



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

December 8, 2015

Mr. Jon C. Wood
Director of Registrations
AMVAC Chemical Corporation
4695 MacArthur Court, Suite 1200
Newport Beach, CA 92660

Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment – Acceptable Amendment to Add New Instructions for Control/Suppression of Post-Harvest Diseases and Greater Application Detail
Product Name: AMV-1018 EP
EPA Registration Number: 5481-571
Application Date: November 24, 2015
OPP Decision Number: 511545

Dear Mr. Wood:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the U.S. Environmental Protection Agency (EPA). If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists examples of statements the EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims

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made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the EPA find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA-approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions, please contact Andrew Reighart of my team by phone at (703) 347-0469 or via email at reighart.andrew@epa.gov.

Sincerely,



Andrew Bryceland, Team Leader
Biochemical Pesticides Branch
Biopesticides and Pollution
Prevention Division (7511P)
Office of Pesticide Programs

Enclosure

ACCEPTED
 12/08/2015
 Under the Federal Insecticide, Fungicide
 and Rodenticide Act as amended, for the
 pesticide registered under
 EPA Reg. No. 5481-571

AMV-1018 EP

**FOR USE AS A POTATO SPROUT INHIBITOR and POST-HARVEST FUNGICIDE
 For Indoor Use Only**

FOR USE THROUGH FOGGING EQUIPMENT ONLY

Active Ingredient: 3-decen-2-one.....98.0%
Inert Ingredients.....2.0%
TOTAL 100.0%

Contains 7.05 lbs (3.2kg) 3-decen-2-one per gallon

KEEP OUT OF REACH OF CHILDREN WARNING - AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

FIRST AID	
If on skin	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If inhaled	<ul style="list-style-type: none"> • Move person 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 poison control center or doctor for treatment advice.
EMERGENCY INFORMATION	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY: For Medical Emergencies phone:.....1-888-681-4261 For Transportation Emergencies: including spill, leak or fire, phone: CHEMTREC®1-800-424-9300 For Product Use Information phone: AMVAC®1-888-462-6822	

EPA Reg. No.: 5481-571
EPA Est. No.: 5481-ID-001

Net Contents:
 As marked on container
 (5 gallons or 12.5 gallons)



See (back) (side) panel for additional Precautionary Statements and Directions For Use

This product is covered by the following US Patents: 6,855,669 and 8,258,081

Batch Code: _____

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

WARNING: Causes skin irritation and substantial but temporary eye injury. Harmful if inhaled. Do not get on skin or on clothing. Avoid contact with eyes. Avoid breathing vapor.

Personal Protective Equipment (PPE):

Wear coveralls worn over long sleeve shirt and long pants, socks, chemical resistant footwear, chemical-resistant gloves, goggles, face shield, or shielded safety glasses and respirator. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables are available, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are **not** within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep unprotected persons out of treated areas until sprays have dried or dusts have settled. Do not enter the treatment area during application. Unless equipped with the required PPE, do not reenter the treatment area for 24 hours (Restricted-entry interval: 24 hours) after treatment and until the ventilation period is completed. PPE required is: coveralls worn over long sleeve shirt and long pants, socks, chemical resistant footwear, chemical-resistant gloves, goggles, face shield, or shielded safety glasses and a NIOSH approved respirator with any N, R, P or HE filter (or MSHA/NIOSH approval number prefix TC-21C).

General: AMV-1018 EP provides effective long-term sprout control by destroying ("burning") the growing meristem of sprouting potato tubers and restores dormancy. Further sprouting of potatoes is prevented up to seven (7) months depending on variety, sprout length, use rate and storage conditions. AMV-1018 EP can also control or suppress certain post-harvest diseases and prevent spread inside the storages.

