

Vapam HL Liquid Soil Fumigant Evaluation Report for Category B, Subcategory 2.1 and 2.4 (New End Use Product Registration)

Application Number: 2006-0455
Application: Category B, Subcategory 2.3 and 2.4 Application (new / changes to end use product chemistry)
Product: Vapam HL Liquid Soil Fumigant
Registration Number: 29128
Active ingredients (A.I.): metam sodium (MTM)
PMRA Document Number: 1661493

Background

Vapam HL Liquid Soil Fumigant containing 42% of metam sodium is used as a pre-planting treatment for control of many soil-borne pests that attack ornamentals, food and fibre crops, and tobacco. Vapam HL controls germinating weed seeds such as annual grasses, bermuda grass, chickweed, dandelion, ragweed, henbit, lamb's-quarters, pigweed, purslane, Johnson grass, wild morning glory and suppresses perennial weeds such as quackgrass. It also controls nematodes and symphytan as well as soil-borne fungus diseases, particularly, damping-off and root rot. For specific details of uses, application rates and methods, precautions, restrictions, and personal protective equipment requirements, refer to the product label.

Purpose of Application

The purpose of this application is to register a new end use product Vapam HL Liquid Soil Fumigant with a new guarantee, 42.0% of metam, and new proportion of formulants. Use patterns and pest claims on the label for Vapam HL Liquid Soil Fumigant are similar to those found on the Vapam Liquid Soil Fumigant (Reg. No. 6453) label that is owned by the same company.

Chemistry Assessment

Vapam HL is a solution containing the active ingredient metam-sodium at a nominal concentration of 42%. This product has a density of 1.21 g/mL and pH in the range of 8.5-11.0. The chemistry requirements for Vapam HL are complete.

Health Assessments

Vapam HL Liquid Soil Fumigant is slightly toxic to the rat by the oral route. It is of low toxicity through the dermal and inhalation routes. It is minimally irritating to the eyes and slightly irritating to the skin. Vapam HL Liquid Soil Fumigant is considered to be a potential skin sensitizer.

The use patterns of the new end-use product Vapam HL Liquid Soil Fumigant are similar to the registered end-use product Vapam Liquid Soil Fumigant; therefore, (1) dietary exposure of all population subgroups to residues of metam sodium should not increase when Vapam HL Liquid Soil Fumigant is applied according to the label directions and (2) the potential occupational or bystander exposure should not increase over the presently registered uses of the active ingredient.

Environmental Assessment

Although the guarantee of metam sodium is greater in the proposed Vapam HL Liquid Soil Fumigant, the application rates are similar to that of than the registered Vapam Liquid Solution Soil Fumigant. Thus, no additional environmental risk is expected with the application of the Vapam HL Soil Fumigant provided that the precautions stated under "Environmental Hazards" of the label are observed.

Value Assessment

Efficacy and crop tolerance data are waived based on the following facts: (1) The increase in proportion of Vapam Technical in Vapam HL is equal to the decrease in proportion of the diluent, water. (2) There is no change to application rate of the active ingredient and no new pest claims or host claims (planted after soil treatment) were requested for labelling. (3) Reduction on product efficacy with the new application methods, power mulcher, power roller or rotovator and roll, are not anticipated because changes to these application methods are only the methods of soil cultivation after soil treatment which are alternative to rotary tiller.

Efficacy data on nematodes, specifically the golden nematode, was not reviewed. Since the golden nematode is listed as a quarantine pest by the Canadian Food Inspection Agency, a label statement that was added indicating efficacy data specific for control of the golden nematode was not assessed.

Conclusion

The Agency has completed an assessment of the subject application and has found the information sufficient to register the new formulation of Vapam HL Soil Fumigant.

References

List of Studies/Information Submitted by Registrant

- PMRA # 1107353 Product Identification, DC-103F. RTU/PC001, 2000. DACO: 3.1.
- PMRA # 1107354 Formulation Process, DC-103F. RTU/PC001, 2000. DACO: 3.2.
- PMRA # 1107358 Establishing Certified Limits, DC-103F. RTU/PC001, 2000. DACO: 3.3.1.
- PMRA # 1107359 Enforcement Analytical Method, DC-103F. RTU/PC001, 2000. DACO: 3.4.1.
- PMRA # 1107360 Enforcement Analytical Method, HPT-0018, 2000. DACO: 3.5.
- PMRA # 1107361 Lonza Formulation DC-103F- Accelerated Storage Stability and Corrosion Characteristics., SP-00076-A, 2001. DACO: 3.5.10.
- PMRA # 1137515 Metam Sodium: Acute Oral Toxicity to the Rat of a 42% SL Formulation, Zeneca Central Toxicology Laboratory, CTL/P/4277, MRID: 43457701, 1994. DACO: 4.6.1.
- PMRA # 1137516 Metam Sodium: Acute Dermal Toxicity to the Rat of a 42% SL Formulation, Zeneca Central Toxicology Laboratory, CTL/P/4278, MRID: 43457702, 1994. DACO: 4.6.2.
- PMRA # 1137517 Metam Sodium: 4-Hour Acute Inhalation Toxicity Study In The Rat of a 42% Formulation, Zeneca Central Toxicology Laboratory, N/A, MRID: 43457703, 1994. DACO: 4.6.3.
- PMRA # 1137518 Metam Sodium: Eye Irritation to the Rabbit of a 42% SL Formulation, Zeneca Central Toxicology Laboratory, CTL/P/4280, MRID: 43457704, 1994. DACO: 4.6.4.
- PMRA # 1137519 Metam Sodium: Skin Irritation to the Rabbit of a 42% SL Formulation, Zeneca Central Toxicology Laboratory, CTL/P/4279, MRID: 43634001, 1994. DACO: 4.6.5.
- PMRA # 1137520 Metam Sodium: Skin Sensitization to the Guinea Pig of a 42% SL Formulation, Zeneca Central Toxicology Laboratory, CTL/P/4281, MRID: 43457705, 1994. DACO: 4.6.6.

PMRA # 1251845 Rationale to Waive Efficacy Data Requirement. Amvac Chemical Corporation. February 2, 2006. DACO 10.1. and 10.2.3.1.”

PMRA # 1305185 Support for registration of Vapam HL in Canada. pp. 1.

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