



Department of Pesticide Regulation



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Director

MEMORANDUM

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Governor

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FROM: John S. Sanders, Ph.D., Environmental Program Manager II
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DATE: April 24, 2012

SUBJECT: METHYL PARATHION MITIGATION

United State Environmental Protection Agency (U.S. EPA) Actions

In 2003, the U.S. EPA completed an Interim Reregistration Eligibility Decision for methyl parathion. Concerns were expressed for applicators and mixer/loaders of agricultural applications of methyl parathion with margin of exposure (MOEs) of less than 100 (the target MOE). In 2006, U.S. EPA implemented the Registration Review program to review each registered pesticide every 15 years to determine whether it continues to meet the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) standard for registration. The following timeline highlights significant events that have occurred during the registration review of methyl parathion:

- March 29, 2010 – A Memorandum of Agreement (MOA) signed by U.S. EPA and the technical and end-use registrants stated that all methyl parathion product registrations would be voluntarily cancelled. The MOA stipulated the existing stocks provision for the registrations.
- April 28, 2010 – Published a Notice of Receipt of requests to voluntarily cancel all pesticide registrations for methyl parathion in the Federal Register (FRL-8822-6).
- July 16, 2010 – Published a Product Cancellation Order for methyl parathion in the Federal Register (FRL-8833-8).

The product cancellation order of July 27, 2010, allows the following existing stocks provision: All sale, distribution and use of existing stocks of manufacturing-use products imported into the United States shall be prohibited as of December 31, 2012. In addition, as of December 31, 2012, all sale, distribution, or use of existing stocks of manufacturing-use products shall be prohibited unless the sale, distribution, or use is for purposes of export consistent with section 17 of FIFRA or for proper disposal. Persons other than the registrants are permitted to sell or distribute end-use products prior to August 31, 2013. All sale and distribution of end-use products shall be prohibited as of August 31, 2013, except for export consistent with section 17 of FIFRA or for proper disposal. Additionally, all use of existing stocks of the end-use products shall be prohibited as of December 31, 2013.



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Department of Pesticide Regulation (DPR) Risk Characterization Document (RCD)

In 2010, DPR completed the final RCD addendum for methyl parathion for occupational, ambient air and aggregate exposures. The RCD concluded that there is concern for application site bystanders, occupational exposures, aggregate exposure for the general population and aggregate exposure for workers with MOEs below the benchmark of 100.

Methyl Parathion Use in California

Table 1 displays the total pounds of methyl parathion and methyl parathion, other related as reported for each of the last five years and the number of crops/use sites cited in DPR's pesticide use report (PUR).

Table 1. Methyl Parathion Use in California 2006 – 2010

Year	Pounds Used	Number of Crops/Use Sites
2006	89,232	9
2007	79,327	15
2008	35,902	10
2009	26,690	13
2010	22,554	7

More than 90 per cent of the use is applied to walnuts.

Methyl Parathion-Related Illnesses in California

Between 2000 and 2009, California's Pesticide Illness and Surveillance Program (PISP) database reported three probable or possible illnesses related to the agricultural use of methyl parathion. All three cases related to use on walnuts.

Methyl Parathion Products Registered in California

There is currently one product containing methyl parathion registered in California. The product is Penncap-M Microencapsulated Insecticide (70506-193-AA). This product does not include walnuts on the label, but there is a Special Local Need label (Section 24c, EPA SLN No. CA-000001) for the product for the treatment of walnut scale.

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Need for Mitigation

All use of existing stocks of methyl parathion will be prohibited on December 31, 2013. I expect some use on walnuts will continue until that date. The label for PennCap-M Microencapsulated Insecticide already includes extensive engineering controls and /or personal protective equipment (see Attachment I, excerpt from label) to reduce dermal and inhalation exposure to workers applying and handling methyl parathion. With the cancellation of all products on December 31, 2013, concerns for exposures to application site bystanders, occupational exposures, aggregate exposure for the general population and aggregate exposure for workers will be mitigated. Therefore, I recommend no further mitigation measures are necessary to address methyl parathion use in California.