Use Precautions:

- Do not make applications to potatoes in the field.
- Do not use on seed potatoes. Do not allow the thermal fog to come into contact with or to enter areas used for storage of seed potatoes, potato handling or cutting equipment. Seed potatoes can be safely stored in potato storages which were previously treated with AMV-1018 EP only after full ventilation and clean out procedures have been followed. The ventilation system including ducts, plenums and the storage building itself must be thoroughly flushed with fresh air and cleaned/disinfected prior to storing seed potatoes.
- AMV-1018 EP should be applied only by qualified personnel who have been trained to make AMV-1018 EP applications. Applicators should follow all use directions, safety precautions and also ensure that the thermal fogging equipment is fitted with proper emergency safety shut-off features.

- Do not enter the treatment area during application unless equipped with the required PPE. Do not reenter the storage for 24 hours after treatment and until the ventilation period is completed. Continue to run ventilation fans as necessary to introduce fresh air into the storage.
- Excellent movement of the fog or vapor through the potato pile is important for consistent sprout and disease control.
- Do not treat when there are visible signs of condensation (wet spots) or when conditions favor condensation. Do not introduce warm and humid fresh air inside the storage during the recirculation phase, because sometimes AMV-1018 EP can co-condense on to the skin of tubers and cause pitting on certain sensitive varieties.
- Follow all application equipment manufacturer's use directions.

Varietal Warning: AMV-1018 EP has been tested and found to be safe to use on a wide range of potato varieties under commercial conditions. However since all varieties and storage conditions have not been tested, it is generally a good precaution to pre-test a small batch of potatoes (especially thin-skinned varieties such as *Desiree*) prior to large-scale use.

Procedure for Thermal Fogging with AMV-1018 EP:

The preferred method of application is through standard aerosol (thermal fogging) equipment. Thermal fogging provides the most efficacious and consistent sprout control.

1. Calculate the quantity of AMV-1018 EP required based on total tonnage and condition of tubers in storage prior to application.
2. Prepare aerosol/fog/vapor generating equipment and insert intake hose into the container with AMV-1018 EP.
3. Configure settings such that the ventilation fans are set at proper speeds to re-circulate with adequate pressure to move the fog or vapor through the potato pile. Turn off all humidifier units well ahead of the treatment and apply only when conditions do not favor condensation. Ensure a good seal of the storage to prevent product leakage. These steps will ensure proper distribution of AMV-1018 EP inside the storage.
4. Place the exhaust end of the aerosol/fog or vapor generator into the air mixing chamber. Since potato storages vary greatly in design and air movement patterns, it is advisable to work with your local custom applicator to ensure accurate applications are made under optimal conditions.
5. Adjust flow rate of AMV-1018 EP through the equipment to match the appropriate injection-point temperature. The fog/vapor should be "dry" and not cause a deposition when a dry board is placed in front of the discharge tube. Never allow the product to drip from the end of application pipe.
6. Turn on the fogging equipment and allow the AMV-1018 EP aerosol, fog or vapor into the storage facility's mixing chamber or plenum. Do not leave application equipment unattended during the course of an application.
7. Operate the ventilation fans to recirculate the fog through the pile for up to 24 hours. Directional fans on top of the pile can be used to aid movement of the fog. For processing varieties, fresh cool air can be introduced as needed, into the storage for 8 to 12 hours after completion of treatment, prior to resuming the normal ventilation schedule.
8. After the recirculation period is complete, return the ventilation system to the desired operational mode and allow fresh, cool, dry air into the potato storage facility and exhaust residual vapor.
9. Within 1-4 days following application, buds or sprouts on tubers should exhibit a blackened or "burnt" appearance. However, depending on the potato variety, sprout size, and use rate of AMV-1018 EP, it may take up to 7 to 10 days after treatment to observe full effects (including extending shelf life of tubers).

