

{Front of Bag}

**SENATOR® 70WP**

**SYSTEMIC FUNGICIDE**

**AGRICULTURAL**

**WETTABLE POWDER**

<b>GUARANTEE:</b> thiophanate-methyl	70%

**READ THE LABEL AND ATTACHED BOOKLET BEFORE USING**

REGISTRATION NO.: 25343  
PEST CONTROL PRODUCTS ACT

GROUP	<b>1</b>	FUNGICIDE
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Registrant:  
Nippon Soda Co., Ltd  
Shin-Ohtemachi Bldg., 2-1, 2-Chrome Ohtemachi, Chiyoda-Ku  
Tokyo, Japan, 100-8165  
USA Contact Number: (212) 490-0350

Canadian Representative:  
Brenda W. Nailor Consulting  
12 Burke Court, Guelph, Ontario  
N1L 1J2  
(519) 837-8704

**Net Contents: 2 Kg**

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**NOTICE TO USER:**

This pest control product is to be used only in accordance with the directions on this 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.

**FIRST AID:**

**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.

**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 inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control centre or doctor for further 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.

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

**TOXICOLOGICAL INFORMATION:**

No specific antidote is available. Treat symptomatically.

**PRECAUTIONS:**

**KEEP OUT OF REACH OF CHILDREN.** May be harmful if swallowed or inhaled. Avoid contact with eyes, skin or clothing. Avoid breathing of dust or spray mist. Wash thoroughly with soap and water after handling. Wash contaminated clothes before re-use. Do not contaminate food or feed. Do not contaminate domestic or irrigation water supplies, lakes, streams and ponds.

**DO NOT** allow effluent or runoff from greenhouses containing this product to enter lakes, streams, ponds or other waters.

If this pest control product is to be used on a commodity that may be exported to the U.S. and you require information on acceptable residue levels in the U.S., visit CropLife Canada's website at: [www.croplife.ca](http://www.croplife.ca).

**DISPOSAL:**

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instructions for any required additional cleaning of the container prior to its disposal.
3. Make the empty container unsuitable for further use.
4. Dispose of the container in accordance with provincial requirements.
5. For information on the disposal of unused, unwanted 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.

***IN CASE OF EMERGENCY INVOLVING A POISONING OR MAJOR SPILL, CALL***

***1-866-336-2983***

{Booklet}

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® SENATOR is a registered trademark of Nippon Soda Co., Ltd.

**GENERAL INFORMATION:**

SENATOR® 70WP is a systemic fungicide for control of certain fungus diseases. It is effective against certain diseases of apples, pears, lowbush blueberries, peaches, nectarines, plums, prunes, cherries, strawberries, raspberries, white beans, sugarbeets, ornamentals, turf, greenhouse tobacco seedlings and white button mushrooms.

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***IN CASE OF EMERGENCY INVOLVING A POISONING OR MAJOR SPILL, CALL***

***1-866-336-2983***

**RESISTANCE MANAGEMENT :**

For resistance management, please note that SENATOR 70WP Fungicide contains a Group 1 fungicide. Any fungal population may contain individuals naturally resistant to SENATOR 70WP Fungicide and other Group 1 fungicides. A gradual or total loss of pest control may occur over time if these fungicides are used repeatedly in the same fields. 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 fungicide resistance:

- Where possible, rotate the use of SENATOR 70WP Fungicide or other Group 1 fungicides with different groups that control the same pathogens.
- Use tank mixtures with fungicides from a different group when such use is permitted.
- Fungicide use should be based on an IPM program that includes scouting, historical information related to pesticide use and crop rotation and considers cultural, biological and other chemical control practices.
- Monitor treated fungal populations for resistance development.
- If disease continues to progress after treatment with this product, do not increase the use rate. Discontinue use of this product, and switch to another fungicide with a different target site of action, if available.
- Contact your local extension specialist or certified crop advisor for any additional pesticide resistance-management and/or IPM recommendations for specific crops and pathogens.
- For further information and to report suspected resistance, contact Nisso America at (212) 490-0350.

Since the occurrence of resistance cannot be foreseen, Nippon Soda Co., Ltd. accepts no responsibility for any loss of, or damage to, crops resulting from the failure of SENATOR 70WP Fungicide to control the resistant fungi strains.

