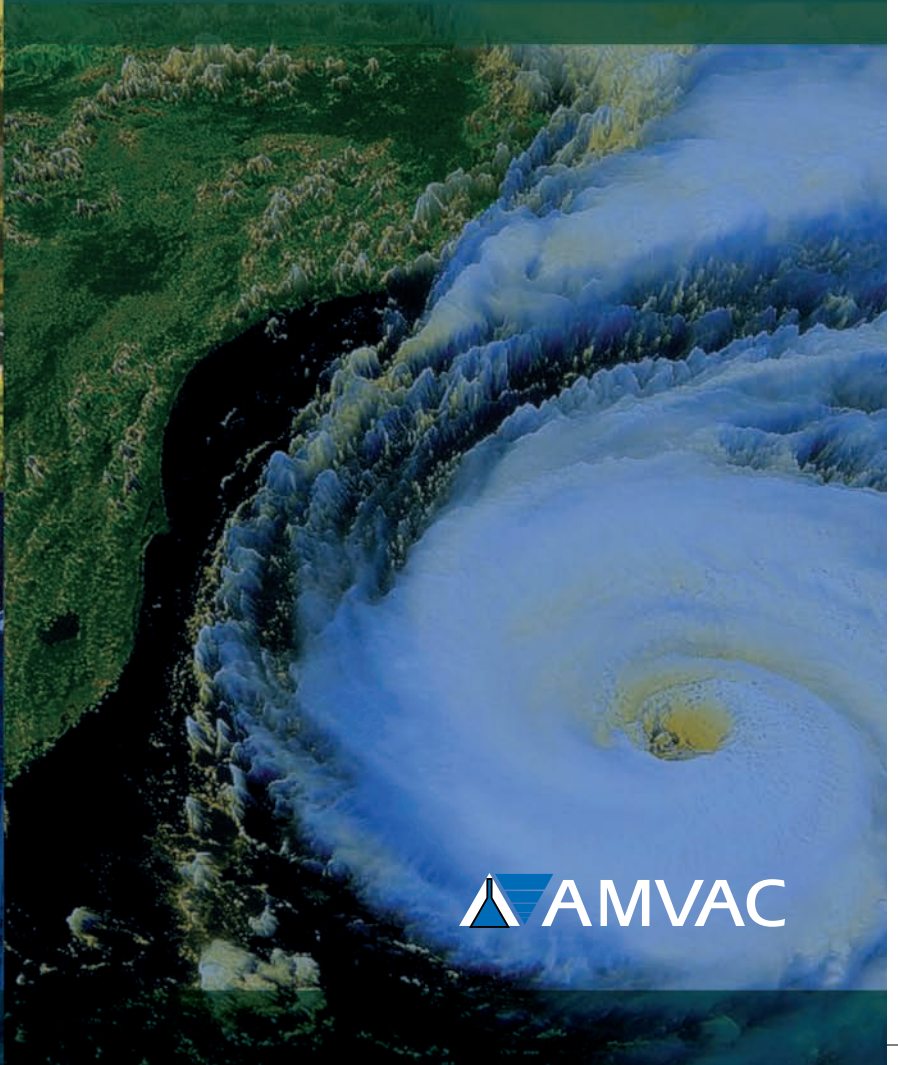
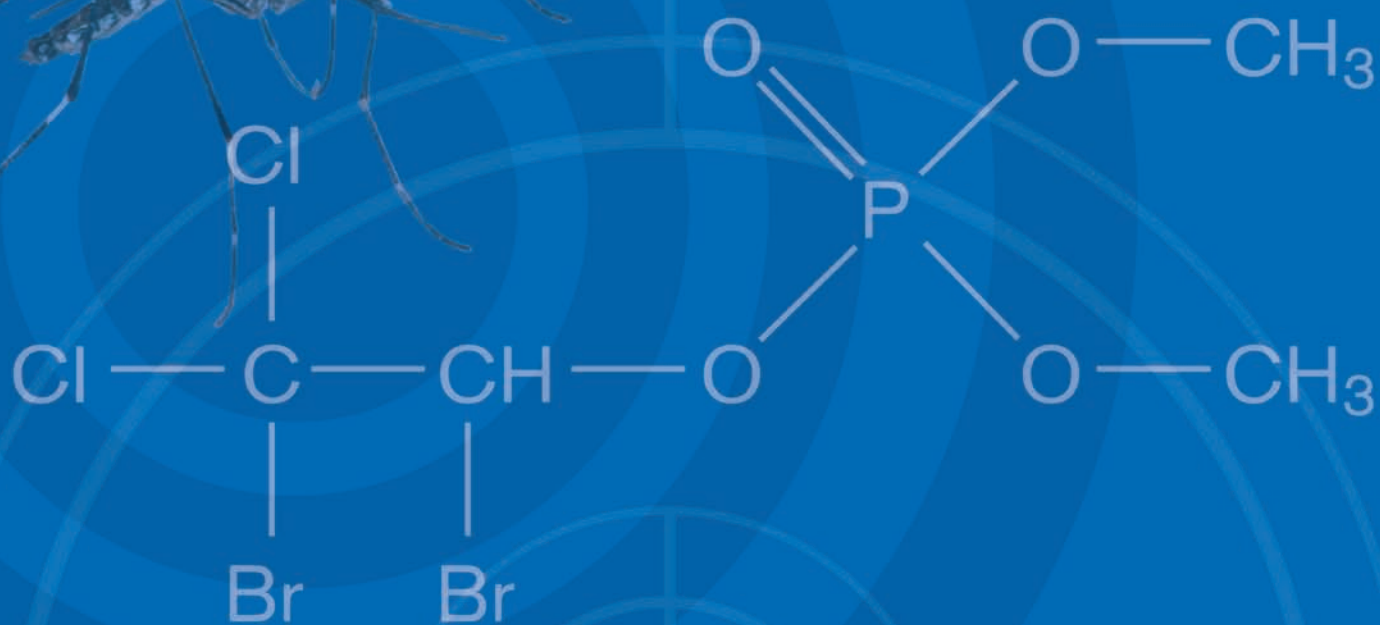




