call the manufacturer at 1 888 283 6847 or obtain technical advice from the distributor or your provincial agricultural representative. On all crops, use sufficient spray volume to obtain thorough and uniform coverage. Calibrate spray equipment to deliver the required volume. The flow rate of SEVIN SL diluted 1:1 with water is similar to water. Use 50 mesh slotted strainers in spray system and behind nozzles. Avoid applications just before rainfall as poor insect control may result. To clean spray system after use, drain and flush with water.

WASHOFF RESISTANCE AND COVERAGE:

Dilution of 1 volume of Sevin T&O Insecticide with 1 volume of water will allow maximum resistance to washoff by rainfall or overhead irrigation. Dilutions higher than 1:39 are not recommended when washoff resistance is desired.

Sevin T&O Insecticide spray must be properly diluted and droplets must dry on the foliage before they become washoff resistant. When atmospheric humidity is low, a drying time of at least one hour is generally adequate. Under high humidity a longer drying time may be required. Wash off resistance cannot be expected if Sevin T&O Insecticide is applied to wet foliage which does not dry adequately prior to rainfall or overhead irrigation.

COMPATIBILITY

Sevin T&O Insecticide, when diluted with an equal volume of water, is compatible with a wide range of pesticides. It is not compatible with diesel fuel, kerosene, fuel oil or aromatic solvents. If compatibility of Sevin T&O Insecticide with another product and the resulting plant response is unknown, it should be tested on a small scale. Curdling, precipitation, greasing, layer formation or increased viscosity are symptoms of incompatibility. **WHEN PREPARING COMBINATION SPRAYS, FIRST ADD "Sevin T&O INSECTICIDE" TO AT LEAST AN EQUAL VOLUME OF WATER, MIX THOROUGHLY, AND THEN ADD COMBINATION PRODUCTS TO THE MIXTURE. DO NOT APPLY TANK MIX COMBINATIONS UNLESS YOUR PREVIOUS EXPERIENCE INDICATES THE MIXTURE IS EFFECTIVE AND WILL NOT RESULT IN APPLICATION PROBLEMS, EXCESSIVE RESIDUES OR PLANT INJURY.**

Unstable under highly alkaline conditions. Not effective if used with alkaline materials such as Bordeaux, lime-sulfur and casein-lime spreaders.

USE PRECAUTIONS

- Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.
- Coarse sprays are less likely to drift, therefore, avoid combinations of pressure and nozzle type that will result in fine particles (mist). Do not apply during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as shelterbelt) or aquatic habitat.

INSECT CONTROL

Apply when insects or their damage appears. To maintain control repeat at 7 to 10 day intervals or as necessary unless a shorter interval is specified below. Where a dosage range is indicated, use lower rate on young plants and early instars and higher rate on mature plants, advanced instars and adults. Thorough and uniform spray coverage is essential for effective control.

Sevin T&O Insecticide does not control spider mites. If spider mites are a problem, use a registered miticide.

RESISTANCE MANAGEMENT

For resistance management, please note that Sevin T&O Insecticide contains a Group 1A insecticide. Any insect population may contain individuals naturally resistant to this product and other Group 1A insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance management strategies should be followed.

To delay insecticide resistance:

- Where possible, rotate the use of Sevin T&O Insecticide with different groups that control the same pests in a field.
- Use tank mixtures with insecticides from a different group when such use is permitted.
- Insecticide use should be based on an Integrated Pest Management (IPM) program that includes scouting and record keeping and considers cultural, biological, and other chemical control practices;
- Monitor treated pest populations for resistance development.
- Contact the local extension specialist or certified crop advisors for any additional pesticide resistance-management and IPM recommendations for the specific site and pest problems in the area.
- For further information or to report suspected resistance, contact Bayer CropScience at 1-888-283-6847 or via the internet at www.bayercropscience.ca.

TREES AND ORNAMENTALS

For dilute-spray ground applications to trees, ornamentals, woody plants and shrubs, apply the specified dosage per 1000 litres of water. For concentrate-spray ground applications, apply the specified dosage per hectare in sufficient spray volume to provide thorough coverage. To prepare small volumes of spray, use 12 millilitres of Sevin T&O Insecticide per 5 litres of water where rates of 2.3 litres are indicated.

CROP	INSECT	LITRES OF "Sevin T&O" /1000 LITRES	SPECIFIC DIRECTIONS
Arborvitae Azalea Birch Boxwood Carnation Chrysanthemum Dogwood Elm Gladiolus Holly Hydrangea Juniper Lilac Maple Oak Pines Roses Zinnia	Bagworm Birch leafminer Blackvine weevil(Taxus weevil) Blister beetles Boxelder bug Boxwood leafminers Cankerworms Cooley spruce gall aphid, Eastern spruce gall aphid, Elm leaf aphid Elm leaf beetle Elm spanworm, Eriophyid mites, Flea beetles Gypsy moth, Japanese beetle June beetles Lace bugs Leafhoppers Leafrollers Mealybugs Pine sawflies Plant bugs Psyllids Rose aphid Rose chafer Rose slug Scale insects Tent caterpillars Thrips (exposed) Webworms Willow leaf beetle	2.3 to 3.5	Spray in the early morning or evening. Repeat at intervals of 7 to 14 days. For scale insects, apply when crawlers are present. Some leaf injury may occur if treatments are made when tender foliage is wet or in the presence of prolonged high humidity. Do not use on Boston Ivy, Maidenhair fern or Virginia Creeper.
Green Ash	Ash plant bug	2.6	Two applications per season; apply in 1000 liters of water as a foliar spray. Apply in nymph stage in May and July. Spray in early morning or evening. Some leaf injury may occur if treatments are made when tender foliage is wet or in the presence of prolonged high humidity.

