

1 of 3  
pmlk  
SU 39-19

DIBROM 14 Concentrate  
Submitted: June 21, 1989  
EPA Reg. No. 239-1721

COPY A

Vehicles used to apply DIBROM must be air conditioned or equipped with automatic speed control flow device.

ACCEPTED  
SEP 20 1989  
Under the Federal Insecticide, Fungicide, and  
Rodenticide Act, as amended, for the  
pesticide registered under  
EPA Reg. No. 239-1721

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2 of 3

DIBROM 14 Concentrate  
Submitted: June 21, 1989  
EPA Reg. No. 239-1721



**ORTHO**

# DIBROM<sup>®</sup>

## 14 Concentrate

**(INSECTICIDE)**

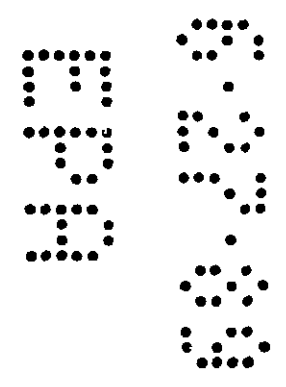
Active ingredient  
\* Naled  
Inert ingredients

By Wt  
85%  
15%

\* 1,2-dibromo-2,2-dichloroethyl dimethyl phosphate  
Contains 14 pounds technical naled per gallon equivalent to 12.6 pounds naled

**KEEP OUT OF REACH OF CHILDREN**  
**DANGER**  
DO NOT TAKE INTERNALLY. DO NOT GET IN EYES. DO NOT GET ON SKIN.  
SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

**NET CONTENTS 1 GALLON (3.785 LITRES)**



**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS & DOMESTIC ANIMALS**

**DANGER**

**CORROSIVE** Causes irreversible eye and skin damage. May be fatal if swallowed, inhaled or absorbed through the skin. May cause allergic skin reaction. Do not get in eyes, on skin or on clothing. When handling this material wear impervious protective clothing, protective gloves, apron, overalls, chemical goggles and face shield. Do not breathe vapor or spray mist. Wear MSHA/NIOSH approved pesticide respirator. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash before reuse.

**STATEMENT OF PRACTICAL TREATMENT**

If in eyes: hold eyelids open and flush with a steady gentle stream of water for 15 minutes. Get medical attention immediately.

If inhaled: remove victim to fresh air. If not breathing, give artificial respiration and get medical attention immediately.

If swallowed: drink 1 or 2 glasses of water for water and induce vomiting by touching the back of the throat with finger. If possible contact a physician. Poison Control Center or emergency center before inducing vomiting. Do not induce vomiting or give anything by mouth to an unconscious person. Take person and product container to the nearest medical emergency treatment center.

If on skin: wash with plenty of soap and water. Get medical attention immediately.

**Note to Physicians:** Emergency information - call (415) 233-3737. DIBROM 14 is a cholinesterase inhibitor. Measurement of blood cholinesterase activity may be useful in monitoring exposure. If signs of cholinesterase inhibition appear atropine sulfate is antidote. 2-PAM (Protopam) is also antidote and may be used in conjunction with atropine, but should not be used alone.

**ENVIRONMENTAL HAZARDS**

This pesticide is toxic to fish, aquatic invertebrates, and wildlife. Do not apply directly to water except when used over water as labeled for adult mosquito black fly and pupa control. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

**PHYSICAL OR CHEMICAL HAZARDS**

**COMBUSTIBLE. KEEP OUT OF REACH OF CHILDREN. DO NOT USE ON STONE** near heat, open flame, sparks or hot surfaces. **USE ONLY IN WELL VENTILATED AREA.** Keep container closed. Clean up spills immediately. Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85°F.

**DO NOT** heat this container. Replace cap or bung. Empty container still contains hazardous or explosive vapor or liquid.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**READ ENTIRE LABEL. USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS.**

DIBROM 14 Concentrate is a special formulation for use undiluted or diluted in diesel oil to be applied for the control of mosquitoes, houseflies and certain other nuisance insects. This product cannot be diluted with water. If crystallization occurs, warm at 70° until crystals disappear.

**SPECIAL MIXING DIRECTIONS (Except CA):** The use of DIBROM 14 Concentrate and some grades of diesel fuel may result in precipitates which cause nozzle clogging and operational difficulties. To prevent this, DIBROM 14 Concentrate should be used with DITHO Additive. See DITHO Additive label for recommended rates.

A technical Bulletin Operating Manual For Ultra Low Volume Application of DIBROM 14 is available. For detailed information on equipment for ULV applications.