**Dibrom[®] Concentrate
and Trumpet[®] EC.
Proven, effective and
reliable products for
adult mosquito control.**



 **AMVAC**



Naled

A nonpersistent organophosphate used especially to control adult mosquitoes, flies and crop pests.

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Contact AMVAC at 1-888-462-6822 or visit our web site at www.amvac-chemical.com

Dibrom[®] Concentrate and Trumpet[®] EC

Dibrom Concentrate and Trumpet EC are today's prime weapons for adult mosquito control due to their high performance and unrivaled effectiveness. These carefully formulated insecticides provide a safe solution with very little risk of adverse effects to people or animals when used according to label directions. Their cost-effectiveness has also become an important factor in making them a top solution in the vector control market.



Naled is the active ingredient in both Dibrom Concentrate and Trumpet EC. Dibrom Concentrate consists of 87% naled by weight, and 18% petroleum distillate solvent. The formulation for Trumpet EC is 78% naled and 22% petroleum distillate and emulsifier. The emulsifier in Trumpet EC allows equipment to be flushed with water after application.

The insecticides utilize a low dose level of naled, which is absorbed into the insect's system and binds to enzymes involved in the transmission of nerve impulses. Under typical conditions, naled breaks down and dissipates rapidly from the environment. When the products are used according to label directions, there are no expected adverse effects to humans, fish or other non-target species.

The products can be applied in all areas where mosquitoes are found, including residential areas, municipalities, tidal marshes, woodlands, agricultural crop areas, feedlots and pastures used for beef, dairy cattle and other livestock. There are no aquatic setback restrictions.

Dibrom Concentrate and Trumpet EC are primarily applied by air for community adult mosquito control. Spraying for adult mosquitoes is most effectively done at dusk or night, when adults are flying. The primary application method is Ultra-Low Volume (ULV) by aircraft. ULV applications produce small droplets which, when dispersed properly, maximize the product's effectiveness. Dibrom Concentrate is applied undiluted at an aerial application rate of 0.5 to 1.0 fluid ounces of product per acre, and Trumpet EC at an application rate of 0.6 to 1.2 fluid ounces of product per acre. Ground-based equipment can also be used; however, rates of use are generally much lower than aerial application.

Effective Results

Dibrom Concentrate and Trumpet EC are the standard for adult mosquito control, and have become the absolute "go-to" brand due to their effectiveness.

Economical

Dibrom Concentrate and Trumpet EC provide a cost-effective solution for nuisance and disease-carrying mosquito populations, large or small.

Proven Performance

Dibrom Concentrate has built a reputation for reliability since it was registered in the early 60s, while Trumpet EC has also been the solution of choice since it was registered in 1995.

Controls Nuisance Insects

Dibrom Concentrate and Trumpet EC are labeled for controlling adult mosquitoes as well as a variety of flies including black flies, deer flies and other Tabanids.

Light or Heavy Infestations

These products can be used to control day-to-day adult mosquito activity, or in cases of challenging emergency conditions after flooding when adult mosquitoes become a large health issue.

A Shared Concern for Safety

Naled used in mosquito control programs does not pose unreasonable risks to wildlife or the environment. Naled degrades rapidly in the environment, and it displays low toxicity to birds and mammals.



Operational Use

Due to their chemical nature, Dibrom Concentrate and Trumpet EC are corrosive compounds, so it's necessary to use specialized equipment for handling, storage, and application. With proper planning, potential corrosion to application equipment can be avoided.

Flushing the system following application is essential. All components of the spray system must be flushed, including the insecticide holding tanks.

After applications of Dibrom Concentrate, use a suitable solvent for flushing. Once flushed, the system may be refilled with a light oil to eliminate condensation.

After Trumpet applications, use water to thoroughly flush the entire system, including holding tanks, and then blow the system dry with compressed air to eliminate condensation.

