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[*] The Industry's Best Products

[*] Unprecedented Training & Support

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DUST SOLUTION GUIDE

IF PESTS IN HARD-TO-REACH PLACES ARE YOUR PROBLEM, B



THE DUST FORMULATION SOLUTION GUIDE

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THE DUST FORMULATION SOLUTION GUIDE

Insecticide dusts are classic pest management tools that smart Pest Management Professionals know how to use effectively. **When applied correctly, insecticide dust is often the most effective choice for providing superior control of a broad range of crawling insects.** Dusting is economical and provides excellent penetration into hard-to-reach areas, fast knockdown and long-term results.

Bayer offers the industry's leading portfolio of dust solutions designed to help you target a wide range of pests and the harborages they seek. In addition, our Field Development and Technical Service Team is available to provide training on proper dust applications to help you enhance your integrated pest management programs.

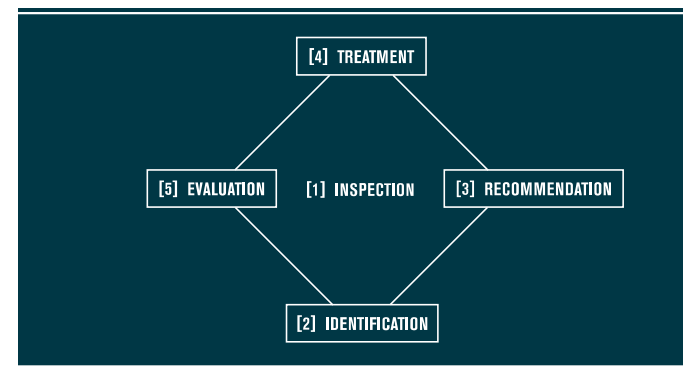
An innovative product portfolio and training are just part of our commitment to the industry. Each year, we invest millions of dollars to develop the next generation of responsible treatment options you need in the field. In addition, as stewards of the industry, we're committed to protecting tomorrow today – by providing the best products, delivery systems and training to help you do the same.

"Bayer's insecticide dusts turn pests into dust with quick knockdown and amazing residual!"
– Gordon Morrison, Maxforce® Insecticides Market Manager, Bayer ES



Integrated Pest Management (IPM)

Integrated pest management is critical to ensuring customer satisfaction, building your business, controlling pests and enhancing your company's reputation. The five steps of a modern IPM program include:



Start your treatment with non-chemical control methods, and when necessary, incorporate the judicious use of pesticides that best fits the environment you're protecting and meets your clients' needs.

DUST AT A GLANCE

Before using any pesticide, always read and follow label directions.

Application Location	DeltaDust®	Drione®	Tenacity®
Inside/outside residences	✓	✓	✓
Commercial establishments	✓	✓	✓
Food-handling areas of commercial establishments	✓	✓	✓
Animal quarters/ resting areas	✓	✓	✓
Attics/crawlspaces	✓	✓	✓
Sewers	✓	✓	✓

✓ Product is labeled for use in this environment
✗ Product is not labeled for this environment



APPLYING DUST

DUST INSECTICIDES

Insecticide dusts are ready-to-use formulations that consist of an active ingredient combined with a finely ground, dry carrier. The particle size in each Bayer dust insecticide is scientifically engineered for ease of application, coverage of treated surfaces, and optimum absorption by crawling pests.

Imagine a fine layer of dust on a surface and how easily the dust particles are picked up by the waxy outer cuticle of an insect, and you will understand why dusts are so effective.

ADVANTAGES OF BAYER'S DUST FORMULATIONS

- [*] Fast knockdown
- [*] Long residual
- [*] Superior control on porous surfaces
- [*] Deep, uniform penetration and coverage of voids and hard-to-reach areas
- [*] Broad spectrum control of a wide variety of pests
- [*] Ready to use, no mixing required
- [*] Lightweight, easy to carry
- [*] Available in ready-to-use applicator bottles or can be applied with a variety of different types of professional dust application equipment

WHERE TO APPLY INSECTICIDE DUST

Dust can be applied inside, outside and around the perimeter of a structure. Before using any pesticide, always read and follow label directions.

