Outdoor and Indoor Fogging and Spraying using Non Thermal (Cold) Ultra Low Volume (ULV) Foggers, Tank Style, or Hose End Sprayers

Overview

Foggers are designed for control of flying or crawling insects and other pests that inhabit your home or structures, indoor and outdoor. The use of BUZZ! 4 bugs people and critter-friendly formulas allows a fogger to emit a COLD FOG that will penetrate the hardest to reach areas of your home, barn, greenhouse, back yard, patio or garden. Fogging is an excellent way to maintain control of biting bug populations in hotels, motels, shelters, apartments, offices, industrial warehouses, shipping containers, barns, poultry houses, etc.

A fogger may be carried about, or set up as a stationery unit [for example]; in an area like an attic where from a stationery location the fogger will [in time] fill the total area with fog. Fogging is ideal for any structure that is subjected to biting or crawling insects such as Bed Bugs, Fleas, Mosquitoes, Ticks, Lice, Carpet Beetles, Silverfish, mites and other types of arthropods. Of concern is the eradication of biting bugs and their eggs [in particular, mosquitoes, fleas and ticks]. A fogger also may be used to rid your central heat and air conditioning duct work of pests like dust mites, silver fish and other types of mites and odor causing bacteria. If you have contracted professional pest control services in the past and yet were unable to get rid of the bed bugs and fleas—simply fog!

BUZZ! 4 bugs, when dispensed through a high quality pest control fogger machine will deliver an atomized, micro sized, penetrating fog cloud that enables the user to reach and kill bed bugs, fleas, ticks, mites, larvae and eggs where they hide.

Armed with a good fogger and BUZZ! 4 bugs you will have everything you need to get rid of fleas, bed bugs, larvae and their eggs from your living space without the toxicity and expense incurred from use of a pest control operator, and sometimes the disappointment from unsatisfactory results.
The Theory of Pest Control Fogging

Insect control through fogging can provide the ultimate in results when practiced in an enclosed structure. The science of creating a fog by reducing the droplet size of the discharge solution to a volumetric mean diameter (VMD) of 5-20 microns is instrumental for insect eradication. When droplet size is identified as having a VMD of 5-20 microns, slightly greater than the size of humidity particles, the air space between droplets is greatly reduced and nearly non existent, and the coverage and delivery of the active ingredient is therefore increased substantially. Molecular crowding...

Subsequently, the lack of available air space between the particles provides a higher delivery percentage of the fogged substance which then delivers a higher percentage of the active ingredient. This is identified as molecular crowding: the phenomenon that triggers the 100% mortality rates enjoyed by fogging machine endeavors when using Cedar Oil formulated active ingredients.

The efficacy of a prudent pest fogging protocol is the direct result of the science and content of the fogging solution. Cedar oil allows us to achieve molecular weights considerably lower than that obtainable with petroleum distillates or pyrethroid substances commonly used by pest control operators.

For inside fogging we recommend BUZZ! 4 bugs Biting Bug Spray which when confined to any roofed area, retains a lengthy residual effect. The use of BUZZ! 4 bugs Biting Bug Spray provides the ultimate in insect mortality in enclosed structures such as attics, homes, hotel/motels, poultry houses, barns, apartments, office buildings, warehouses, homeless shelters, shipping containers and an array of other structures. Since the discharged fog is heavier than air, settlement of the fog into the walls and lower areas when doing attic treatments will prove to be a very effective and prudent exercise. A ULV treatment agenda with BUZZ! 4 bugs Biting Bug Spray provides optimal results in the eradication of numerous species of mites, a microscopic parasite.