MOUNTAIN PINE BEETLE CONTROL

For use on high value trees in urban and rural areas. To prepare small volumes of spray, use 1 L of Sevin T&O Insecticide per 25 L of water to make a spray mixture containing 2% active ingredients. Ground application only.

Liters of Sevin T&O Insecticide /1000 L of water	Specific Directions
40	Effective as a preventive treatment only. Repeat annually as required to prevent beetle attacks. Avoid spraying when conditions favor drift from spray area. Apply one (1) L of spray per one (1) m ² of bark in late May to early July or prior to beetle attack. Treat trunks from ground level up to until trunk diameter is less than 12.5 cm.
<p>RESTRICTED USE</p> <p>NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.</p> <p>NATURE OF RESTRICTION: This product is to be used only in the manner authorized; consult provincial regulatory authorities about use permits which may be required.</p> <p>RESTRICTED USE: For use to control small infestations of mountain pine beetle in lodgepole pine forest stands.</p> <p>DIRECTIONS FOR USE: To be used only on trap trees (standing, dead or dying) which are not to be harvested. Monitor stand in the period mid-June to mid-July to determine which trees are infested. Apply 1 treatment to infested trees more than 3 weeks prior to the expected beetle emergence in order to kill the emerging adult beetles. Mix 1 liter of Sevin T&O Insecticide in 24 liters of water (41.6 liters of Sevin T&O Insecticide in 1000 liters of water) to make a spray mixture containing 2% active ingredient by weight. Apply 1 liter of spray per square meter of bark using a backpack handheld or suitable hydraulic ground sprayer. Treat bole from ground level up to a height of at least 3 meters or until bole is less than 12.5 centimeters in diameter. Avoid spraying when conditions favor drift from spray target.</p> <p>LIMITATIONS: Consult provincial regulations and obtain all necessary permits and applicator certificates prior to making applications.</p>	

GYPSY MOTH CONTROL

<p>RESTRICTED USE:</p> <p>NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offence under the Pest Control Products Act to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.</p> <p>NATURE OF RESTRICTION: This product is to be used only in the manner authorized; consult provincial regulatory authorities about use permits which may be required.</p> <p>RESTRICTED USE: Aerial application for the control of gypsy moth in forests and woodlands.</p> <p>DIRECTIONS FOR USE: Use 2.3 liters of Sevin T&O Insecticide per hectare. Apply a total spray volume of 3 to 5 liters per hectare. Apply when larvae are in early instars and leaves are at least one-third grown.</p>
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TURFGRASS

Ground application only. Do not allow public use of treated areas during applications or until sprays have dried.

CROP	Insect	Specific Direction
Turf (Ornamental and Sports)	Ants Chinch bugs Cutworms (climbing) Earwigs Fall armyworm Fleas Leafhoppers Millipedes Mosquitoes Sod webworms	Apply 210 to 290 millilitres of Sevin T&O Insecticide in 6 to 15 litres spray volume per 100 square meters of turf. Mow lawn and apply spray. Do not water for 2 days after treatment. Repeat in 2 to 3 weeks if necessary.
Turf	European Chafer*, Japanese Beetle* (suppression of population)	Where small areas of turf are being treated, apply 210 to 290 mL of Sevin T&O Insecticide in 6 to 15 L spray volume per 100 m ² of turf. Alternatively, apply 210 to 290 mL of Sevin T&O Insecticide in 1.5 to 3 L spray volume per 100 m ² of turf and irrigate following application to ensure movement of Sevin® T&O Insecticide into the root zone. Remove excessive thatch and irrigate 24 hours before treatment if soil is dry. Contact local agricultural representative for treatment thresholds and timing of application. *To optimize control of European Chafer and Japanese Beetle apply Sevin® T&O Insecticide to the early instar stage of the grub.
Turf (Golf Course)	Leatherjackets (larvae of crane flies; Tipula oleracea and T. paludosa)	Apply a single treatment of 200 mL of Sevin T&O Insecticide in 6 to 15 L spray volume per 100m ² of turf. Mow golf course turf and apply spray. Do not water for 2 days after treatment. Alternatively, where small areas of turf are being treated, apply in 1.5 to 3 L spray volume per 100 m ² of turf and irrigate following application to ensure movement of Sevin T&O Insecticide into the root zone. Remove excessive thatch and irrigate 24 hours before treatment if soil is dry. To ensure effective use of insecticide, monitor turf for the abundance of larvae of T. paludosa and T. oleracea. Treatment should be considered at densities at or above 270 larvae per m ² . To optimize control of leatherjackets apply Sevin T&O Insecticide to late instar larvae. Contact local agricultural representative for treatment thresholds and timing of application. Do not allow public use of treated areas during applications or until sprays have dried.
Turf	Leatherjackets (larvae of crane flies; Tipula oleracea and T. paludosa)	Apply one treatment per year of 200 mL of Sevin T&O Insecticide in 6 to 15 L spray volume per 100m ² of turf. Mow turf and apply spray. Do not water for 2 days after treatment. Alternatively, where small areas of turf are being treated, apply in 1.5 to 3 L spray volume per 100 m ² of turf and irrigate following application to ensure movement of Sevin T&O Insecticide into the root zone. Remove excessive thatch and irrigate 24 hours before treatment if soil is dry. To ensure effective use of insecticide, monitor turf for the abundance of larvae of T. paludosa and T. oleracea. Treatment should be considered at densities at or above 270 larvae per m ² .

		<p>To optimize control of leatherjackets apply Sevin T&O Insecticide to late instar larvae. Contact local agricultural representative for treatment thresholds and timing of application.</p> <p>For spot treatment only in residential areas. Do not treat a single residential area larger than 100m²</p>
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