Indoors

- [*] Cracks and crevices
- [*] Voids in walls, floors, ceilings and equipment
- [*] Voids behind cabinets and refrigerators
- [*] Expansion joints between different elements of construction
- [*] Pipe chases (Figure1)
- [*] Attics
- [*] Crawlspaces
- [*] Floor drains that lead to sewers (DeltaDust® only)
- [*] Motor housings
- [*] Electrical outlets (Figure2) and junction boxes
- [*] Between equipment bases and the floor bases (Figure3)
- [*] Hollow table and equipment legs
- [*] Animal resting areas

Outdoors

- [*] Cracks around windows and door frames
- [*] Shrubs and ornamental plants (Figure4)
- [*] Underneath siding – especially where it meets the foundation wall
- [*] Under decks (Figure5)
- [*] Weep holes (Figure6)
- [*] Behind shutters
- [*] Utility entrances for pipes and electrical lines
- [*] Soffits
- [*] Sewers
- [*] Animal quarters and animal resting areas



Figure4



Figure5



Figure6

FOR BETTER ACCESS TO VOIDS

- [*] Remove electrical switch plates
- [*] Pull back pipe collars where plumbing pipes enter/exit the walls
- [*] Look for access to voids under floor cabinets in the kitchen and the bathroom
- [*] Drill holes if necessary to gain access; select inconspicuous areas

DUSTING PRECAUTIONS

- [*] Avoid breathing in dust
- [*] Avoid getting dust on clothing and skin
- [*] Avoid drift and deposits onto exposed surfaces
- [*] Avoid drafty areas or areas with fans that will displace dust
- [*] Avoid deposits on food preparation surfaces
- [*] Avoid applying dust to wet areas, as most dust formulations will clump and lose effectiveness. DeltaDust is an exception, as it is the only waterproof dust available and is specially formulated to work well in both wet and dry conditions.
- [*] Do not use dust application equipment in or on electrical equipment, where a possibility of shock hazard exists.





BAYER'S DUST SOLUTIONS

DeltaDust®
with DeltaGard

DELTADUST®

DeltaDust is the only 100 percent waterproof dust and will not clump or absorb moisture in wet areas. It is approved for use in commercial food-handling establishments, making it an ideal tool for eliminating pests in wet areas of these accounts. DeltaDust is also labeled for application directly into drains that lead to sewers, a common place to find cockroaches, phorid flies and other pests. Labeled for use indoors and outdoors, DeltaDust is non-staining and odorless. With the active ingredient deltamethrin, DeltaDust will remain effective for up to eight months.

Packaging: DeltaDust is available in a 1-pound applicator bottle and 5-pound container.

In food-handling environments of commercial establishments, DeltaDust applications are permitted in both food and non-food areas and may be applied as a spot or crack and crevice treatment when the facility is in operation, provided exposed food is covered and/or removed prior to application.

For shrubs and ornamental plants, apply 8 ounces of dust per 1,000 square feet. Dust should be applied in a thin layer to the upper and lower side of leaves.

For perimeter applications, treat in and around areas where pests may enter the structure and against the foundation wall. DeltaDust can also be applied to the surrounding area near the structure and is very effective when applied to landscape plants.

Application rate: Apply 2 to 3 grams of DeltaDust per square yard (or 0.5 pounds per 1,000 square feet).



TEMPO® 1% DUST

Tempo 1% Dust is a ready-to-use dust that contains one percent cyfluthrin and is especially effective against bees and wasps, ants, cockroaches and other crawling pests. Labeled for use indoors and outdoors, Tempo 1% Dust provides a long residual, is low-odor and non-staining. In commercial food-handling establishments, apply Tempo 1% Dust only to non-food areas. If left undisturbed, Tempo 1% Dust will remain active for up to one year.

Packaging: Tempo 1% Dust is available in a 1.25-pound applicator bottle.

Application rate: Apply 0.5 pounds to 1 pound of Tempo 1% Dust per 1,000 square feet.



DRIONE®

Drione is a desiccant dust approved for use in residences, commercial accounts, food plants and granaries for control of ants, cockroaches, and other pests, and will remain effective for up to six months when left undisturbed. Drione features natural pyrethrum plus amorphous silica gel that is produced from sand and erodes the insect cuticle, causing the pest to die from dehydration.

Drione is an excellent flushing tool that is ideal for pinpointing infestations in hard-to-reach areas. Simply apply the dust into cracks, crevices and voids where pests may hide. Any pests that are present will run from the treated area, but they won't get far due to Drione's fast knockdown. And with Drione's long residual, pests will not be able to re-infest the treated area for up to six months, saving you time on future visits.

"Every technician should experience the satisfaction of seeing white cockroaches running from their hiding places, covered with a light coating of Drione dust."
– Gordon Morrison, Maxforce Insecticides Market Manager

Packaging: Drione is available in a 1-pound applicator bottle and 7-pound container.

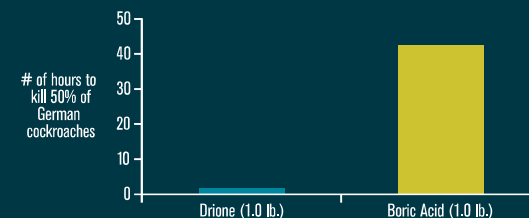
In food-handling environments of commercial establishments, limit applications of Drione to cracks and crevices.