**DIRECTIONS**

**ADULT MOSQUITO CONTROL in Residential Areas, Municipalities, Total Marshes, Swamps, Pastures, Feed Lots and Pastures including Dairy Cattle:** It is not necessary to avoid farm buildings, or storage areas. Treat shrubbery and vegetation where mosquitoes may rest. Spray in stagnant pools, marshy areas, swamps, residential areas, municipalities, woodlands, etc. Lots may be treated.

**ULTRA LOW VOLUME AIRCRAFT APPLICATION:** Apply 1.2 to 1.6 oz. of undiluted concentrate per acre where heavy vegetation exists (i.e., woodlands, etc.). Aircraft should be equipped with a 100-gallon tank. Large droplets may damage certain automobile finishes. Flat fan nozzles should be used. Only use aircraft flying 100 mph or faster. Aircraft flying at slower speeds should be used only if the droplets should be larger than 80 microns. Spray during the day and when the temperature is low.

**AIRPLANE APPLICATION:** Dilute 50 to 100 or 116 to 312 gals. of DIBROM 14 Concentrate in 100 or 200 gal. of dilute material per acre. This is equivalent to 0.05 to 0.10 lb. actual DIBROM 14 Concentrate with HANCO Aromatic Naphthalene to make 16.1 oz. of dilute material per acre. This is equivalent to 1.6 lb. actual DIBROM per acre.

**THERMAL FOG APPLICATION:** Dilute 2 gals. of DIBROM 14 Concentrate in 99 gals. of No. 2 Fuel Oil or diesel oil. Apply either at the rate of 40 gals. per hour at 5 mph or at the rate of 99 gals. per hour at 10 mph. Apply swath 300 ft. 400 feet wide.

**ULTRA LOW VOLUME NON-THERMAL GROUND APPLICATION:** Dilute 2 gals. (64 fl. oz.) of soybean oil or HANCO to make 5 gals. of dilute solution. Apply with the rate of 3 to 8 fl. oz. per acre at 5 mph applying a swath 300 ft. wide, at 10 mph, use 6 to 12 fl. oz. per minute per acre per minute. This is equivalent to 0.01 to 0.02 lb. actual DIBROM per acre. Use the high rate in dense vegetation. Maximum effect is produced by particles 15 to 20 microns in size. The droplets produced should not exceed 15 microns and no droplets should be larger than 10 microns. Over atomization results in poor mosquito control. To determine droplet size, test with a thin film of General Electric SC-87 Oil Film to show aerosol product. This is a rapidly 3 to 6 feet in front of aerosol discharge. Place prepared slides in a spray deposit discharge to avoid saturation. Using an ocular micrometer at 450x magnification, measure 100 of droplet diameters. Multiply droplet diameter by a 0.42 spread factor to determine diameter to obtain droplet size range and median diameter.

**GROUND ULV CONCENTRATE APPLICATION:** Apply DIBROM 14 Concentrate undiluted at 5 mph, 12 fl. oz. per minute at 10 mph, or 12 fl. oz. per minute at 15 mph. These flow rates are equivalent to 0.02 lb. actual DIBROM per acre. **CAUTION - SP** application can be made only under the following conditions: 1. Application can be licensed and certified personnel with public agencies or private contractors operating contract with such government agencies. 2. Application in calm air conditions is to not be made in the immediate vicinity of pedestrians. 4. Vehicle used to apply must be equipped with automatic speed control device.

**BLACKFLIES, HOUSEFLIES, GNATS, CERTAIN OTHER NUISANCE INSECTS - SMALL FLYING INSECTS, ADULT STABLE FLIES (Dog Flies) in Residential Areas, Municipalities, Woodlands, Pastures, Feed Lots and Pastures including Dairy Cattle:** It is not necessary to avoid farm buildings, or storage areas. **THERMAL FOG APPLICATION:** Dilute 1 gal. to 99 gals. of No. 2 Fuel Oil or diesel oil at a rate of 40 gals. per hour output at an average vehicle speed of 5 mph, applying swath 300 feet wide. **PLANE APPLICATION:** Dilute 100 to 230 fl. oz. (3.4 to 3.4 gals.) DIBROM 14 Concentrate in diesel oil. **Smaller insects - Gnats and Midges, 3-4 to 1 gal. Houseflies, Flying Moths:** diluted material per acre. This is equivalent to 0.1 to 0.2 lb. actual DIBROM per acre. Supply



NOT REVIEWED

In Accordance with FR Notice 82-2  
Based on Draft Labeling Dated 9-20-89

# DIBROM®

## 14 Concentrate

(INSECTICIDE)

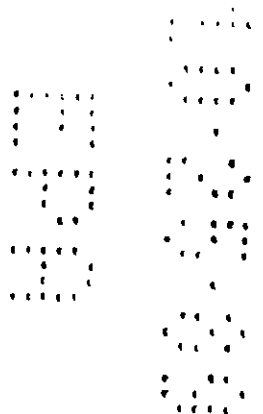
Active Ingredient  
\* Naled  
Inert Ingredients  
\* 12 dibromo 2,2 dichloroethyl dimethyl phosphate  
Contains 14 pounds technical naled per gallon equivalent to 12.6 pounds naled  
DIBROM® - Reg. TM of Chevron Chemical Company for naled insecticide

84 Wt  
85%  
15%

KEEP OUT OF REACH OF CHILDREN  
**DANGER**

DO NOT TAKE INTERNALLY. DO NOT GET IN EYES. DO NOT GET ON SKIN.  
SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS.