**MIXING:**

Add required amount of SENATOR 70WP Fungicide to partially filled tank with mechanical or hydraulic agitation and then complete filling with water. Agitate continuously to keep the material in suspension.

**RATE:**

Rates for orchard spraying are shown as kg of SENATOR 70WP Fungicide per 1000 litres water for dilute spraying based on a volume of approximately 3500 litres per hectare. For concentrate spraying apply the same quantity per hectare as would be applied by dilute spraying. On turf, use at least 8 litres of water per 100 m<sup>2</sup> of area to be sprayed for dollar spot and use a minimum of 24 litres of water per 100 m<sup>2</sup> of area to be sprayed for brown patch, powdery mildew and pink snow. Use the recommended rate and reduce spray intervals under conditions of severe disease pressure.

**Compatibility:**

SENATOR 70WP Fungicide is compatible with most pesticides; do not mix with lime or other alkaline materials.

**DIRECTION FOR USE: AERIAL APPLICATION**

Apply only by fixed-wing or rotary aircraft equipment that has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates 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 applications 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 pilot has 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 Nisso America at (212) 490-0350 or obtain technical advice from the distributor or your provincial agricultural representative. Application of this specific product must meet and/or conform to the following:

Volume: Apply the recommended rate in a minimum spray volume of 50 litres per hectare.

#### **APPLES AND PEARS:**

NOTE: Always use SENATOR 70WP Fungicide in a tank mix with a suitable protectant fungicide, such as Captan, unless otherwise specified.

**Apple Scab, Powdery Mildew:** Spray with ground application equipment using sufficient volume for thorough coverage. DO NOT APPLY BY AIR.

#### **Eastern Canada**

**Tank Mix with Captan:** Apply at the rate of 175 grams SENATOR 70WP Fungicide plus 1 kg of Captan 50W (625 g Captan 80W) per 1000 litres of water. The rate per hectare is 625 grams of SENATOR 70WP Fungicide + 3.25 kg of Captan 50W (or 2 kg of Captan 80W) in a full-season spray program.

Do not apply tank mix with Captan within 7 days of harvest. Do not use Captan with or shortly after oil sprays, or solvent formulations of parathion.

**British Columbia:**

For apple scab and powdery mildew control in the Okanagan-Kootenay region of British Columbia, apply SENATOR 70WP Fungicide at the rate of 2.25 kg per hectare. Consult local authorities for timing of applications. May be applied up to the day before harvest.

**LOWBUSH BLUEBERRIES:**

**Blossom and Twig Blight:** Apply 1.1 kg of SENATOR 70WP Fungicide in 1000 litres of water per hectare when using ground application equipment or 50-60 litres of water for aerial applications. Commence applications at bud break. Make 3-4 applications at 10 - 14-day intervals. Exact interval used depends on weather conditions and disease development. Contact local extension officials. Do not apply within 60 days of harvest.

**PEACHES, NECTARINES, PLUMS, PRUNES, CHERRIES:**

**Brown Rot:** Apply 500 grams of SENATOR 70WP Fungicide per 1000 litres of water (1.75 kg per hectare), using ground application equipment, at very early stages of blossoming, and at full bloom to ensure adequate protection. In B.C. apply at pink and full bloom stage. Repeat 3 to 5 days later if wet weather conditions prevail. May be applied up to the day before harvest. **DO NOT APPLY BY AIR.**

Experience has shown that alternating contact fungicides and SENATOR 70WP Fungicide for control of brown rot will provide best results with least expectancy of resistance developing to the fungicides.

**RASPBERRIES:**

**Powdery Mildew, Fruit Rots:** Apply 500 grams of SENATOR 70WP Fungicide per 1000 litres of water (1.1 kg per hectare), using ground application equipment, during flowering and repeat every 7 - 10 days as necessary. May be applied up to the day before harvest. **DO NOT APPLY BY AIR.**

**STRAWBERRIES:**

**Fruit Rot (*Botrytis*), Leaf Spot:** Apply 500 grams of SENATOR 70WP Fungicide per 1000 litres of water (1.1 kg per hectare), using ground application equipment, commencing when buds are visible in the crown. Repeat every 7 - 10 days as required up to the day before harvest. During rainy periods which favour rapid development of fruit rots, reduce spray interval to 3 - 5 days. May be applied up to the day before harvest. **DO NOT APPLY BY AIR.**

