

2023-2983
2024-03-26

This label has been updated according to the re-evaluation decision of Nucleopolyhedrovirus for Douglas-Fir Tussock Moth and *Neodiprion Abietis* Nucleopolyhedrovirus RVD2023-11. While users are encouraged to follow this updated label immediately, the previously approved label is valid until 2025-06-06 in accordance with the phase out period set out in RVD2023-11. This previously approved label will be provided upon request by emailing hc.pmra.info-arla.sc@canada.ca. In your email please include the product name and Registration number of the label you are requesting.

VIRTUSS Nucleopolyhedrovirus Biological Insecticide

FOR CONTROL OF DOUGLAS-FIR TUSSOCK MOTH OR SUPPRESSION
OF WHITEMARKED TUSSOCK MOTH IN
FOREST, WOODLAND AND ORNAMENTAL USE SITES
WETTABLE POWDER
RESTRICTED

ACTIVE INGREDIENT:..... Polyhedral inclusion bodies of
Douglas-fir tussock moth nucleopolyhedrovirus 2.5%
(Contains at least 1×10^{10}
Polyhedral Inclusion Bodies of *Orgyia pseudotsugata*
nucleopolyhedrovirus per gram)

READ THE LABEL BEFORE USING

DANGER-EYE IRRITANT
POTENTIAL SENSITIZER
CAUTION-SKIN IRRITANT

REGISTRATION NUMBER 17786 PEST CONTROL PRODUCTS ACT NET

NET CONTENTS: 1.5 KG

DATE OF MANUFACTURE:

Product should be stored at 5° C and used within five months

Natural Resources Canada
Canadian Forest Service
Great Lakes Forestry Centre
1219 Queen Street East
Sault Ste. Marie, Ontario
P6A 2E5
(705) 541-5517

DIRECTIONS FOR USE: This product is registered only for the management of Douglas-fir tussock moth and white-marked tussock moth and shall only be used on forest trees, in woodlands, along rights-of-way, in tree nurseries or seed orchards and in treed areas of less than half a hectare where high-valued or ornamental trees may be attacked. Do not allow spray mixture to stand in the tank for more than 12 hours.

Avoid spraying sensitive population areas. This pesticide must be applied in a manner to avoid spraying – either directly or indirectly through drift – sites such as residential areas, schools, playgrounds, or similar sites where people or pets may be present.

MIXING:

VIRTUSS Nucleopolyhedrovirus Biological Insecticide is a freeze-dried, finely-ground powder that readily disperses in water.

1. For each hectare to be treated, pre-mix 25.0 g of powder in 250 mL water and agitate.
2. For final tank mix, add a further 3.5 L of water and 1.25 L of molasses for each hectare to be treated.

When transferring from the mixing tank to the aircraft hopper the formulation should be screened through a 20 mesh or 30 mesh sieve. The pump filter and line filters on the aircraft must not be finer than this sieve. It is recommended that agitation be maintained during spraying. The spray mixture should be used as soon as possible after mixing. Sprays should not be allowed to remain in the mixing tank for more than 12 hours.

GROUND APPLICATION:

VIRTUSS Nucleopolyhedrovirus Biological Insecticide may be applied with conventional hydraulic sprayers at a rate of 25.0 g/1000 L of water/ha (2.5×10^{11} PIB/ha). To prepare ground spray mixtures, add 25.0 g of VIRTUSS Nucleopolyhedrovirus Biological Insecticide powder to 1000 L of water* for each hectare to be treated. Agitate well. Maintain agitation during spraying. The spray mixture should be used as soon as possible after mixing. Wet foliage thoroughly, but not to the point of excessive runoff.

DO NOT allow worker entry into treated areas for 4 hours or until sprays have dried unless wearing waterproof gloves, long-sleeved shirt, long pants, socks and shoes.

*Chlorinated or highly alkaline water should not be used in tank mixes. Tank mix pH should be between 5.0 and 8.0. If only chlorinated water is available, it should be allowed to stand for 24 hours before use.

PRECAUTIONS: KEEP OUT OF REACH OF CHILDREN. POTENTIAL SENSITIZER.

SEVERE EYE IRRITANT. PREVENT ACCESS BY UNAUTHORIZED PERSONNEL.