Dibrom Concentrate is labeled for use as a thermal fog, diluted, and non-diluted ULV applications by ground, in addition to aerial ULV uses. Trumpet EC is also labeled for ground and aerial ULV applications. Consult with the product distributor or AMVAC representative for information about other application methods.

Ultra-Low Volume (ULV) Applications

Spray Droplet Size

Data suggests that the optimum droplet size for Dibrom Concentrate and Trumpet EC is between 20 and 25 microns, applied by air. Work is ongoing to characterize and optimize commonly used nozzles to maximize adult mosquito control. Overly large particles provide ineffective coverage and can damage automobile paint. When applying by ground, the optimum particle size is 11 to 20 microns.

In the absence of wind tunnel nozzle performance data, particle size determinations should be made by collecting the spray droplets on silicone or Teflon-coated slides. An AIMS machine also works well to measure droplet sizes. AMVAC continues to work on characterizing commonly used nozzles.

Nozzle Positioning

To achieve product distribution and to avoid spotting automobile paint finishes, it's necessary to carefully adhere to recommendations concerning nozzles and pump pressure. All aircraft application systems should be characterized for swath width and VMD to ensure proper performance.

1. When using rotary atomizing nozzles, placement should be horizontal with the aircraft, facing toward the back (rear).
2. Non-atomizing nozzles must be positioned at 45° to 90° (perpendicular to air flow) into the wind. This positioning results in the maximum wind shear action across the face of the nozzles and helps to create the optimum spray particle size.

Loading Procedure

Dibrom Concentrate and Trumpet EC should be passed through a strainer when loading. Use a 100-mesh (150 micron) stainless steel or nylon screen. A closed-loading system is required for both products.

Application Equipment

Listed below are recommendations for general system components, however, it is not the purpose of this manual to provide a definitive application system design. Depending on the aircraft or other type of application equipment, design and installation will vary.

All equipment used in the application of Dibrom Concentrate and Trumpet EC should be constructed of corrosion-resistant materials. Stainless steel, bronze, fiberglass, polypropylene, and rigid PVC have all proven fairly resistant to the effects of these products. Use of Teflon® or Viton® seals is recommended. When using a diaphragm pump, a Santoprene diaphragm is recommended. Avoid the use of any "soft" materials (such as steel or galvanized steel) or, in the case of Dibrom Concentrate, contamination of the application system with water. This also applies to transfer systems (pumps, etc.) and storage facilities. All equipment requires a careful maintenance program involving flushing, cleansing and constant inspection of the entire system.

Application Equipment, continued

Generally, the pump system is preferred. The diagram below provides a general component layout for this type of system. Naled-resistant materials should be solely used in component construction.

Tank

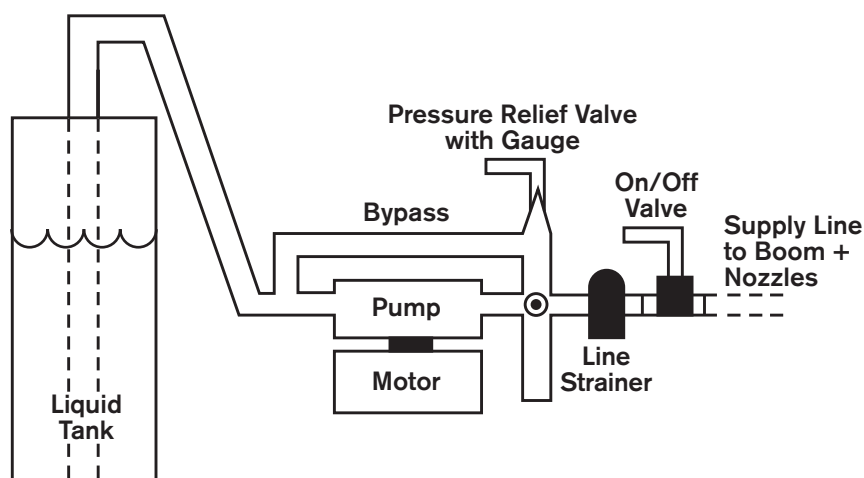
Stainless steel, fiberglass, or polypropylene should be utilized. Polypropylene or stainless steel is preferred. Fiberglass is considerably more economical; however, not all fiberglass compositions are resistant to naled so be certain to establish this before the tank is constructed. Flushing systems should include the tank. Tank size should be based upon the weight of Dibrom Concentrate and Trumpet EC and the size of the area that will normally be treated.

