



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

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

MEMORANDUM

Date: June 2, 2003

To: Cypermethrin RED Team

From: Mark Seaton, Chemical Review Manager
Special Review and Reregistration Division

Subject: REVISED Cypermethrin Use Closure Memo

This memo serves as the revised cypermethrin use closure memo and identifies cypermethrin uses for the Reassessment Eligibility Decision (RED) risk assessments. This revision incorporates corrections identified by cypermethrin registrants.

Background:

The SMART meeting for cypermethrin was held on March 25, 2003. During the SMART meeting, the technical registrants indicated their support of all current cypermethrin registrations.

Cypermethrin is a type II pyrethroid insecticide, meaning it has a cyano group at the α carbon position of the alcohol moiety and it is more effective when the ambient temperature is raised. Cypermethrin is used both in agriculture and non-agricultural settings to control ants, cockroaches, and termites. The great majority of cypermethrin use occurs in sites other than agricultural crops, including indoor and outdoor commercial, household and institutional use.

Applications:

Application sites and application rates for crop and non-crop sites are listed in Tables 1 and 2, respectively. For agriculture/crop site applications, cypermethrin can be applied as

ear tags, low volume spray (concentrate), ground broadcast spray, aerial broadcast spray, and chemigation.

For non-crop sites, applications types include soil treatments, barrier treatments, and crack and crevice and/or spot treatments. Application methods include brush, fogger, hand-held sprayer, low-pressure sprayer, power sprayer, sprinkler can, aerosol can, and cloth, glove, or sponge for application of horse wipe products.

Additionally, cypermethrin is used for pre- and post-construction protection of wood products. For wood protection, applications types include void treatment, injection treatment, manual brush treatment, crack and crevice and/or spot treatment, soil treatment (surface), soil treatment (subslab injection), soil treatment (rodding), soil contact (nonfumigation), as well as treatment by pressure and dip.

In general, retreatment of non-crop sites can occur on an as needed basis.

Current formulations for technical products include: emulsifiable concentrate, emulsion in water, wettable powder, and wettable powder in water soluble packaging. Current formulations for end-use products include: aerosols (indoor fogger, crack and crevices/spot, surface sprays); ready-to-use (spray and horse wipe); and cattle ear tags.

The tables below represents the cypermethrin uses that are being supported for reregistration. The risk assessments will be based on these use sites, application rates, retreatment intervals, and application methods. After the issuance of the RED, all end use products will conform to these parameters, as well as any risk mitigation measures identified through the reregistration process. Updated labeling must be submitted after the RED is issued.

Table 1: Crop/Agriculture Use Sites

Application Site	Application Rates for a.i.	Seasonal Max Dose/Crop Cycle	Min. Retreat-ment (Days)	REI (Hrs)
BEEF/RANGE/ FEEDER CATTLE (MEAT)	0.002932 lb/animal		120	NS
BROCCOLI	0.1 lb/A	0.6 lb	7	12
BROCCOLI - CHINESE	0.1 lb/A	0.6 lb	7	12
BROCCOLI-RAAB	0.1 lb/A	0.4 lb	7	12
BRUSSELS SPROUTS	0.1 lb/A	0.6 lb	7	12
CABBAGE	0.1 lb/A	0.6 lb	7	12
CABBAGE - CHINESE BOK CHOY NAPA	0.1 lb/A 0.1 lb/A	0.4 lb 0.6 lb	7 7	12 12
CALVES (MEAT)			120	NS
CAULIFLOWER	0.1 lb/A	0.6 lb	7	12
CAVALO BROCCOLI	0.1 lb/A	0.6 lb	7	12
CLOVER	0.1 lb/A		As Needed	NS
COLLARDS	0.1 lb/A	0.4 lb	7	12
COTTON	0.1 lb/A	0.6 lb	3	12

Application Site	Application Rates for a.i.	Seasonal Max Dose/Crop Cycle	Min. Retreat-ment (Days)	REI (Hrs)
GARLIC	0.1 lb/A	0.5 lb	7	12
JAPANESE BUNCHING ONIONS	0.1 lb/A	0.5 lb	7	12
GREEN ESCHALOTS	0.1 lb/A	0.5 lb	7	12
KALE	0.1 lb/A	0.4 lb	7	12
KOHLRABI	0.1 lb/A	0.6 lb	7	12
LEEK	0.1 lb/A	0.5 lb	7	12