Avoid contact with skin, eyes and clothing. Avoid inhaling spray mists/dusts. Wash thoroughly with soap and water after handling. Wear a long-sleeved shirt, long pants, protective eyewear (goggles), waterproof gloves, socks and shoes and a NIOSH-approved particulate filtering facepiece respirator with any N, R or P filter when handling, mixing/loading or applying the product and during all clean-up/repair activities. When applicators use a closed system (e.g., enclosed cab), the applicator requirement for waterproof gloves, protective eyewear (goggles) and a NIOSH-approved particulate filtering respirator with any N, R, or P filter may be waived. When reduced personal protective equipment is worn, waterproof gloves and the facepiece respirator must be immediately available for use in an emergency such as a spill or equipment breakdown. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Primary eye irritation studies indicate that the pesticide is a severe eye irritant and

may cause irreversible eye damage. An emergency eye flushing apparatus must be present where mixing/loading/application take place. Remove contaminated clothing and wash clothing before re-use.

FIRST AID :

IF SWALLOWED:	Rinse mouth and throat with copious amounts of water. Do not induce vomiting.
IF ON SKIN/CLOTHING:	Take off contaminated clothing. Wash skin with plenty of soap and water.
IF INHALED:	Move to fresh air.
IF IN EYES:	Hold eyes open and rinse slowly and gently with water. Remove contact lenses, if present, then continue rinsing eyes. Get medical attention.
GENERAL:	Seek medical attention immediately if irritation or signs of toxicity occur and persist or is severe. Take the container, label or product name and Pest Control Product Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION: Product is a severe eye irritant, possibly causing irreversible damage to the cornea.

DISPOSAL:

1. Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
2. Follow provincial instruction 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 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.

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.

NATURE OF RESTRICTION: This product is to be used only in the manner authorized; contact local pesticide regulatory authorities about use permits that may be required.

RESTRICTED USE

Aerial Application Instructions – 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. Aircraft should be calibrated to deliver droplets with diameters of 100–250 microns. To ensure a good deposit, applications should only be made under conditions of highest possible relative humidity and low-wind velocity (i.e., in the early morning or early evening when good spray conditions prevail). Label rates, conditions and precautions are product specific. 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 by employing appropriate marking devices.

Use Precautions – Apply only when meteorological conditions at the treatment site allow for complete and even 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.

Apply only when the potential for drift to areas of human habitation or other areas of human activity such as parks, school grounds, and playing fields is minimal. Take into consideration wind speed, wind direction, temperature inversions, application equipment and sprayer settings.

Operator Precautions – Do not allow the pilot to mix the product to be loaded onto the aircraft. Loading of premixed product 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 mixers/loaders must wear the personal protective equipment described in the PRECAUTIONS section of this label. All personnel on the job site must wash hands and face thoroughly before eating and drinking. Protective clothing, aircraft cockpits 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 1 888 870 6444 or obtain technical advice from the distributor or from your provincial agricultural or forestry representative. Application of this specific product must meet and/or conform to the restricted uses and rates on this label. Virtuss Nucleopolyhedrovirus Biological Insecticide is a highly selective biological insecticide for the management of Douglas-fir tussock moth and whitemarked tussock moth larvae. Applications should be made when larvae are in the first and second instars after they

have migrated from the egg masses and are actively feeding on the current year's foliage.

AERIAL APPLICATION

For aerial application it is recommended that VIRTUSS Nucleopolyhedrovirus Biological Insecticide be used with conventional boom and nozzle or Micronair spinning nozzles on fixed wing aircraft or Beecomist spinning nozzles with drilled sleeves on helicopters. Application equipment should be calibrated to deliver droplet diameters of 100-250 microns. To ensure a good deposit, Virtuss should be applied only under conditions of highest possible relative humidity and low wind velocity; i.e., in the early morning or early evening when good spray conditions prevail. Do not mix this product with any materials other than those listed on this label.

RATES OF AERIAL APPLICATION

	VIRTUSS Nucleopolyhedrovirus Biological Insecticide PER HECTARE	MOLASSES	WATER*	TOTAL EMITTED Volume per hectare
	Grams	PIB		Litres
Forest, Woodlands	25.0	25% total volume	75% total volume	5.0

STORAGE AND SHELF LIFE: In order to ensure microbial purity and virus potency, VIRTUSS Nucleopolyhedrovirus Biological Insecticide should be stored in the original container at temperatures below 5°C and used within five months of the date of manufacture. Product stored longer or subjected to elevated temperatures should be returned to the manufacturer for re-evaluation of purity and potency.

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