Pump and Motor

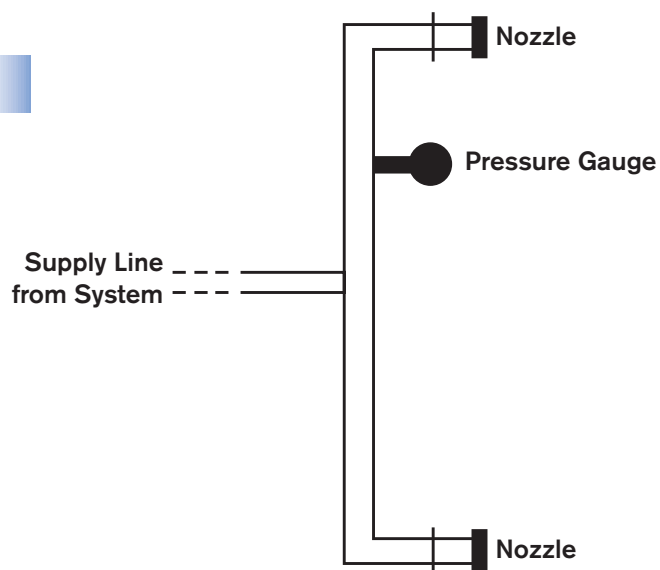
The pump is the key item in any handling system. Stainless steel gear pumps have performed well with Dibrom Concentrate and Trumpet EC. Pumps should be run at the lowest possible speed. This is accomplished through proper pump and motor selection.

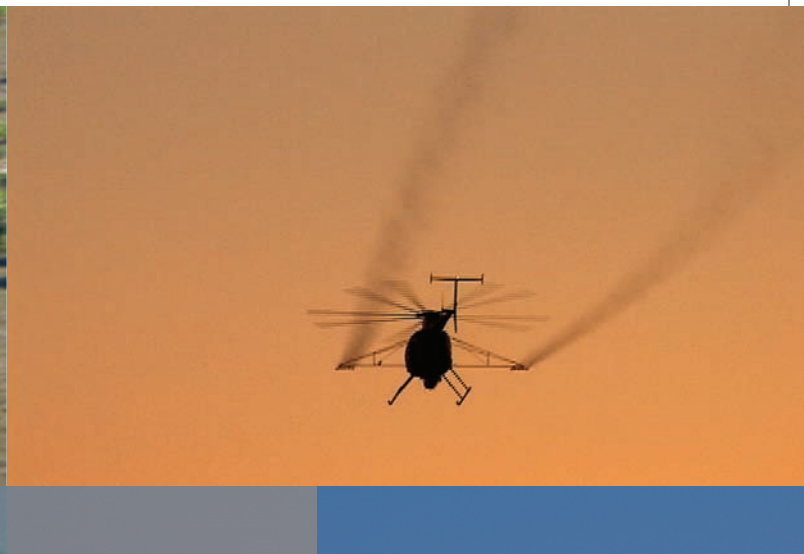
Past experience has shown the Oberdorfer stainless steel pump, equipped with a Teflon seal, is a corrosion-resistant, dependable pump available in a size range sufficient to handle flow rates associated with aerial application in ULV, as well as those associated with bulk handling and loading systems. The SHURFLO pump with Santoprene diaphragm is also recommended.

Pump System



Typical Application System





Most applications are made by air.

Pressure Relief Valve

Available in bronze or stainless steel with interior parts also available in stainless steel from either Debeo Co. or SHURFLO.

Flow Meter

Many agencies use self-adjusting flow meters to monitor and change the flow as needed during turns and as the relative ground speed changes. Sotera and Great Plains have flow meters that function well.

Strainer

Stainless steel or brass body with 100-mesh stainless steel or nylon screen insert is recommended.

On/Off Valve

A solenoid controlled on/off is recommended. Attention must be paid to see that the interior construction will withstand naled (Viton or Teflon).

Supply Lines

A Teflon-lined, steel-braided hose, nylon or stainless steel tubing is recommended. Nylon is considerably more economical, but stainless steel is considerably more durable.

Boom

Teflon-lined, steel braided hose or a stainless steel boom is recommended in spite of the cost factor. The boom is subjected to a great deal of force and the possibility of bird strikes, so the system should be constructed to prevent leaks or failure.

Nozzles

Selections vary depending on aircraft speed. Electric and turbine-driven rotary atomizers, some flat fans and or impinger nozzles, rated for label droplet size performance should be used. Nozzles should be constructed of either stainless steel or brass.

For aircraft flying under 100 mph, use electric atomizing nozzles only. These high-speed rotary nozzles distribute particles in the 20 to 40 micron range. Micronaire AU 4000, AU 5000, and AU 6000 series and Beecomist Systems, Inc. nozzles are recommended.

Aircraft and Ground Equipment Calibration

To ensure proper application for the various ground and aircraft equipment, contact your pilot, aircraft manufacturer, your local distributor and/or your AMVAC technical representative.



HEALTH EFFECTS

When Dibrom Concentrate or Trumpet EC is used according to label directions, the risk of adverse health effects to mosquito abatement workers, or to people present in treated areas, is extremely low. Consult AMVAC's Material Safety Data Sheet (MSDS) for the product in use, for current information on the effects of overexposure. In case of emergency, or if more in-depth information is needed on health-related issues, physicians or the public may call a poison control center or AMVAC at 1-323-264-3910.