NET CONTENTS 1 GALLON (3.785 LITRES)



### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS & DOMESTIC ANIMALS

### DANGER

**CORROSIVE:** Causes irreversible eye and skin damage. May be fatal if swallowed, inhaled or absorbed through the skin. May cause allergic skin reaction. Do not get in eyes, on skin, or on clothing. When handling this material wear impervious protective clothing including gloves, apron, overboots, chemical goggles and face shield. Do not breathe vapor or spray mist. Wear a MS-1A NIOSH approved pesticide respirator. Wash thoroughly with soap and water after handling and before eating, drinking, or using tobacco. Remove contaminated clothing and wash before reuse.

#### STATEMENT OF PRACTICAL TREATMENT

If in eyes: hold eyelids open and flush with a steady gentle stream of water for 15 minutes. Get medical attention immediately.

If inhaled: remove victim to fresh air. If not breathing, give artificial respiration and get medical attention immediately.

If swallowed: drink 1 or 2 glasses of water (or milk) and induce vomiting by touching the back of the throat with finger. If possible contact a physician, Poison Control Center, or emergency center before inducing vomiting. Do not induce vomiting or give anything by mouth to an unconscious person. Take person and product container to the nearest medical emergency treatment center.

If on skin: wash with plenty of soap and water. Get medical attention immediately.

**Note to Physicians:** Emergency information—call (415) 232-3737. Nealed is a cholinesterase inhibitor. Measurement of blood cholinesterase activity may be useful in monitoring exposure. If signs of cholinesterase inhibition appear, atropine sulfate is antidotal. 2-PAM (Protopam) is also antidotal and may be used in conjunction with atropine, but should not be used alone.

#### ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish, aquatic invertebrates, and wildlife. Do not apply directly to water except when used over water as labeled for adult mosquito, blackfly, or housefly control. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are actively visiting the treatment area.

#### PHYSICAL OR CHEMICAL HAZARDS

**COMBUSTIBLE. KEEP OUT OF REACH OF CHILDREN. DO NOT USE ON STOVE** near heat, open flame, sparks or hot surfaces. **USE ONLY IN WELL VENTILATED AREA.** Keep container closed. Clean up spills immediately. Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 65°F.

**DO NOT** heat this container. Replace cap or bung. Embroid container still contains hazardous or explosive vapor or liquid.

#### DIRECTIONS FOR USE

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.

#### READ ENTIRE LABEL USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND DIRECTIONS, AND WITH APPLICABLE STATE AND FEDERAL REGULATIONS

DIBROM 14 Concentrate is a special formulation for use undiluted or diluted in diesel oil to be applied for the control of mosquitoes, houseflies and certain other nuisance insects. This product cannot be diluted with water if crystallization occurs, warm at 70° until crystals disappear.

**SPECIAL MIXING DIRECTIONS (Except CA):** The use of DIBROM 14 Concentrate and some grades of diesel fuel may result in precipitates which cause nozzle clogging and operation difficulties. To prevent this, DIBROM 14 Concentrate should be used with VALENT Additive. See VALENT Additive label for recommended rates. A technical bulletin, Operating Manual for Ultra Low Volume Application of DIBROM 14 Concentrate, is available for detailed information on equipment for ULV application.

#### DIRECTIONS

**ADULT MOSQUITO CONTROL** in Residential Areas, Municipalities, Trivial Areas, Swamps, Woodlands, Livestock Pastures, Feed Lots and Pastures including Dairy Cattle. It is not necessary to avoid farm buildings, dairy barns, feed or forage areas. Treat shrubbery and vegetation where mosquitoes may rest. Shrubbery and vegetation around stagnant pools, marshy areas, swamps, residential areas, municipalities, woodlands, pastures, farm buildings and feed lots may be treated.