POTATOES (in storage)		
Treatment	Target	Rate (per ton of potatoes)
Sprout Control	Non-sprouting, suberized potatoes prior to dormancy break	2.1 – 3.1 fl. oz.
	Potato sprouts (0.2 inch or below)	2.1 – 3.1 fl. oz.
	Potato sprouts (0.2 inch to 0.5 inch)	Up to 4.2 fl. oz.
	<ul style="list-style-type: none"> • Treatments should be made towards the end of tuber dormancy and to effectively leverage the natural, sprout-free dormancy period. • For best results, make the first application when approximately 75% of tubers show visible signs of sprouting (peeping) or exhibit signs of early dormancy break (swollen buds). • Treated potatoes can be unloaded from storages and shipped 24 hours after ventilation is resumed, however for full effect, unload the storages 7-10 days after treatment ensuring sprouts are sufficiently blackened and adequate shelf life is achieved. • Rate can be adjusted to match the sprout length and desired residual length of control. Generally, for long dormancy varieties (e.g. <i>Russet Burbank</i>) when sprouts are approximately 0.3 inch, one treatment at 4.2 fl. oz./ton can provide up to seven (7) months of control when stored at 40°F or lower. • When tubers are stored at 46°F or higher, for medium to short dormancy varieties, around two (2) to three (3) months of sprout control can be expected. • Repeat applications as needed, to maintain sprout-free tubers. (See Restrictions below) • Can be mixed with low use rates of chlorpropham (CIPC) to enhance efficacy. 	
	Potatoes undergoing reconditioning	Up to 4.2 fl. oz.
	<ul style="list-style-type: none"> • AMV-1018 EP can be used effectively to burn off sprouts which develop during the reconditioning phase. Unload within 30 days. • For best results, average sprout length should not exceed 1 inch at the time of treatment. 	
	Rescue Treatment with sprouts 0.5 inch to 1 inch	Up to 4.2 fl. oz.
<ul style="list-style-type: none"> • In cases where storage conditions lead to undesirable sprouting, especially late in the storage cycle, AMV-1018 EP can be effectively used to “burn off” sprouts and restore dormancy. • Important: Unload potatoes within 30 days after treatment. 		
Disease Control	Control or suppress post-harvest diseases such as dry rot (<i>Fusarium spp.</i>), pink rot and (<i>Phytophthora erythroseptica</i>) and silver scurf (<i>Helminthosporium solani</i>)	3.1 to 4.2 fl. oz.
	<ul style="list-style-type: none"> • Apply early in the storage cycle when light disease infestation levels are present. Repeat applications as needed to suppress and prevent further spread of disease. Do not treat storages which have very high disease levels or when the integrity of the potato skin (peel) is compromised. 	
Potato Quality Improvement	Improve tuber turgidity and reduce pressure bruising	2.1 to 4.2 fl. oz.
	Lower tuber greening at pack out	
<ul style="list-style-type: none"> • For maximum benefit, treat at least 30 days prior to unloading. 		
<p>One gallon of AMV-1018 EP will treat 610 cwt. potatoes at the maximum use rate.</p> <p>Restrictions</p> <ul style="list-style-type: none"> • Reapply as needed. Do not apply more than 16.8 fl. oz./ton of potatoes per storage season. • Minimum retreatment interval is 7 days. • Do not use in combination with dimethyl naphthalene (DMN) products. 		

Note: AMV-1018 EP can also be used very effectively with other sprout control products such as chlorpropham (CIPC) or maleic hydrazide (MH). When mixing with CIPC, lower rates of AMV-1018 EP may be used to enhance the overall performance of CIPC for sprout control and to simultaneously reduce CIPC deposition on walls, plenums, ducts and fans.

Consult your local custom applicator for more information.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

Pesticide Storage: Store in cool dry area.

Pesticide Disposal: Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling: Non-refillable container. Do not reuse or refill this container. Then offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use, subject to the inherent risks referred to herein, when it is used in accordance with such directions; and (c) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and upon reports of field experience. Tests have not been made on all varieties of potatoes, or in all states or under all conditions.

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