Attachment

References

Department of Pesticide Regulation (DPR). 2010. Risk Characterization Document: Methyl Parathion, Occupational, Ambient Air and Aggregate Exposures; Addendum to the 2004 Risk Characterization Document for Methyl Parathion Dietary and Ambient Air Exposures. October 26, 2010.

Department of Pesticide Regulation (DPR). 2012. Pesticide use report indexed by chemical. CalPip Data Server, DPR.

Department of Pesticide Regulation (DPR). 2012. Pesticide Illness and Surveillance Program database. CalPIQ Data Server, DPR.

United States Environmental Protection Agency, 2006. Final Reregistration Eligibility Decision Document for Methyl Parathion. July 31, 2006.

United States Environmental Protection Agency, 2010. Methyl Parathion Proposed Registration Review Final Decision. July 7, 2010.

United States Environmental Protection Agency, 2011. Methyl Parathion; Rescission of Previously Issued Cancellation Orders and Issuance of Revised Cancellation Orders for Certain Pesticide Registrations. Federal Register: July 11 (Volume 76, Number 132).

94% of actual size

Product file
ID# 239015

RESTRICTED USE PESTICIDE

Due to residual effects to avian species and bees.
For retail sale to, and use only by Certified Applicators or persons under the direct supervision of a Certified Applicator,
and only for those uses covered by the Certified Applicator's certification.

Pennncap-M[®]

GROUP 1 INSECTICIDE

Microencapsulated Insecticide

ACTIVE INGREDIENTS:	
Q,O-Dimethyl O-p-nitrophenyl phosphorothioate	20.9%
Related Isomers	1.1%
OTHER INGREDIENTS:	78.0%
TOTAL:	100.0%

*Methyl Parathion (Contains 2 pounds Methyl Parathion and Related Isomers per Gallon)
U.S. Patent Nos. 3,429,827; 3,577,515; 3,959,454

SPECIAL NOTICE TO USERS: It is unlawful to use this product after December 31, 2013. This container and any contents remaining after December 31, 2013 shall be disposed of in accordance with State and Federal law.

KEEP OUT OF REACH OF CHILDREN AVISO WARNING

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 ORGANOPHOSPHATE

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 further treatment advice.
IF SWALLOWED	<ul style="list-style-type: none"> Call a poison control center 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 center or doctor. Do not give anything by mouth to an unconscious or convulsing person.
IF ON SKIN OR CLOTHING	<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 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. Contact the Rocky Mountain Poison Control Center at 1-866-673-6671 for emergency medical treatment information.

NOTE TO PHYSICIAN - This product contains methyl parathion, an organophosphate that inhibits cholinesterase. If symptoms of cholinesterase inhibition are present, Atropine by injection is antidotal. 2-PAM is also antidotal and may be administered in conjunction with atropine. Morphine is contraindicated.

See inside for additional Precautionary Statements and complete Directions For Use.



United Phosphorus, Inc.
630 Freedom Business Center, Suite 402 • King of Prussia, PA 19406
1-800-438-6071 • www.upi-usa.com

EPA Registration No. 70506-193



30 Gallons

LABELING ACCEPTABLE
STATE OF CALIFORNIA
DEPARTMENT OF PESTICIDE REGULATION
PESTICIDE REGISTRATION
Date 6/30/10 Reviewer mmam
Reg. No. 70506-193-AA

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

WARNING

MAY BE FATAL IF INHALED. HARMFUL IF SWALLOWED. HARMFUL IF ABSORBED THROUGH SKIN.

Do not breathe vapors or spray mist. Avoid contact with eyes, skin, or clothing. Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals.

If you feel sick in any way, STOP work and get help right away. See First Aid section on main container label.

The Rocky Mountain Poison Control Center is available for recommendations regarding poisoning management, emergency treatment, and other information regarding the toxicity of methyl parathion. The toll free number for the Rocky Mountain Poison Control Center is 1-866-673-6671.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are made of any waterproof material. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

Mixers and loaders for aerial application using engineering controls and all applicators using engineering controls must wear:

- Long-sleeved shirt and long pants,
- Shoes plus socks,
- In addition, mixers and loaders must wear chemical-resistant gloves and a chemical-resistant apron.

See Engineering Controls for additional requirements.