If absorbed into the body, Dibrom Concentrate and Trumpet EC break down very quickly, primarily to dichlorvos (DDVP). DDVP has a comparable degree of toxicity to naled, the active ingredient, and also breaks down rapidly in the body to less toxic chemicals. Dibrom Concentrate, Trumpet EC and DDVP are extensively metabolized within the body and their breakdown products are excreted primarily via the kidneys within a few days.

The mechanism of toxicity of organophosphates is very specific. All such chemicals inhibit cholinesterase enzymes, which are involved in the transmission of signals between nerves, or from nerves to muscles or glands. Organophosphates act by binding to cholinesterase and inhibiting the transmission of nerve signals. Since the body continually manufactures these enzymes, the signs and symptoms of mild to moderate overexposure disappear after several days, once the normal physiological levels of the enzyme have been replenished.

Acute Effects

Acute toxicity studies are used to determine the systemic toxicity and irritation potential of substances following a short-term (acute) exposure. EPA uses the results of these studies to determine the "signal" word (i.e., Danger, Warning, Caution), precautionary wording and first aid statements which appear on the product label. The purpose of the signal word and associated precautionary statements is to protect individuals who may work with or be exposed to the undiluted concentrate. These statements are not intended to apply to persons in the community who may be exposed to the chemical from mosquito abatement applications, as their exposure

Dibrom Concentrate and Trumpet EC can be safely used in a wide variety of environments, from residential areas to agricultural farms to woodland and marsh areas.



will be far less. The label statements also indicate what protective equipment should be worn by persons working with the product, and what first aid procedures to follow in case of accidental overexposure.

The following results are from studies conducted to determine the acute toxicity of naled. They can be used as an estimate of the toxicity of the formulated products.

Effects of Long-Term Exposure

Naled has been thoroughly tested for adverse health effects under long-term exposure conditions. There is no indication that persons working with Dibrom Concentrate and Trumpet EC regularly should have any long-term health effects.

Acute Oral LD ₅₀ ¹ in the Rat	92 – 191 mg/kg body weight ²
Acute Dermal LD ₅₀ in the Rabbit	360 – 390 mg/kg body weight ²
Acute Inhalation LC ₅₀ in the Rat	0.19 – 0.2 mg/1 air
Acute Eye Irritation in the Rabbit	Corrosive to eyes
Acute Skin Irritation in the Rabbit	Corrosive to skin

¹The LD or LC is the dose which is lethal to 50% of an experimental population of lab animals.

²Results based on studies conducted with naled technical grade.

Cancer Testing

Research shows that exposure to naled does not cause cancer in laboratory animals. There are no findings or reports of increased cancer among workers involved in the manufacture, formulation, or application of naled formulations. Similarly, there are no reports of increased rates of cancer in communities where Dibrom Concentrate and Trumpet EC is used for adult mosquito control.

Naled breaks down to dichlorvos (DDVP) in mammals. When given by mouth to mice for a lifetime, DDVP was shown in one study to produce fore-stomach tumors. No tumors of this or any other type were produced in naled lifetime cancer studies, even though naled was administered to the animals at a daily dose level thousands of times greater than that to which humans might be exposed from applications of the chemical for adult mosquito control.

Reproductive Effects Testing

Data from laboratory animal tests indicate that naled does not cause adverse reproductive effects. Results of the multigenerational rat reproduction study and teratology studies demonstrated that at the dose levels tested, naled did not have an adverse effect upon reproduction or cause fetal malformations.

Neurotoxic Effects Testing

Neurotoxic is defined as any adverse effect on the structure or function of the nervous system related to exposure to a chemical substance. Based on an extensive neurotoxicity database, including recently completed subchronic studies, and human case reports, there is no evidence that exposure to naled ULV application results in neurotoxicity symptoms other than the well-documented inhibition of cholinesterase.

Residue on Food Crops

Due to the broadcast nature of mosquito control applications, there is a potential for small amounts of these materials to reach growing crops. The likelihood of such residues being detectable at harvest is very small. However, the EPA has established a tolerance of 0.5 parts per million for naled and its breakdown product DDVP on all food crops resulting from wide-area pest control uses. Thus, crops containing inadvertent residues up to the tolerance level may be sold legally. Food containing inadvertent Dibrom Concentrate and Trumpet EC residues as a result of labeled mosquito control applications may be consumed without concern over potential adverse health effects. Dibrom 8, an agricultural use formulation of naled, is registered for insect control on over 25 crops including citrus, melons, strawberries and cole crops. Dibrom 8 is also used around dairies, feedlots and other sites to control flies and other nuisance pests.



Environmental Effects

When Dibrom Concentrate or Trumpet EC is properly applied at the recommended label use rate, non-target organisms such as fish, birds, and mammals have shown no ill effects following the application. The concentration of naled resulting from ULV applications, is sufficient for insect control immediately following application. However, because naled breaks down and dissipates rapidly in the environment, studies show that its effect on other organisms resulting from such applications will be insignificant to non-existent.

