

CARDINAL
CHEMICAL
COMPANY



FIFTY FRANCISCO ST
SAN FRANCISCO
CALIFORNIA 94133

CARDINAL 25-5 INSECTICIDE

Not for use on food or feed

For use on food or feed

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PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Harmful if swallowed. Avoid breathing vapor. Avoid contact with skin, eyes or clothing. Wear protective clothing. Wash exposed skin with soap and water after handling and before eating. Wash all contaminated clothing with soap and water separately from other clothing before reuse.

Do not apply directly to food. In commercial food handling facilities, cover or remove any food and food processing equipment during application. Do not apply while food processing is under way. After space spraying in meat packing plants, bakeries and other processing plants, wash all equipment, benches, shelving, etc. thoroughly with an acceptable detergent solution and then rinse with potable water to remove all traces of contamination where food will be handled. In the home, all food processing surfaces and utensils should be covered during treatment or thoroughly washed before use.

Remove pits and birds, and cover fish aquariums before spraying.

FIRST AID

If in eyes: Flush eyes with plenty of water. Get medical attention if irritation persists.

If on skin: Wash skin with plenty of soap and water. Get medical attention if irritation persists.

PHYSICAL OR CHEMICAL HAZARDS

Extinguish open flame before space spraying. This formulation is combustible. DO NOT USE, POUR, SPILL, OR STORE NEAR HEAT OR OPEN FLAME.

DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. SEE SIDE PANEL FOR ADDITIONAL INSTRUCTIONS.

STORAGE AND DISPOSAL

STORAGE: Do not contaminate water, food or feed by storage or disposal.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

CONTAINS 5% PYRETHRINS

For indoor or outdoor application as a space, area or contact spray. Dependent upon pests to be controlled and the area to be treated, may be applied through mechanical generators (ULV) as well as conventional fogging or spraying equipment.

ACTIVE INGREDIENTS:	
Pyrethrins	5.00%
*Piperonyl Butoxide, Technical	25.00%
**INERT INGREDIENTS:	70.00%
TOTAL:	100.00%

*Equivalent to 20.00% (butylcarbityl)(6-propylpiperonyl) ether and 5.00% related compounds.
**Contains Petroleum Distillate

KEEP OUT OF REACH OF CHILDREN
CAUTION
SEE SIDE PANEL FOR ADDITIONAL
PRECAUTIONARY STATEMENTS

EPA Reg. No. 5440-115

WARRANTY STATEMENT: Our recommendations for use of this product are based upon tests believed to be reliable. The use of this product is beyond the control of the manufacturer. No guarantee, expressed or implied, is made as to the effect of such or the results to be obtained if not used in accordance with directions or established safe practice. The buyer must assume all responsibility, including injury or damage resulting from its misuse as such or in combination with other materials.

DIRECTIONS FOR USE, continued

Cardinal 25-5 Insecticide is effective in the control of the indicated insects if the applicator follows directions for use as enumerated below.

Angoumois Grain Moth	Horn flies
Ants	Hornets
Boxelder Bugs	Horse flies
Cadellids	House flies
Cheese Mites	Indian meal moths
Cheese Skippers	Lice
Cigarette Beetles	Mediterranean flour moths
Clover mites	Mosquitoes
Cockroaches (German)	Mushroom flies
Confused flour beetles	Red flour beetles
Dark mealworms	Rice weevils
Deer flies	Saw-toothed grain beetles
Dried fruit beetles	Silverfish
Drugstore beetles	Small flying moths
Earwigs	Spider
Fruit flies	Spider beetles
Gnats	Stable flies
Grain mites	Tobacco moths
Granary weevils	Wasps
	Yellow mealworms

INDOOR USE AS A SPACE SPRAY, UNDILUTED

The use of this product in food processing or food handling establishments (bakeries, beverage plants, canneries, food processing plants, hospitals, hotels, industrial installations, restaurants, schools, supermarkets, and warehouses) should be confined to the time periods when the plants or facilities are not in operation. Foods should be removed or covered during treatment. All food processing surfaces should be covered during treatment or thoroughly cleaned before using.