**ULTRA LOW VOLUME AIRCRAFT APPLICATION:** Apply 1.0 to 3.0 oz. of undiluted product per acre. Use the 1 or 2 rate where heavy vegetation exists (e.g., woodlands, etc.). Aircraft should be equipped with a corrosion resistant spray system. Large droplets may damage certain automobiles. Nozzle for nozzles should be positioned 45° forward and only on aircraft flying 100 mph or faster. Aircraft flying slower than 100 mph should be equipped with atomizing nozzles. No more than 5% of the droplets should be larger than 100 microns. Spray during periods when wind is 10 mph or less and when thermal activity is low.

**AIRCRAFT APPLICATION:** Dilute 5% to 10% (1.6 to 3.2 oz. of DIBROM 14 Concentrate in 100 gals. No. 2 Fuel Oil or diesel oil). Apply at the rate of 1 gal. diluted material per acre. This is equivalent to 0.05 to 0.1 lb. actual DIBROM per acre or dilute 1.0 fl. oz. DIBROM 14 Concentrate with HALOGENATED AROMATIC Naphthalene to make 16 fl. oz. Apply at the rate of 16 fl. oz. of dilute mixture per acre. This is equivalent to 1.0 lb. actual DIBROM per acre.

**THERMAL FOG APPLICATION:** Dilute 3.1 qts. (100 fl. oz.) in 90 gals. No. 2 Fuel Oil or diesel oil or 10 oz. per 10 gals. oil. Apply either at the rate of 40 gals. per hour at 5 mph or at 80 gals. per hour (10 mph) or 120 gals. per hour (15 mph), applying swath 300 to 400 feet wide.

**ULTRA LOW VOLUME NON-THERMAL GROUND APPLICATION:** Dilute 2 qts. (64 fl. oz.) of DIBROM 14 Concentrate in soybean oil or HAN to make 5 gals. of dilute solution. Apply at the rate of 3 to 6 fl. oz. per minute at a vehicle speed of 5 mph, applying a swath 300 ft. wide, at 10 mph deliver 6 to 12 fl. oz. per minute and at 15 mph deliver 9 to 18 fl. oz. per minute. This is equivalent to 0.01 to 0.02 lb. actual DIBROM per acre. Use the high rate and slower speed to penetrate dense vegetation. Maximum effect is produced by particles 11-20 microns in size. Mass median diameter of the droplets produced should not exceed 15 microns and no droplet should be larger than 50 microns. Excessive pressure and over atomization result in poor mosquito control. To determine droplet size, treat glass microscope slides with a thin film of General Electric SC-87 Dn Film (as a sensitive aerosol product). This is accomplished by waving slides rapidly, 3 to 6 feet in front of aerosol discharge. Place prepared slides in a spray deposit area far enough away from discharge to avoid saturation. Using an ocular microscope at 450x magnification, measure a reasonable sample (about 100) of droplet diameters. Multiply droplet diameter by a 0.42 spread factor to determine original droplet size. Proceed to obtain droplet size range and median diameter.

**GROUND ULV CONCENTRATE APPLICATION:** Apply DIBROM 14 Concentrate undiluted at the rate of 0.6 fl. oz. per minute at 5 mph, 1.2 fl. oz. per minute at 10 mph, and 1.8 fl. oz. per minute at 15 mph, applying a 300 ft. swath. These flow rates are equivalent to 0.02 lb. actual DIBROM per acre. **CAUTION — SPECIAL INSTRUCTIONS:** This application can be made only under the following conditions: 1. Application can be made only by appropriately licensed and certified personnel with public agencies or private contractors operating in conjunction with or under contract with such government agencies; 2. Application in calm air conditions is to be avoided; 3. Application is not to be made in the immediate vicinity of pedestrians; 4. Vehicles used to apply DIBROM must be air conditioned or equipped with automatic speed control flow device.

**BLACKFLIES, HOUSEFLIES, GNATS, CERTAIN OTHER NUISANCE INSECTS — SMALL FLYING MOTHS, CRANE FLIES, MIDGES, ADULT STABLE FLIES (Dog Flies) in Residential Areas, Municipalities, Woodlands, Livestock Pastures, Feed Lots and Pastures including dairy cattle.** It is not necessary to avoid farm buildings, dairy barns, feed or forage areas. **THERMAL FOG APPLICATION:** Dilute 1 gal. to 1.5 gal. of DIBROM 14 Concentrate in 90 gal. No. 2 Fuel Oil or diesel oil at a rate of 40 gals. per hour output at an average vehicle speed of 5 mph, applying swath 300 to 400 feet wide. **AIRCRAFT APPLICATION:** Dilute 100 to 23.4 fl. oz. of DIBROM 14 Concentrate in 100 gals. No. 2 Fuel Oil or diesel oil. **Smaller insects — Gnats and Midges:** Dilute 1.0 to 1.34 gals. Apply 1 gal. diluted material per acre. This is equivalent to 0.02 lb. actual DIBROM per acre. **Suppression of Black Flies:** Dilute