Environmental Fate

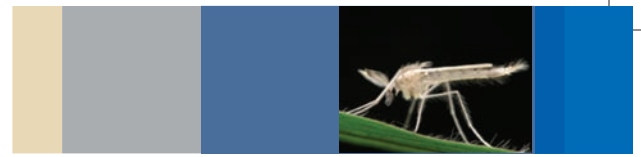
Environmental fate studies demonstrate that naled degrades rapidly under typical environmental conditions. Results of these studies are expressed in terms of half-life, which is the time for one half of the chemical administered to be lost through degradation and dissipation. The half-life of naled in pure, distilled water in a hydrolysis study conducted at 25 C was 96 hours at pH 5; 15.4 hours at pH7; and 1.6 hours at pH 9. The half-life of naled in water in a photolysis study was just under one day. Metabolic activity increases the rate of degradation of naled. The degradation half-life on soil is approximately one half hour under light or dark conditions. DDVP is the primary product of naled photolysis and is known to dissipate rapidly in the environment.

Results of aquatic dissipation studies conducted in ponds located in Florida and Mississippi, after five aerial applications of Dibrom, confirmed a naled half-life of less than one day. Another avian dietary study demonstrated a naled half-life of about 30 hours under laboratory conditions. A residue trial conducted in California on rice, indicated a half-life of 4–5 hours for naled and 5 hours for the metabolite dichlorvos (DDVP).

Environmental evaluations on various fowl fish, crustaceans and other animals have confirmed that naled can be safely used around wildlife. Research evaluations were conducted on ducks, geese, meadowlarks, sparrows, robins, cardinals, starlings, doves, orioles, pigeons, minnows, fiddler crabs, cats, dogs, rabbits and rodents, showing no mortality and no ill effects from any treatment with naled.

The trials and other observations are of value in demonstrating the low risk to wildlife in areas where naled is used in mosquito control programs.

Dibrom Concentrate and Trumpet EC are an effective solution in emergency situations where mosquitoes pose the greatest health hazard.



Aquatic Organism Toxicity

Due to the relatively rapid degradation of naled in water, naled must be tested using flow-through systems. In these studies, test organisms are continuously exposed to fresh test solutions to maintain a controlled concentration of naled in the water. These studies maximize exposure of the test organisms to naled and generate exaggerated results, which lead to very conservative estimates of aquatic organism toxicity. The table below presents acute toxicity results from studies conducted with various freshwater estuarine aquatic organisms in which the LC₅₀ ranged from 3.30 mg a.i./L to 0.00035 mg a.i./L. Under normal use conditions of a residue deposition, these concentrations would not persist for the observation time of the test.

Based upon these findings, the toxicity of naled to aquatic organisms is considered to range from moderately to very highly toxic under generally recognized criteria for acute aquatic organism toxicity. However, under true environmental conditions during actual applications made for adult mosquito control, Dibrom Concentrate and Trumpet EC dissipate rapidly and can be used without adversely affecting non-target aquatic organisms in most circumstances. Therefore, there are no aquatic setbacks for Dibrom Concentrate or Trumpet EC.

In studies conducted using technical grade naled and Dibrom Concentrate, both materials exhibited similar toxicity. These studies indicate the formulated product neither increases nor decreases the toxicity of naled to aquatic organisms.

Acute Oral Toxicity of Naled Technical to Aquatic Organisms	
Freshwater Organisms	
Bluegill Sunfish	96-hour LC = 0.18, 2.20 mg/L
Rainbow Trout	96-hour LC = 0.13, 0.20 mg/L
Fathead Minnow	96-hour LC = 3.30 mg/L
Daphnia Magna	48-hour EC = 0.00035 mg/L
Estuarine Organisms	
Sheepshead Minnow	96-hour LC = 1.20 mg/L
Grass Shrimp	96-hour LC = 0.0089 mg/L
Eastern Oyster	96-hour LC = 0.19 mg/L
Shell Deposition	

Since DDVP (dichlorvos) is a significant degradation product of naled in water, toxicity of DDVP to aquatic organisms is presented in the following table.

Acute Oral Toxicity of Dichlorvos to Aquatic Organisms	
Freshwater Organisms	
Bluegill Sunfish	96-hour LC = 0.869 mg/L
Cutthroat Trout	96-hour LC = 0.17 mg/L
Daphnia Magna	48-hour EC = 0.00007 mg/L
Estuarine Organisms	
Sheepshead Minnow	96-hour LC = 7.35 mg/L
Eastern Oyster	96-hour LC = 89.1 mg/L
Myside Shrimp	96-hour LC = 0.019 mg/L

Avian Toxicity

Naled is considered to be mildly toxic to birds when tested in the laboratory. Naled is short-lived in the environment, and therefore prolonged exposure to birds is minimal. Shown below are results from several acute oral and dietary studies.