Close windows and doors and shut off ventilating systems. Use a fogger or vaporizer adjusted to deliver an aerosol spray (no droplets over 50 microns in diameter and 80% less than 30 microns). Apply at a rate of 1/2 ounce per 1000 cubic feet of space. Direct the spray toward the ceiling and upper corners of the area and behind obstructions. Keep the area closed for at least 15 minutes. Vacate the treated area and ventilate before reoccupying. Repeat treatment as necessary.

The above described application will kill accessible, exposed stages of flies (including fruit flies), mosquitoes, small flying moths, gnats, wasps, hornets, clover mites, cheese mites, cheese skippers, boxelder bugs, earwigs, ants, and the following common stored product pests: granary weevils, rice weevils, confused flour beetles, saw-toothed grain beetles, spider beetles, cigarette beetles, drugstore beetles, Angoumois grain moths, Mediterranean flour moths, Indian meal moths, tobacco moths, yellow mealworms, dark mealworms, grain mites, cadellids and red flour beetles.

DRIED FRUIT PRODUCTS: in storage or being processed, for control of confused flour beetles, dried fruit beetles, Indian meal moths, saw-toothed grain beetles. Remove and destroy infested products. As noted above, disperse this product as a fine mist in the air above the trays and shelves. Do not apply to fruit directly.

Use one ounce per 1000 cubic feet of space. Repeat application at this dosage in any given month. Leave the room closed for one hour. Do not remain in treated areas and ventilate area before re-entry. This application will kill accessible, exposed stages of dried fruit beetles as well as those pests named above.

STORED FOOD: (Stored in multi-walled bags or in cloth bags) in warehouses, storage rooms, flour mills, grain elevators, granaries, for control of Angoumois grain moths, cadellids, confused flour beetles, Indian meal moths, Mediterranean flour moths, rice weevils, saw-toothed grain beetles, yellow mealworms, cheese mites, cheese skippers, cigarette beetles, grain mites, granary weevils, dark mealworms, red flour beetles. Remove and destroy infested products. As directed above, disperse this product first by directing spray into corners, under pallets, and around stacks of packaged foods hitting as many insects as possible and then as a space spray. Infested stored products should be fumigated or treated by other effective methods using an approved product intended for this purpose. Use a dosage of 1 fluid ounce per 1000 cubic feet of room space. Repeat application as necessary for insect control. Leave the room closed for one hour. Do not remain in treated areas and ventilate area before re-entry. This application will kill accessible, exposed stages of those stored product pests listed above.

INDOOR USE AS A SPACE SPRAY, DILUTED

For use in conventional mechanical fogging equipment, to kill flies, fruit flies, mosquitoes, small flying moths, and gnats. Cover or remove exposed food and food handling surfaces. Close room and shut off all air conditioning or ventilating equipment. Dilute 1 part of Cardinal 25-5 Insecticide plus 49 parts of oil (refined kerosene) and mix well. Apply at the rate of 1-2 fluid ounces per 1000 cubic feet filling the room with mist. Keep area closed for at least 15 minutes.

Vacate treated area and ventilate before reoccupying. Repeat treatment when reinfestation occurs.

SURFACE SPRAY: To insure maximum control of crawling insects (ants, boxelder bugs, clover mites, drugstore beetles, earwigs, lice, spider beetles) dilute 1 part of Cardinal 25-5 Insecticide plus 41 parts of oil (refined kerosene) and mix well and apply as a coarse droplet using approximately 1 gallon to 750 square feet of surface. Spray walls, floors, and other surfaces of bins and storage and handling areas thoroughly being especially careful to treat cracks, crevices, and similar hiding places. Treat unloading, handling and processing areas, and inside conveying, processing and handling equipment. Spray thoroughly around the base of heavy machinery and equipment. Spray insects directly when possible.

For in-transit protection, clean and spray truck beds, boxcars, and ship's hold before loading. Thoroughly treat walls and floors and spray each layer of cartons or containers lightly as stacked. To control Indian meal moth and Angoumois meal moth in stored grain, apply to the surface of binned grain at a rate of 1 gallon per 1000 square feet. Apply at monthly intervals with the first appearance of moths and continuing until early fall. In case of severe infestation, break up webbing with rake before spraying and make a second application in two weeks.

As an aid in the control of mosquitoes, gnats, wasps, and skippers, treat walls, ceilings, moldings, screens, door and window frames, beams, light cords, and similar resting places.