**WHITE BEANS:**

**White Mould on White Beans:** Apply SENATOR 70WP Fungicide at 1.75 - 2.25 kg per hectare in 1000 litres of water per hectare when using ground application equipment or 50-60 litres of water for aerial applications when conditions favouring development of disease exist (e.g., warm, humid weather combined with heavy, dense crop foliage). This usually occurs during the early stages of bloom prior to the rows closing in. Spray to achieve optimum coverage and penetration on all parts of the plant. If disease conditions persist, repeat applications may be warranted. **NOTE:** Do not feed or allow livestock to graze on treated crops.

**SUGARBEETS:**

**Leaf Spot (*Cercospora* sp.) of Sugarbeets:** Apply SENATOR 70WP Fungicide at 0.42 – 0.56 kg of product per ha, using ground application equipment, when disease first appears. Repeat 14 – 21 days later if required. Make a maximum of two applications per growing season. **DO NOT APPLY BY AIR.**

- DO NOT APPLY WITHIN 21 DAYS OF HARVEST.
- FOR SUGARBEETS GROWN FOR EXPORT ONLY.
- NO SUGARBEETS OR PARTS OF SUGARBEETS ARE TO BE USED AS FODDER OR FEED IN CANADA.

- TO DELAY THE SELECTION OF RESISTANT STRAINS OF FUNGI, SENATOR 70WP FUNGICIDE SHOULD ALWAYS BE ALTERNATED WITH A FUNGICIDE OF DIFFERENT CHEMISTRY

#### TURF:

SENATOR 70WP Fungicide can be applied to golf course greens, tees, fairways and other turf areas. For use on all fine turf applications of cool and warm season grasses (such as Bentgrass, Blue grass, Fescues, Rye Grass) or their mixtures. SENATOR 70WP Fungicide is not phytotoxic to any of the above mentioned grasses when used in accordance with the label. Apply after mowing or avoid mowing for twelve hours after application. Begin applications, using ground application equipment, when diseases first appear. When disease pressure is severe, apply at the higher recommended rate. DO NOT APPLY BY AIR.

Disease	Rate / 100 m <sup>2</sup>	Spray Volume (per 100 m <sup>2</sup> )	Spray Schedule
Dollar Spot ( <i>Sclerotinia homoeocarpa</i> )	25-30 g	Minimum 8 L	Repeat every 10-14 days as required
Brown Patch ( <i>Rhizoctonia solani</i> )	30-60 g	Minimum 24 L	Repeat every 5-7 days as required
Powdery Mildew ( <i>Erysiphe graminis</i> )	125-250 g	Minimum 24 L*	Repeat every 14-21 days as required
Pink Snow Mould ( <i>Fusarium nivale</i> )	125-175g	Minimum 24 L	Repeat when required

\* For Powdery mildew only, wash SENATOR 70WP Fungicide into root zone with 2.5 cm of water immediately after application

#### ROSES, ORNAMENTAL PLANTS:

**Black Spot of Roses and Powdery Mildew:** Apply SENATOR 70WP Fungicide at 500-750 g product per 1000 litres of water using ground application equipment. Repeat every 10-14 days as required. DO NOT APPLY BY AIR.

#### GREENHOUSE POTTED ORNAMENTALS:

**Powdery Mildew, Botrytis and Leaf Spots:** Apply SENATOR 70WP Fungicide at 650-850 g per 1000 L of water using ground application equipment. Water soil thoroughly with spray solution. Repeat every 7 days as required.

**Stem, Crown and Root Rots caused by *Fusarium* and *Rhizoctonia*:** Apply SENATOR 70WP Fungicide at 650-850 g per 1000 L of water as a drench or directed spray using ground application equipment to thoroughly soak the growing media through the root zone. Repeat after 15 days if required. Note: Senator 70WP does not control *Pythium* or *Phytophthora*.

#### ASPEN AND POPLAR:

**Marssonina Leaf Spot, Septoria Leaf Spot:** Apply SENATOR 70WP Fungicide at 1.1 kg product per 1000 litres of water per hectare using ground application equipment. Repeat every 10 days beginning mid-June. Make a maximum number of 3 applications per season. DO NOT APPLY BY AIR.