Application rate: Apply 2 ounces of Drione per 100 square feet of surface area (or approximately 0.5 grams per square foot). For heavy infestations, apply 16 ounces per 1,000 square feet.



DRIONE VERSUS BORIC ACID AGAINST GERMAN COCKROACHES

DRIONE IS 30 TIMES FASTER ACTING THAN BORIC ACID POWDER



Reference: BRP-00-00635



DUSTING RECOMMENDATIONS

Dusting Recommendations

Cockroaches

- [*] Cracks, crevices and voids where cockroaches harbor are ideal treatment sites.
- [*] Waterproof DeltaDust is the best choice in wet areas that are often preferred by cockroaches. DeltaDust is labeled for use in food areas of commercial establishments and is extremely effective when applied to drains that lead to sewers.
- [*] Drione is the best choice when inspecting for cockroaches, due to its fast knockdown and flushing action. Drione also delivers the added benefit of long residual control in treated areas.
- [*] Tempo 1% Dust is not labeled for use in food areas of commercial food-handling establishments, however; it can be applied in non-food areas of commercial accounts and in residences.
- [*] Dust is an excellent choice for large peridomestic cockroaches that enter structures from outdoors. Treat entrance points as well as crawlspaces and attics. Dust performs especially well in areas that contain fiberglass insulation, a difficult environment for other pesticide formulations that kill by contact.

Ants

- [*] Indoors and outdoors, apply dust to ant nests, trails, travel routes and places where ants enter structures.

Carpenter Ants

- [*] Apply dust to carpenter ant nests, trails, travel routes, voids and places where carpenter ants enter structures.
- [*] DeltaDust works best in damp areas where these ants prefer to nest.
- [*] Drione is the product of choice for carpenter ant inspections. It will penetrate hard-to-reach areas, flush ants and quickly enable you to pinpoint nest locations.
- [*] Carpenter ants travel long distances for food and water, so inspect trees, stumps, landscape timbers, wood piles and similar areas around the structure.

Spiders

- [*] Spiders can be difficult to control because they travel along surfaces or webs, and their bodies have very little contact with the substrate. Dust, however, is particularly effective against spiders because the light particles are not absorbed into surfaces and are readily available to be picked up by these elusive pests. Apply dust behind baseboards, to window and door frames, attics, crawlspaces and other places spiders crawl.

Bees and Wasps

- [*] Use Tempo 1% Dust for fast knockdown of bees and wasps. The high percentage of active ingredient in this formulation works quickly, and the residual will control immature stages if they emerge.
- [*] Thoroughly treat nests, their entrances and surrounding areas where pests alight.
- [*] Drill holes in walls if necessary to treat nests in voids.
- [*] Treatment at night when all of the workers are in the nest is preferred; however, when treatment is made during the day, returning workers will enter the nest and be controlled quickly.

Bed Bugs

- [*] Apply dust to areas where bed bugs are found such as cracks, crevices, voids and bed frames. Be thorough! Inspect and treat tufts and folds of mattresses and spring coils.
- [*] Let powder remain in place for 4 to 6 hours and vacuum the powder thoroughly, dispose of the vacuum bag properly and place clean linens on the bed. Removing parts of the cambric at the bottom of box springs will provide better access.

Occasional Invaders

- [*] Outdoors, apply dust around structural entry points such as doors, windows and utility entrances, as well as under siding and decks. DeltaDust is labeled for use as a perimeter treatment around structures and to ornamental plants.
- [*] Indoors, apply dust behind baseboards, to window and door frames, attics, crawlspaces and other places pests crawl.

Stored Product Pests

- [*] Apply dust as a crack and crevice treatment and in difficult-to-reach areas where stored product pests may be present to prevent contamination of food and food preparation areas.

DUST APPLICATION EQUIPMENT

Equipment Options

No matter where you choose to apply dust, there is a variety of equipment options available to help you make the most of your applications.

Small Handheld Dusters

These dusters are easy to use, convenient to carry, and will help you make targeted crack and crevice applications.

- [*] The product container as an applicator (Drione/Tempo 1%/DeltaDust)

- [*] Centrobulb Duster

- [*] B&G Model 1150 Bulb Duster

Larger Two-Handed Dust Applicators

These dusters hold a higher volume of dust, come with a variety of extensions and tips and can be adjusted to deliver various amounts of dust insecticide.

- [*] B&G 1151-M Mini Dust-R

- [*] B&G 1152-A Hand Dust-R

Electric/Power Dusters

Power dusters help increase the electrostatic charge of the dust while it is being applied. This static electricity causes dust to adhere to vertical surfaces in voids for better distribution.