LETTUCE - HEAD	0.1 lb/A	0.6 lb	7	12
MIZUNA	0.1 lb/A	0.4 lb	7	12
MUSTARD GREENS	0.1 lb/A	0.4 lb	7	12
MUSTARD CABBAGE (GAI CHOY - PAK-CHOI)	0.1 lb/A	0.4 lb	7	12
MUSTARD SPINACH	0.1 lb/A	0.4 lb	7	12
ONION	0.1 lb/A	0.5 lb	7	12
ONIONS (GREEN)	0.1 lb/A	0.5 lb	7	12

ONIONS (SCALLIONS)	0.1 lb/A	0.5 lb	7	12
PECAN ¹	0.1 lb/A	0.8 lb	NS	12
RAPE	0.1 lb/A	0.4 lb	7	12
SHALLOT	0.1 lb/A	0.5 lb	7	12

NS: Not stated on the label.

¹Cypermethrin is labeled for use on pecans at a rate of 0.1 lb/A per single application.

The seasonal maximum is 0.6 lb a.i./A with the exceptions of New Mexico, where a special local needs label allows for a seasonal maximum of 0.8 lb/A.

Table 2: Non-crop Use Sites

Application Site	Application Rates ¹
ANIMAL KENNELS/SLEEPING QUARTERS (COMMERCIAL) DOGS/CANINES (ADULTS, PUPPIES) PET LIVING/SLEEPING QUARTERS	0.01672 lb/1 gal 1 sec/spot 2 sec/linear ft 2.819E-004 lb/1K cu.ft
AGRICULTURAL UNCULTIVATED AREAS	0.07782 lb/1K sq.ft 0.08 lb/mound
AUTOMOBILES-TAXIS-LIMOUSINES- RECREATIONAL VEHICLES & TIRES	1 sec/spot 0.01672 lb/1 gal
BARNs/BARNYARDS/AUCTION BARNs	0.007813 lb/1 gal 0.07782 lb/1k sq ft
BATHROOM PREMISES-HARD SURFACES	0.07782 lb/1k sq ft
COMMERCIAL STORAGE/WAREHOUSES PREMISES COMMERCIAL TRANSPORTATION FACILITIES/FEED/FOOD-EMPTY COMMERCIAL TRANSPORTATION FACILITIES-NONFEED/NONFOOD COMMERCIAL SHIPPING CONTAINERS- FEED/FOOD-EMPTY	0.03846 - 0.07782 lb/1K sq.ft 0.07943 lb/linear ft 0.001953 lb/sq.ft 0.005859 gal/1 gal 0.01709 lb/1 gal 2.819E-004 lb/1K cu.ft 1 sec/spot
COMMERCIAL/INSTITUTIONAL/ INDUSTRIAL PREMISES/EQUIP. (INDOOR)	0.005859 gal/1 gal 1 sec/spot 0.01709 lb/1 gal
COMMERCIAL/INSTITUTIONAL/ INDUSTRIAL PREMISES/EQUIPMENT (OUTDOOR)	0.01465 gal/1K sq.ft 1 part/1K sq.ft 1 sec/spot 0.033 lb/mound 0.0155-0.0203 lb/1K

Application Site	Application Rates ¹
	sq.ft 0.004073 lb/sq.ft 0.005859 gal/1 gal 0.007813-0.01709 lb/1 gal 0.01629- 0.3636 lb/linear ft
DAIRIES/CHEESE PROCESSING PLANT PREMISES (NONFOOD CONTACT) DAIRIES/CHEESE PROCESSING PLANT PREMISES (NONFOOD CONTACT)	1 sec/spot 0.0165 lb/1 gal
DAIRY CATTLE (LACTATING OR UNSPECIFIED)	0.002932 lb/animal
DAIRY FARM MILK STORAGE ROOMS/HOUSES/SHEDS	1 sec/spot
DRAINAGE SYSTEMS	0.07782 lb/1k sq ft 0.0165 lb/gal
EGG PACKING PLANTS (COMMERCIAL) EGG PLANTS/HATCHERIES/BROODER ROOMS/SHOE BATHS (HATCHING)	0.01672 lb/1 gal 1 sec/spot
EATING ESTABLISHMENTS NON-FOOD AREAS (NONFOOD CONTACT)	0.005859 gal/1 gal 1 sec/spot 0.01709 lb/1 gal
FEED MILLS/FEED PROCESSING PLANTS	0.01672 lb/1 gal
FENCEROWS/HEDGEROWS	0.01629 lb/linear ft 0.04 - 0.8 lb/1K sq.ft 0.007813- 0.05 lb/1 gal
FOOD PROCESSING PLANT PREMISES (NONFOOD CONTACT)	0.005859 gal/1 gal 0.01709 lb/1 gal 0.03846 lb/1K sq.ft 1 sec/spot