Acute Oral Toxicity of Naled Technical to Avian Species		
Species	LD ₅₀ (mg/kg body wt.)	LD ₅₀ 95% CL (mg/kg body wt.)
Canada Goose	36.9	(27.2 – 50.0)
	49.9	(31.7 – 78.6)
Mallard	52.2	(37.8 – 72.3)
Ring-necked Pheasant	120.0	(30.0 – 480.0)
Sharp-tailed Grouse	64.9	(37.3 – 113)

Dietary Toxicity of Naled Technical to Avian Species		
Species	LC ₅₀ (ppm)	LC ₅₀ 95% CL (ppm)
Japanese Quail	1,328	(1,130 – 1,561)
Mallard	2,724	(1,068 – 15,089)
Northern Bobwhite	2,117	(1,502 – 2,890)
Ring-necked Pheasant	2,538	(2,221 – 2,896)

Technical Information

Dibrom Concentrate – Primarily for Use in Adult Mosquito Control Programs (Contains 13.35 lbs active ingredient per gallon)

Physical State	Liquid
Appearance	An off-white to straw-yellow color
Odor	Sharp, pungent, with overtones of aromatic solvent
Odor Threshold	No data available
Boiling Point	320° F/160° C
Freezing/Melting Point	60° F/15° C
Specific Gravity	1.794 to 1.831
Density	14.97 to 15.28 lb/gal
Vapor Pressure (mm/Hg)	10 mm Hg @ 100° F
Vapor Density	Heavier than air
Solubility in Water	0.2%
Solubility (Other)	This product is soluble in aromatic hydrocarbons, chlorinated hydrocarbons, ketones and esters
Partition Coefficient (O/W)	~ 100 (a.i) at ambient temperatures
pH	3 to 4 (1% dilution in water)

TRUMPET EC – Primarily for Use in Adult Mosquito Control Programs (Contains 10.8 lbs active ingredient per gallon)

Physical State	Liquid
Appearance	Clear amber liquid
Odor	Aromatic solvent odor
Odor Threshold	No data available
Boiling Point	320° F/160° C
Freezing/Melting Point	60° F/15° C
Specific Gravity	1.67 @
Density	13.9 lb/gal
Vapor Pressure (mm/Hg)	10 mm Hg @ 100° F
Vapor Density	Heavier than air
Solubility in Water	Emulsifies
Solubility (Other)	This product is soluble in aromatic hydrocarbons, chlorinated hydrocarbons, ketones and esters
Partition Coefficient (O/W)	~ 100 (a.i) at ambient temperatures
pH	3.6 (1% dilution in water)

NOTE: Trumpet EC is a formulation of naled containing an emulsifier that allows applicators to flush equipment with water after application.



Corrosivity

All concentrate formulations of naled coming in contact with as little as 0.1% water will immediately establish acidic conditions which will be extremely corrosive to most metals. Any lines, tanks, filling, packaging or application equipment which come in contact with naled should be cleaned out immediately after use. Dibrom Concentrate must be cleaned up with a solvent rinse. Many mosquito control districts re-fill the spray system after flushing with a light oil to prevent condensation. Trumpet EC can be flushed out of application equipment with water. Lines should be completely drained and then it is recommended to blow out the system with air to eliminate condensation.

Stability

Naled is stable when stored in suitable containers under normal storage conditions. It will hydrolyze slowly in the presence of water and rapidly in alkaline media.

For formulated products, the naled loss is a maximum of two (2) percent per year under normal storage conditions. This loss may be further reduced when held in moderate temperature (60° to 70° F) storage conditions or accelerated under high temperature (+100° F) storage conditions.

Solubility

Naled has limited solubility in the following selected commonly used solvents.

Solvent	Solubility gms/100 gms Solvent
Diesel Fuel (SP Type B)	25
Automotive Diesel	7
Kerosene (Deodorized)	7
Jet A	7
Water	0.2 @ 23.3° C

Crystal Point Determinations

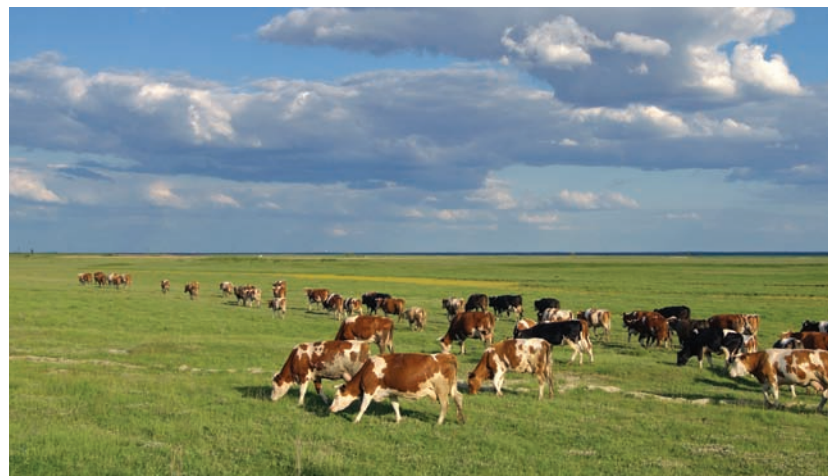
Concentrations of naled in hydrocarbons and other organic solvents are very stable at low temperatures and may be super-cooled far below their normal crystal points, shown below before any crystallization or solidification is observed. These super-cooled temperatures will vary and are dependent on crystal initiation from seeding. Crystallization temperatures are therefore given, where the numbers represent the maximum possible temperature at which solidification can occur.

