

US EPA ARCHIVE DOCUMENT

EFFICACY REVIEW

DATE: IN 3-9-99 OUT 5-19-99

FILE OR REG. NO. 4816-690

PETITION OR EXP. PERMIT NO. _____

DATE DIV. RECEIVED February 24, 1999

DATE OF SUBMISSION February 19, 1999

DATE SUBMISSION ACCEPTED _____

TYPE PRODUCT(S): (I,)D, H, F, N, R, S _____

DATA ACCESSION NO(S). 447628-01;D254010;S558050;Case#051356;AC:305

PRODUCT MGR. NO. 03-Layne/DeLuise

PRODUCT NAME(S) PERMANONE® Multi-Use Insecticide Spray

COMPANY NAME AgrEvo Environmental Health

SUBMISSION PURPOSE Provide performance data in support of claims related to control of house dust mites in carpets, bedding, curtains and on upholstery.

CHEMICAL & FORMULATION Permethrin: (3-phenoxyphenyl)methyl(+)*cis*, trans 3-(2,2-dichloroethenyl) 2,2-dimethylcyclopropanecarboxylate
0.50%
(pressurized ready-to-use liquid spray)

CONCLUSIONS & RECOMMENDATIONS The data presented in EPA Accession (MRID) Number 447628-01, having been obtained from standard laboratory testing designed to simulate actual use, and meeting the requirements of § 95-11(b)(1) to (7) on p. 268 and the standard of § 95-11(c)(2)(ii)(A)(a) on p. 270 of the Product Performance Guidelines, are adequate to demonstrate satisfactory reduction in live adults of the American house dust mite, *Dermatophagoides farinae*, for up to 8 weeks [2 months, 60 days] when the subject product was sprayed on 8.5 cm x 8.5 cm mini-mattresses at the rate of 1.0 gm per unit (= 13.84 mg of product per sq.cm) as measured by a combination of 2 exposures of 28 days each to separate inoculations of populations of house dust mites, during which time mite mortality increased from 71.5% at 7 days, to 89.9% at 14 days, 99% at 28 days, 71.3% at 7 days after the second inoculation, > 99% at 28 days after the second inoculation, with respect to the untreated samples; 74.5% at 7 days, 96.2% at 14 days, 98.8% at 28 days, 72% at 2nd 7 days, and > 99% at 2nd 28 days, with (to be continued)

respect to placebo for the subject product (vehicle less toxicant). This is adequate to support claims for the subject product as follows: "Kills House Dust Mites in Carpets, Bedding, Curtains and on Upholstery", "Controls House Dust Mites (*Dermatophagoides* spp.) for up to 8 Weeks [2 Months, 60 Days] in Carpets, Bedding, Curtains and on Upholstery", "Controls House Dust Mites that may cause Asthma, Hay Fever, Rhinitis, Watery Eyes, Sneezing", "...is Effective in the Control of Dust Mites". The subject product was as effective or better than 2 other registered products which contain permethrin along with other active ingredients: EPA Reg. No. 432-790, "Tetraperm Crawling Insect Killer WBA Q3" containing 0.25% permethrin + 0.10% tetramethrin + 0.50% piperonyl butoxide, and EPA Reg. No. 4816-773, "Pyraperm Household Insect Killer WBA P59" containing 0.20% permethrin + 0.10% pyrethrins + 0.50% piperonyl butoxide. As can be seen from a comparison of the formulations for the 3 products, the subject product has 2X or 2.5X as much active permethrin as the other 2, so we would expect that the subject product would be more effective against house dust mites.

RL Vern L. McFarland, IB