ANIMAL QUARTER USE: (cattle barns, horse barns, poultry houses, swine houses, zoos). As a space spray diluted for use in conventional mechanical fogging equipment to kill flies, mosquitoes, small flying moths and gnats. Dilute 1 part of Cardinal 25-5 Insecticide plus 49 parts of oil (refined kerosene) and mix well. Apply at the rate of 2 fluid ounces per 1000 cubic feet of space above the animals. Direct spray towards the upper portions of the enclosure, filling the room with mist. Keep area closed for at least 15 minutes. Vacate treated area and ventilate before reoccupying. Repeat treatment when reinfestation occurs.

IN MUSHROOM PRODUCTION AND PROCESSING: To control mushroom flies or fungus gnats in growing houses, dilute 1 part of Cardinal 25-5 Insecticide plus 49 parts of oil (refined kerosene) and mix well and apply at a rate of 1 ounce per 1000 cubic feet of space. Fogger should be operated 8 to 10 feet away from beds and directed slightly upward over them. Circulating fans should be left in operation, but for best results, refrigeration should be turned off. In packing and canning plants, use at a rate of 1 ounce to 2000 cubic feet of space.

OUTDOOR GROUND APPLICATION UNDILUTED: To control adult mosquitoes, gnats and small flying moths. For best results, apply when there is a light breeze at approximately 5 miles per hour. Apply from the windward side so the fog will be carried across the area to be treated. Treat shrubbery and vegetation where mosquitoes may rest. Shrubby and vegetation around stagnant pools, marshy areas and ponds may be treated. Application of this product to any body of water is prohibited. Repeat treatment as required.

Using truck-mounted equipment, the objective is to treat the area with 0.02 to 0.025 pounds of pyrethrins and 0.10 to 0.125 pounds of piperonyl butoxide per acre. Cardinal 25-5 Insecticide should be applied without further dilution. Disperse 1-g at the following flow rates depending upon the speed at which the truck is moving.

Truck Speed Miles Per Hour	Flow Rate of Cardinal 25-5 Insecticide Fluid Ounces per Minute in 2-25 fluid oz
5	4 to 4.5 fluid oz
10	

Delivery rate and traveling speeds can be varied slightly so long as the basic objective of 0.02 to 0.025 pounds actual pyrethrins per acre is maintained. Use a swath width of 300 feet for acreage calculations. To control mosquito larvae, dilute at the rate of 9 ounces per 50 gallons of oil and apply at the rate of 20 to 25 gallons per acre. Apply as a coarse wetting spray to the border or on shallow water of wet lands, swamps, and marshes where mosquito larvae are known to breed.

TEMPORARY REDUCTION OF ANNOYANCE: from flies, mosquitoes and small flying moths outdoors. The aforementioned application for outdoor ground application will afford temporary reduction of annoyance from these pests in public gathering places (drive-in restaurants, drive-in theaters, golf courses, municipalities, parks, play grounds and recreational areas). Direct application into tall grass, shrubbery and around lawns where these pests may hover or rest. Apply while air is still. Avoid wetting foliage. Application should be made prior to attendance. Repeat as necessary. In additional outdoor areas (corrals, feed lots, swine lots, and zoos). Cover water, drinking fountains, and animal feed before use. Fill area with mist directing application into tall grass, shrubbery and around lawns where these pests may hover or rest. Apply while air is still. Avoid wetting foliage. In zoos, avoid exposure of reptiles to the product. Repeat as necessary.

FOR USE ON ANIMALS: To protect beef and dairy cattle, horses and dogs from horn flies, house flies, mosquitoes and gnats, dilute 1 part of Cardinal 25-5 Insecticide plus 49 parts oil (refined kerosene) and mix well and apply a light mist sufficient to wet the tips of the hair. To control stable flies, horse flies, and deer flies on beef and dairy cattle and horses, apply 2 ounces per adult animal sufficient to wet the hair but not to soak the hide. Repeat treatment once or twice daily or at intervals to give continued protection.

To control the motile stages of blood sucking lice on beef and dairy cattle, apply the spray to thoroughly wet the hair. Use 2 ounces or less per animal and repeat every 2 to 3 weeks as required.

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PROTECTING
THE FOODS
THAT FEED
THE NATION