Solidified naled formulations will always re-dissolve above their respective crystal points. Speed of re-dissolving is directly proportional to the temperature used. (DO NOT HEAT NALED ABOVE 115° F). In some cases, agitation of the materials may be needed and may speed up the process of re-dissolving the crystals.

Crystal point formulation temperatures for these naled formulations have been developed using a modified ASTM D 1015 analysis.

Product	Degrees (Fahrenheit)
AMVAC Naled Technical	78°
Dibrom Concentrate	60°
Trumpet EC	60°

Dibrom Concentrate and Trumpet EC protect feedlots, pastures including beef and dairy cattle and other livestock, as well as agricultural crop areas.



Degradation of Naled

The two main types of naled degradation are by hydrolysis and biological degradation, and both are quite rapid in the breaking down of naled into harmless by-products. The two pathways to degradation are:

- Debromination followed by hydrolysis and ultimate degradation
- Hydrolysis followed by dehalogenation and ultimate degradation

A combination of hydrolysis and biodegradation occurs in nature. Biological degradation can occur in either aquatic or terrestrial situations. The degradation of naled starts immediately upon release of the spray droplet and is well advanced in only a few hours.

The factors contributing to degradation are:

Temperature

Higher temperatures accelerate the degradation.

pH

Higher pH accelerates hydrolysis and debromination.

Moisture

Naled is slightly soluble in water, thus any moisture (dew, high humidity, etc.) that comes in contact with the material starts hydrolysis.

Microbes

Microbes rapidly decompose naled. These are found in soil, water, air and on surfaces.

Sulphydro Groups

These chemical structures are very common chemical groups found in nature. They are present in plant sap, all protein, all soil and most bodies of water. These chemicals are active in the degradation pathways of naled. For example, in plant tissue, naled rapidly penetrates the cuticle of the plant and mixes with the sap, which begins the degradation process.

A study conducted in February 1996 showed the hydrolysis half life of naled in distilled water, in the dark, to be as follows: pH9 – 1.6 hours; pH7 – 15.4 hours; and pH5 – 96 hours. In open sunlight this occurs much more rapidly. The metabolites of naled are DDVP, DCA and

BDCA. DDVP is rapidly biodegraded. DCA and BDCA are highly water soluble and so unstable and short-lived that it is almost impossible to detect these compounds in plant tissue. They decompose as rapidly as they are formed. Metabolism and animal tissue studies revealed that naled and its metabolites are not stored in the body.

Regulatory Status

The EPA registration database for all products containing naled, the active insecticidal ingredient in Dibrom Concentrate and Trumpet EC, has been updated with over 300 studies. This work was done as a result of a reregistration timetable established by the EPA in 1988, under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) as well as the Food Quality Protection Act (FQPA) of 1996. In addition to data required to address testing requirements for naled, data has also been provided to address possible exposures to DDVP (dichlorvos), which is a metabolite of naled found in plants and animals.

Reregistration is a rigorous process whereby the EPA re-evaluates the data supporting the registration of pesticides already on the market. The re-evaluation of naled culminated with the issuance of a Reregistration Eligibility Decision (RED) document in July 2006, whereby the EPA concluded that naled formulations, including both Dibrom Concentrate and Trumpet EC, are eligible for reregistration. The EPA does not have risk concerns for bystanders or handlers/applicators when these naled formulations are applied according to label directions for the control of adult mosquitoes.

AMVAC Chemical Corporation is the sole U.S. registrant of naled-based products and is fully committed to the continued registration of naled. AMVAC will continue to invest the resources necessary to ensure that the naled registration database on health and environmental effects continues to meet today's rigid scientific standards. AMVAC is confident that Dibrom Concentrate and Trumpet EC will remain available for use in mosquito control programs well into the foreseeable future.

For more information regarding the EPA's current status on naled, please visit their web site at www.epa.gov/pesticides/reregistration/naled.

The EPA does not have risk concerns for bystanders or handlers/applicators when the naled formulations are applied according to label for the control of adult mosquitoes.



DIBROM[®] CONCENTRATE

TRUMPET[®] EC



For more information about Dibrom[®] Concentrate and Trumpet[®] EC contact your product distributor, call 1-888-462-6822 or visit www.amvac-chemical.com.

Always read and follow all label directions and use precautions. Always pre-test for phytotoxicity prior to large-scale use.

Photos on page 4 courtesy of Collier County Mosquito Control.

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