- [*] B&G 2250 Electric Dust-R

- [*] Greomar Power Puff Duster

- [*] Exacticide Duster



Centrobulb Duster



Greomar Power Puff Duster



THE ART OF EFFECTIVE DUSTING

When applied properly, dust insecticides may provide a residual of up to one year if harborage areas are left undisturbed. This long residual will save you time on the job during future visits, as pests will not be able to inhabit treated areas and re-treatment will not be necessary for long periods of time.

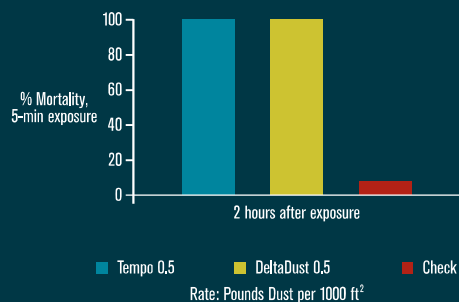
Dusting Tips

Effective dusting takes practice and experience to develop a “feel” for applying the correct amount of material when using handheld equipment. The applicator tip is often inserted into a crack or void so you can’t see exactly how much dust is dispensed. Here are some application tips that will help you to apply dust more effectively.

- [*] Examine the applicator and pay special attention to the placement of the pickup tube inside the applicator.
- [*] Corn starch is a great material for demonstrating and practicing dust applications.
- [*] Fill handheld dusters that are squeezed approximately half full, leaving room to more easily compress the applicator.
- [*] The angle of the duster and the strength exerted when making an application will affect the amount of dust that is dispensed.
- [*] Practice in an open area outside with the applicator positioned at different angles so you can see how much dust comes out.
- [*] Listen carefully; most applicators make a distinctive sound when too much dust rushes out of the applicator tip.
- [*] Shaking the applicator immediately prior to treatment will help create a cloud of dust in the airspace of the applicator and help facilitate a light uniform application. Inserting a marble inside the applicator can help break up any clumps of dust that are present.
- [*] Apply a thin layer of dust into cracks, crevices and voids. This is usually accomplished when the pickup tube is in the air space, not buried in dust. The idea is to “float” a small amount dust into the void or onto the surface.
- [*] Avoid applying too much dust. It’s not economical or necessary for control. Thick layers or clumps of dust may repel some pests.
- [*] Adding an extension tip or hose to dust equipment may allow for easier treatment of hard-to-reach areas.
- [*] The Dustick® provides an extension up to 20 feet for treating hard-to-reach bee and wasp nests.
- [*] Dusts can be used in combination with other formulations such as bait gels, stations, granules, and liquid sprays. Do not apply dust directly on top of bait placements.
- [*] A long-handled, narrow scoop or spoon and a funnel are helpful when filling dust applicators.
- [*] Store dusts in their original containers, keeping them sealed, as many dust formulations readily absorb moisture, which will make them more difficult to apply.
- [*] Zip top plastic bags are good for storing small handheld dusting equipment when not in use.

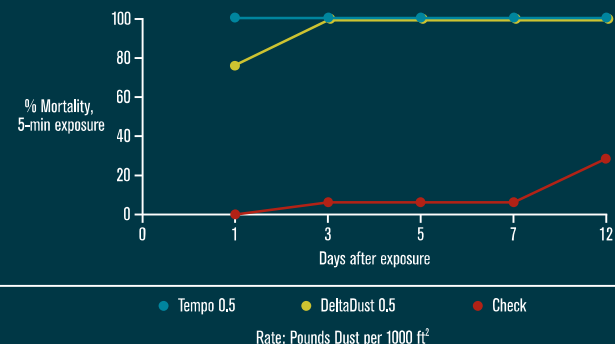
EFFICACY OF TEMPO & DELTADUST AGAINST FIELD CRICKETS

100% MORTALITY WITH ONLY 5 MINUTES EXPOSURE TO TREATED SURFACE



Reference: 072-00-0039

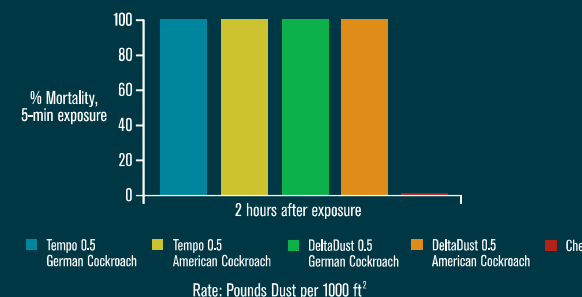
EFFICACY OF TEMPO & DELTADUST AGAINST CARPENTER ANTS



Reference: BRP-00-00612

EFFICACY OF TEMPO & DELTADUST VS. AMERICAN & GERMAN COCKROACH

100% MORTALITY WITH ONLY 5 MINUTES EXPOSURE TO TREATED SURFACE



Reference: BRP-00-00635