#### GREENHOUSE TOBACCO SEEDLINGS AND WHITE BUTTON MUSHROOMS:

#### NOTE TO USER: READ THE FOLLOWING BEFORE USING THIS PRODUCT FOR THE INDICATED SPECIAL USE APPLICATIONS

The DIRECTIONS FOR USE for this product for the uses described below were developed by persons other than Nippon Soda Co., Ltd. and accepted for registration by Health Canada under the User Requested Minor Use Label Expansion program. Nippon Soda Co., Ltd. itself makes no representation or warranty with respect to performance (efficacy) and/or crop tolerance (phytotoxicity) claims for this product when used on the crops listed below. Accordingly, the Buyer and User assume all risks related to performance and crop tolerance arising, and agree to hold Nippon Soda Co., Ltd harmless, from any claims based on efficacy and/or phytotoxicity in connection with the uses described below.



**DIRECTION FOR USE: For Control of *Rhizoctonia* Damping-Off on Greenhouse Tobacco Seedlings**

Apply 90 grams of SENATOR 70WP Fungicide in 300 L water to 100 m<sup>2</sup> of seedlings as a drench or directed spray, using ground application equipment, to thoroughly soak the growing media through the root zone. Apply preventatively, when the larger leaves of the seedlings are about 1.5 cm in diameter, or at the first sign of disease. Repeat if necessary 10 - 14 days later. Do not make more than 2 applications per crop. DO NOT apply within 65 days of harvest.

**DIRECTION FOR USE: For Control of *Trichoderma* Green Mould on White Button Mushrooms**

A maximum of one application of Senator 70WP Fungicide per crop cycle may be made either as a single application to the spawn or as a drench application to the casing. Please note that the drench application to the casing will not control the aggressive species of *Trichoderma* (*Trichoderma aggressivum* f. *aggressivum*).

**Resistance Management**

Do not make sequential applications of Group 1 (Benzimidazoles) fungicides. If an application of a Group 1 fungicide has been made to the spawn or casings, use a registered fungicide with a different mode of action before applying another Group 1 fungicide.

**Specific Limitations for Mechanical Spreading of Treated Spawn and Drench Application to the Casings:**

- Do not hand spread Senator 70WP Fungicide treated spawn
- When mechanically spreading Senator 70WP Fungicide treated spawn, any one person can treat and handle only enough spawn to cover a maximum of 600 m<sup>2</sup> of bed surface per day (750 g of Senator 70WP Fungicide)
- Any one person can only apply a casing drench containing Senator 70WP Fungicide to a maximum of 500 m<sup>2</sup> of bed surface per day (304 g Senator 70WP Fungicide) when using hand held equipment.

**Environmental Hazards:**

By-products from this product are toxic to aquatic organisms. Do not store waste piles of treated mushroom compost in an area which will allow runoff into surface waters. Do not contaminate any body of water or groundwater when disposing of equipment wash water. DO NOT allow effluent or runoff from the mushroom houses containing this product to enter lakes, streams, ponds or other waters.

**For Control of *Trichoderma* Green Mould on White Button Mushrooms (CASING)**

Mix 61 g of Senator 70WP Fungicide with approximately 75 L of water and apply as a drench to 100 m<sup>2</sup> of bed surface. Make application shortly after casing. Do not make more than one application to the mushroom bed as a drench. Do not apply within 17 days of first harvest. Do not apply after harvesting has started.

**For Control of *Trichoderma* Green Mould on White Button Mushroom (SPAWN)**

Mix 1.25 g of Senator 70WP Fungicide with 50-62 g of gypsum, limestone or chalk per 1 kg of spawn. Mechanically apply approximately 100 kg of treated spawn to 100 m<sup>2</sup> of bed surface at the time of spawning. Do not apply within 29 days of harvest.

**Exposure Mitigation Measures:**

1. Cover cement mixer with a plastic bag or other type of cover and secure with cord during mixing in order to minimize dust exposure
2. After coating the spawn grain, spawn should be mechanically transferred into a plastic tote (with a lid) to minimize dust exposure.
3. Wash hands and other exposed skin after contact, and before eating, drinking or smoking.
4. Wash clothes before re-wearing. Wash separately from other clothing.
5. **Hand Spreading of Treated Spawn is not permitted.**

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