For outside fogging and some indoor fogging; such as for barns, poultry houses, and semi open structures where there is exposure to plant life; you will want to utilize the water-diluted BUZZ! 4 bugs Yard Shield formula to avoid phyto-toxic burn to the vegetation. The use of BUZZ! 4 bugs Yard Shield formula will provide the ultimate in insect repelling and knockdown of airborne pests. This water soluble cedar oil concentrate creates a fog that immediately interrupts the pheromones of flying insects, creating an "OFF
LIMITS" area. It can be used inside and outside as a delivery agent of the cedar oil active. **BUZZ! 4 bugs Yard Shield** dissolves the insect egg and larvae by eroding the exoskeleton and subsequently dehydrates that substance. The aroma of cedar oil provides a barrier to re-entry by masking the Kairomone (aroma) of all matter in the treated area.

**Using a Non-Thermal ULV Fogger**

*Indoors:*
Bed Bugs, Fleas, Silverfish, Mites; Other Biting Bugs and Pests

1.) Area Coverage: Using 2QT Compression Sprayer = 250 sq ft per QT of *Biting Bug Spray.*
2.) Area Coverage: Using ULV Non-Thermal Fogger = 400+ sq ft per QT of *Biting Bug Spray.*

1 gallon of *Biting Bug Spray* will fog approximately 4-6 motel rooms of average size or 1600-1800 sq ft of interior structure space. Always purchase more than you need. **You’ll want to complete the interior fogging all at one time.** You can always return the unused containers for refund if arranged prior with the store. If the infestation to be treated is limited to one room only, treat that room and the hallway area that leads to it. Don’t forget the HVAC ducts.

**Preparing the Area for Fogging**

Prior to using a ULV fogging device around gas appliances, turn off fire alarms and pilot lights in the structure. Close all exterior windows and entry ways. Open all dresser drawers, night stand drawers, cabinets, interior doors, cupboard doors and drawers, closet doors and blinds. Unzip any empty suitcases. Remove all linens from mattresses and box springs. Stand mattresses on end [The mattress should be removed from the bed so that both sides of the mattress and total coverage of the surface can be treated]. Dislodge cushions from sofa and chairs and stand on end to expose all sides. Put away open food. Remove all personnel, animals and reptiles from area to be fogged. Remove all plants. Cover aquariums well. Remove the furnace filter from the cold air return on the HVAC system.

If you are pregnant or nursing, it is best to have someone else do the fogging since the aroma of cedar oil fogging can be overpowering. It is best to wear a vapor/dust mask and protective eyewear during fogging. Note: Fogging with cedar oil creates an overwhelming, almost overpowering
aroma, and it is not prudent to do anything other than exit the structure once done.

**BUZZ! 4 bugs Biting Bug Spray** will cause phyto-toxic burn on plants if not removed from the area to be fogged. Should you harbor any concerns that you may bring back into your home or structure a pest that hitchhikes on the plants, you’ll want to spray the removed plants outdoors (including treatment of potting soil) with **BUZZ! 4 bugs Yard Shield** plant formula mixed with water before reintroducing them into the home. A very small amount of **Yard Shield** goes a long way when mixed with water.

In the case of bed bug infestation, you may remove light switch and electrical outlet covers and puff some diatomaceous earth (DE) inside the outlet area. There is no reason to use DE anywhere else in the home. Re- affix electrical covers before fogging. **Do not fog into an interior wall by way of the exposed openings at light switches or electrical outlets.** Let DE do its job there for you. You can fog into the walls by fogging the attic and allow that fog seep down.

Prior to fogging it is suggested that the seams and tucks of the mattress and any other cloth material be rolled back and treated with a mist or spray. The **BUZZ! 4 bugs Biting Bug Spray** trigger sprayer works well for this.

**Helpful Tips for Fogging Interiors**

Fill fogger reservoir with at least 1 quart of **BUZZ! 4 bugs Biting Bug Spray**. Note: The weight of a fogger with 1 gallon of solution in the fill tank may be rather heavy for some people to carry.

