

Chlorpyrifos-Methyl Facts

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EPA has assessed the dietary risk of chlorpyrifos-methyl and prepared a Report on FQPA Tolerance Reassessment Progress and Risk Management Decision for this organophosphate (OP) pesticide. The Report identifies risk mitigation measures needed to reduce risk and summarizes data needed to better characterize risks. The registrants of chlorpyrifos-methyl have requested voluntary cancellation of their products rather than committing to develop additional data. These data include acute, subchronic, developmental neurotoxicity studies, and toxicology data base. The voluntary cancellations will be "phased-in" to facilitate the user's transition to other products. In the interim, before sale, distribution, and use of chlorpyrifos-methyl cease, the registrants have agreed to measures which mitigate the worker associated with chlorpyrifos-methyl.

The chlorpyrifos-methyl agreement was reached after the risk assessment and mitigation proposal were completed through the OP pilot public participation process, which increases transparency and maximizes stakeholder involvement in EPA's development of risk assessments and risk management decisions. EPA worked extensively with affected parties during the development of the risk mitigation proposal. The agreement on the voluntary cancellation, based on the registrants' decision not to develop data that were an essential part of the risk mitigation proposal, concludes the OP pilot process for chlorpyrifos- methyl.

Uses

Chlorpyrifos-methyl is a general use organophosphate insecticide registered in 1985 for use on stored grain (for protection of stored food, feed oil, and seed grains against injury from stored grain weevils, moths, borers, beetles and mealworms including granary weevil, rice weevil, red flour beetle, confused flour beetle, saw-toothed grain beetle, Indian meal moth, and Angoumois grain moth, lessor grain borers), seed treatment, grain bin and warehouse.

Annual domestic use is 80,000 pounds of active ingredient per year.

Health Effects

Chlorpyrifos-methyl can cause cholinesterase inhibition in humans; that is, it can overstimulate the nervous system causing nausea, dizziness, confusion, and at very high exposures (e.g., accidents or major spills), respiratory paralysis and death. In addition, systemic toxicity may include body weight loss, decreased food consumption, liver, kidney and adrenal pathology.

Risks

Based on the data currently available, residues of chlorpyrifos-methyl in food does not pose risk concerns.

Based on the use pattern for chlorpyrifos-methyl, no residential nor drinking water exposure is anticipated.

With maximum PPE and/or engineering controls, the risks from mixing, loading and applying are of concern for hand-held spray equipment and all dust application methods.

EPA did not quantitatively assess the risks to postapplication workers. Since personnel rarely have direct contact with the stored grain and skin exposure is only a concern during short exposures for testing of grain, minimal postapplication exposure is anticipated.

Risk Mitigation

The registrants have requested a voluntary cancellation of chlorpyrifos-methyl.

The registrants have agreed to cancel immediately the production of its dust formulation product (EPA Reg. No. 7501-98 & 7501-99) used on stored grain, and will not sell nor distribute the products containing a.i. chlorpyrifos-methyl after March 31, 2001. All existing stocks of the dust formulation will be allowed until December 31, 2001.

The registrants are also canceling its manufacturing use products (EPA Reg. No. 62719-42) and the liquid formulations (EPA Reg. No. 7501-41 and 62719-42) and will not sell nor distribute the products after December 31, 2003. All existing stocks of the manufacturing use product and liquid formulations will be allowed until December 31, 2004.

The changes include deletion of all but two uses from all product labels. Only direct treatment of grain with automated admixture systems and empty bin treatment from outside the bin will be allowed. (further information see Table 7 "Summary of Labeling Changes for chlorpyrifos-methyl.")

The OP Pilot Public Participation Process

The organophosphates are a group of related pesticides that affect the functioning of the nervous system. They are among EPA's highest priority for review under the Food Quality Protection Act.

EPA is encouraging the public to participate in the review of the OP pesticides. Through a six-phased pilot public participation process, the Agency is releasing for review and comment its preliminary and revised scientific risk assessments for individual OPs. (Please contact the OP Docket, telephone 703-305-5805, or see EPA's web site, [Pesticide Reregistration Status](#).)

EPA is exchanging information with stakeholders and the public about the OPs, their uses, and risks through Technical Briefings, stakeholder meetings, and other fora. USDA is coordinating input from growers and other OP pesticide users.

Based on current information from interested stakeholders and the public, EPA is making interim risk management decisions for individual OP pesticides, and will make final decisions through a cumulative OP assessment.

Next Steps

Numerous opportunities for public comment were offered as this decision was being developed. The Interim Tolerance Reassessment Evaluation and Risk Management Decision for Chlorpyrifos-methyl is being issued in final (see <http://www.epa.gov/pesticides/reregistration/status.htm>), without a formal public comment period. However, the docket remains open, and any comments submitted in the future will be placed in this public docket.

To effect the label amendments as quickly as possible, time frames for making the changes required by the Interim Tolerance Reassessment Evaluation and Risk Management Decision document are shorter than those in a usual RED. Label changes were submitted by registrants to the Agency on April 2001.

When the [cumulative risk assessment](#) for all organophosphate pesticides is completed, EPA will issue its final tolerance reassessment decision for chlorpyrifos-methyl and may require further risk mitigation measures.

In lieu of putting end use dates on the label, registrants have agreed to notify their distributor of the last use date and the rationale for it.

The Agency is working very closely with USDA to assess pesticide and integrated management approaches currently being evaluated as potential replacements for chlorpyrifos methyl. EPA and its stakeholders will expeditiously assess the viability of any compounds identified as alternatives to chlorpyrifos methyl.