Application Site	Application Rates ¹
FOOD STORES/MARKETS/SUPERMARKETS PREMISES (NONFOOD CONTACT)	0.01709 lb/1 gal 1 sec/spot
GREENHOUSE-EMPTY	0.005859 gal/1 gal 0.01709 lb/1 gal 0.0418 lb/1K sq.ft
GREENHOUSES-IN USE	0.005859 gal/1 gal 0.01709 lb/1 gal 0.033lb/mound 0.1031 lb/1K sq.ft 1 sec/spot
HORSES (SHOW/RACE/SPECIAL/PONIES)	4.008E-004 lb/animal 0.01672 lb/1 gal 1 sec/spot
HOSPITALS/MEDICAL INSTITUTIONS PREMISES (HUMAN/VETERINARY)	0.005859 gal/1 gal 0.01709 lb/1 gal 0.07782 lb/1K sq.ft 1 sec/spot
HOUSEHOLD/DOMESTIC DWELLINGS OUTDOOR PREMISES	0.002044 lb/sq.ft 0.004073 lb/linear ft 0.01465 gal/1K sq.ft 0.01709 lb/1 gal 0.08 lb/mound 0.02095-0.07782 lb/1K sq.ft 1 sec/spot 1 part/1K sq.ft
HOUSEHOLD/DOMESTIC DWELLINGS INDOOR PREMISES CONTENTS	2.819E-004 lb/1K cu.ft 0.005859 gal/1 gal 0.0225 lb/1 gal 1 sec/spot
LAWNS (COMMERCIAL/INDUSTRIAL) ²	0.21 lb/1 K sq. ft.
LAWNS (RESIDENTIAL) ²	0.1563 lb/1 K sq. ft.1

Application Site	Application Rates ¹
ORNAMENTAL LAWNS AND TURF ²	0.0203 lb/1K sq.ft 0.033 lb/mound 0.0033 lb/1 K sq. ft. 0.0101 lb/1 K sq. ft. 0.07782 lb/1K sq.ft
ORNAMENTAL AND/OR SHADE TREES	0.07782 lb/1K sq.ft 0.025 lb/1 gal
ORNAMENTAL HERBACEOUS PLANTS	0.07782 lb/1K sq.ft 0.007813 lb/1 gal
ORNAMENTAL NON-FLOWERING PLANTS	0.007813 lb/gal
ORNAMENTAL SOD FARM (TURF)	0.06614 lb/A
ORNAMENTAL WOODY SHRUBS AND VINES	0.07782 lb/1K sq.ft 0.007813 lb/1 gal
PATHS/PATIOS	0.01672 lb/1 gal 0.033 lb/mound 0.0418-0.07782 lb/1K sq.ft
POTTING SOIL/TOPSOIL	0.07782 lb/1K sq.ft
POULTRY PROCESSING PLANT (NONFOOD CONTACT)	0.0165 lb/gal
REFUSE/SOLID WASTE SITES (OUTDOOR)	0.01709 lb/1 gal 0.033 lb/mound 0.0418-0.07782 lb/1K sq.ft 1 sec/spot
SEED HOUSES/STORES/STORAGE AREAS/WAREHOUSES	0.01672 lb/1 gal 1 sec/spot

Application Site	Application Rates ¹
SWIMMING POOL WATER SYSTEMS	1 sec/spot
WOOD PRESSURE TREATMENT TO FOREST PRODUCTS	0.002523 lb/sq.ft
WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS INDOOR	0.005092 lb/sq.ft 0.02037 lb/linear ft 0.007813-0.042 lb/1 gal 1.446lb/1K sq.ft
WOOD PROTECTION TREATMENT TO BUILDINGS/PRODUCTS OUTDOOR	0.004162 lb/linear ft 0.00309- 0.01018 lb/sq.ft 0.0155 lb/1K sq.ft 0.02037 lb/linear ft 0.008438- 0.051 lb/1 gal
WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (SEASONED)	0.00825 lb/1 gal 0.009988-0.02037 lb/linear ft 0.8 lb/1K sq.ft
WOOD PROTECTION TREATMENT TO FOREST PRODUCTS (UNSEASONED)	0.001561 lb/sq.ft 0.033 lb/mound 0.03906 lb/1 gal 0.1031 lb/1K sq.ft

¹Values are application rate ranges (minimum to maximum) or maximum application rates.

²The registrants are supporting a residential lawn use cap of 0.0138 a.i./1K sq. ft. Registrants will submit an agreed upon label amendment during Phase 5 of the RED process.