**Fog room to room, completely filling the area with fogged material until visibility is minimal. Begin fogging in the room furthest from the exit. Continue fogging in this pattern until entire area is filled with fog.**

Fog separately, each floor in a building, attics and basements. For home fogging, do a stationary fog in the attic first. After the attic is fogged, remove the fogger, then do the basement [section by section], next the second floor of the home and last, the main floor (from which you will exit the home): Always begin with the furthest point from the exit at the basement and at the second and main floors of the home.
Fog the mattress, box spring, headboard and all cloth covered furniture insuring that at minimum, a **slight dampness** of solution is detectable on the fabric. Working backward from the far end of the room, aim the fogger at all floor areas. Disperse a constant fog over all carpet, wood flooring and tile areas. Be sure to direct the fog under furniture and into corners, and on walls at least twenty four inches up from the floor area, especially with drapes in the room. Fog the cupboards, drawers and closets. Approximately 1 gallon of solution per 1600-1800 square foot of surface area is suggested to insure mortality and to neutralize and prevent immediate re-infestation.

For control of mites and bed bugs, it is necessary to fog all drapes, curtains and closet clothing. Be sure that an adequate amount of **BUZZ! 4 bugs Biting Bug Spray** is discharged into the air for each room. Mite infestations may require a second fogging within 3 days of the initial fogging, as they are very difficult to eradicate. Collembola mite eradication may require more.

Turn on the HVAC fan. Discharge a heavy fog into the return air cavity where the furnace filter was removed from the cold air return. This will circulate the fog through the air ducts killing dust mites and other pests in the duct work leading to all areas of the home. Shut off the fan and finish fogging the rooms. We recommend that each room be closed and that the fog be allowed to settle approximately 3 hours before reoccupation [*more if possible*]. The overwhelming cedarwood oil aromas will dissipate in a matter of 6 hours. Minimum reentry time is 30 minutes after fogging. The structure can be aired out if desired, but it is suggested it be kept closed for at least three hours after treatment to enable a pheromone interruption event to impair and destroy the insects’ mental capacities and trigger their subsequent death. Replacing the HVAC filter with a new one is recommended.

Wait several days after treatment before cleaning or vacuuming the floor. This will give the solution an opportunity to erode and dehydrate the insect eggs and larvae in the treated area. The aroma of the cedar oil will impair the mental capacities of any "New Hatch" that survives the treatment, and, subsequent death will incur usually within 72 hours or less. It is imperative that the total structure be treated to insure no reoccurrence of the pest. Parasites such as Fleas will often move from one area to another, such as from basements to other levels. **Walking the treated area after treatment wearing white socks will usually expose any areas yet harboring Fleas, as the Flea will be attracted to white.** Areas where this occurs should be re-treated immediately to eliminate the egg layer cycle and eliminate the next generation of flea.
**Outdoors: Yards, Gardens and Structures:**
Fleas, Ticks, Biting Flies, Ants, Snakes; Other Biting Bugs and Pests

1.) Area Coverage: Using 2QT Compression Sprayer — 16,000 sq ft per QT of **Yard Shield**. [1 QT **Yard Shield** makes 16 gallons of spray mix @ 1000 sq ft of coverage per gallon of mix].

2.) Area Coverage: Using Hose End Sprayer w/20 Gallon Capacity — 160 Gallons of spray mix per QT of **Yard Shield**—Covers 4,000-5,000 sq ft [use when soil penetration is important].

3.) Area Coverage: ULV Non-Thermal Fogger — 16,000-26,000 sq. ft. per QT of **Yard Shield**, depending on intensity. [1 QT **Yard Shield** makes 16 gallons of spray mix @ 1000-1600 sq ft per gallon of mix]. ULV Non-Thermal foggers offer the added advantage of mortality to airborne pests.

**Objectives**

When the objective of outdoor pest control is to remove pests from plants, shrubs and trees *including the soil*, a hose end sprayer may best. For removal of airborne outdoor pests and pests above ground on plants, grass, shrubs and trees [including greenhouses], fogging is the preferred option, and the faster option. For smaller areas and indoor/outdoor walls in barns and stables, a 2QT compression sprayer may be adequate.