Mixers and loaders for ground application must wear:

- Coveralls over long-sleeved shirt and long pants,
- Chemical-resistant gloves,
- Chemical-resistant footwear plus socks,
- Chemical-resistant headgear if overhead exposure,
- Chemical-resistant apron if exposed to the concentrate, and
- A respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P, or HE prefilter.

Handlers performing tasks, such as spill clean-up, for which engineering controls are not feasible, must wear the PPE cited above for mixers and loaders for ground application.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them.

Engineering Controls for Mixers and Loaders for Aerial Application

Mixers and loaders for all aerial applications must use a closed system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(4)]; for dermal protection and must:

- Wear the PPE listed above for mixers, loaders using engineering controls,
- Wear protective eyewear if the system operates under pressure, and
- Be provided, must have immediately available, and must use in an emergency, such as a broken package, spill, or equipment breakdown the following: coveralls and chemical-resistant footwear and a respirator specified in the PPE section above.

Engineering Controls for All Applicators

Use of human flaggers is prohibited.

Applicators must use an enclosed cab that meets the definition in the Worker Protection Standard for agricultural pesticides [40 CFR 170.240(d)(5)] for dermal protection. In addition, such applicators must:

- Wear long-sleeved shirt and long pants,
- Wear shoes plus socks,
- Either wear the type of respirator specified in the PPE section above or use an enclosed cab that is declared in writing by the manufacturer or by a government agency to provide at least as much respiratory protection as the type of respirator specified in the PPE section above.

- Be provided, must have immediately available, and must use in an emergency when they must exit the cab in the treated area: coveralls, chemical-resistant gloves, chemical-resistant footwear, a respirator as specified in the PPE section above, and chemical-resistant headgear if overhead exposure.
 - Take off any PPE that was worn in the treated area before reentering the cab, and
 - Store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab.
- Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard for agricultural pesticides [40 CFR 170.240(d)(6)].

USER SAFETY RECOMMENDATIONS:

*Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Note to Physician: The active ingredient of PENNCAP-M is an organophosphate cholinesterase inhibitor. Atropine is antidotal. 2-PAM is also antidotal and may be administered in conjunction with atropine. Morphine is contraindicated.

Warning signs of organophosphate poisoning include weakness, headache, tightness in chest, blurred vision, non-reactive pin-point pupils, salivation, sweating, nausea, vomiting, diarrhea, and abdominal cramps. If these symptoms appear, transport the patient immediately to the nearest hospital. Keep the patient prone and quiet. Start artificial respiration immediately if patient is not breathing.

Call a physician in all cases of suspected poisoning. It is suggested that a suitably equipped local medical facility be identified prior to using this product.

PRECAUTIONS and RESTRICTIONS

PENNCAP-M is a flowable formulation consisting of a water suspension of polymeric-type microcapsules which contain methyl parathion. It is applied by air or ground equipment by diluting it with an amount of water suitable for the specific crop and type of spraying equipment. For air application, use at least 2 gallons total spray per acre unless specified otherwise.

Mixing Instructions - First fill the tank with 1 to 1 1/2 gallons of water for each gallon of PENNCAP-M to be used. Start mechanical or hydraulic agitation. Slowly add the required amount of PENNCAP-M, agitate a few minutes; continue agitating and add the remaining volume of water. This procedure should be followed to insure proper mixing of PENNCAP-M.

For Tank Mixes: After pre-mixing PENNCAP-M and water as described above, fill the tank 1/2 to 3/4 full. Add tank mix products in the following order:

1. Wettable powders
2. Dry flowable or Wettable dry granules
3. Flowables
4. Emulsifiable concentrates
5. Fertilizer products

Add the remaining volume of water.

Mixtures of PENNCAP-M with emulsifiable concentrates, organic solvents, or some surfactants may cause increased toxicity and shorter residual effectiveness. This effect is more pronounced with concentrated sprays and extended periods between mixing and application.

STIR OR SHAKE BEFORE USING.

DO NOT USE SCREENS OR NOZZLES FINER THAN 50 MESH.

PENNCAP-M will not control organophosphate resistant insects.

Rainfall soon after application may decrease effectiveness of PENNCAP-M. Applications are not recommended if rainfall is expected within 6 hours of application.