**Preparing the Outdoor Area for Fogging or Spraying**

Mow the yard, if practical to do so. Remove all pets and livestock from the area to be fogged or sprayed. Pour out any standing water left in wheel barrels or other outdoor receptacles, etc. in the yard. Open up any enclosed structures.

Fogging should not be done in poultry houses [when birds are present]. For fogging or spraying of poultry houses, barns and stables, remove all animals and livestock before application. Seal up the structure (windows, open vents, etc.) as much as possible prior to fogging so that the fog will not be dispelled from the structure prematurely. Allow reentry of animals preferably after 3 hours, but minimally after 30 minutes.
Helpful Tips for Fogging or Spraying Exteriors

A 2QT tank-style compression sprayer filled with a diluted **Yard Shield** solution works very well for a small outdoor patio. Where a yard or garden is involved, use a hose-end sprayer. If you live in the North you may choose to not use **Yard Shield** until spring. However, applying it in the fall will accelerate the demise of non-beneficial pests, their eggs and larvae. Remember, **most insects never travel more than 150 feet from where they were hatched**. Treatment of your personal space and a 150 foot distance from that space will create an off-limits area to pests that you can now enjoy!

Fog or spray the sides of your outdoor structures, working from the outside of the building outward toward the yard. For stables, barns and other structures, fog internally first, from the furthest part of the interior to the exit. Be certain to fog thoroughly any loft areas. If a loft area is difficult to reach, do a stationary fog in the loft, just as you would an interior attic. You can use **Biting Bug Spray** or **Yard Shield** for these interior applications. Fogging or spraying dissolves the eggs and larvae when exposed to the cedar oil or cedar oil spiked water sprayed from the hose-end applicator or fogger.

Fog or spray liberally to provide a good soak on the first application. Fog or spray the outside walls of the house, wood, brick, stucco and other; starting at the soffit [underside] level. The spray will wash out the many insects, eggs and larvae harboring in the siding, etc. The heavy dose of treatment fluid accumulating at the foundation from this wash will leach down, kill and deter any termites that may be in the soil or surrounding area.

Fog or spray liberally; soaking the shrubbery, flower beds, concrete, tile, and of course all of the lawn and dirt areas [including standing water]. Fog or spray the trunks of the trees up to at least the first branch line to kill and dissolve the many insects and un-hatched eggs and larvae. This is where you will see a lot of action while spraying. This exercise will get rid of the flea, its egg and larvae and continue the same eradication for mosquito, ants, grubs and many other flying and crawling insects that harbor in the barks of trees. Spray or fog the entire tree, including leaves, if possible.

**Yard Shield** loves water. Periodic rains will enhance its performance reviving earlier treatments. And, spraying after or during a rain storm allows the solution to penetrate deeper into the ground. Follow-up applications
should be conducted as required, depending on the local insect population you experience. If you follow this protocol, you also can say goodbye to the snakes.

**Venomous Snake Control**

*Yard Shield* should be effective for control of heat seeking and pheromone driven venomous snakes. The Cedar Oil and Ethyl Lactate solution produces a pheromone interruption agent that impairs the snake’s mental capacity. This product has no effect on beneficial and pollinator insects such as butterflies or bee's that are sight driven. It will not hurt any of the amphibians or lizard family but will deter venomous snakes from the treated areas. As you may or may not know, all of the snake’s nerve endings are in its belly skin. When exposed to cedar oil residue it feels the same to the venomous snake as you or I putting our hands on a hot plate.

Snakes can often be found coiled upside down dead after exposure to a cedar-oil treated grass area. Venomous snakes are referred to as heat seekers. They are looking for a food source [moles, gophers, field mice and others]. Their presence in your yard is all about the food chain. If the insects are gone, so are the rodents and amphibians [*food source of the Snake*]. Exposure to a water solution spiked with cedar oil and ethyl lactate will exude an aroma that creates a barrier of entry to your property and keeps the pheromone-driven insects and snakes at bay.