

# HELENA BRAND

**CYTHION**<sup>®</sup>  
INSECTICIDE  
THE PREMIUM GRADE MALATHION  
\*TRADEMARK OF AMERICAN CYANAMID COMPANY

ACCEPTED  
MAY 21 1973  
UNDER THE FEDERAL INSECTICIDE  
FUNGICIDE AND RODENTICIDE ACT  
FOR ECONOMIC POISON REGISTER  
ED UNDER NO. 100001-100001  
TO ATTACHED COMMENTS

## ULV CONCENTRATE INSECTICIDE

Active Ingredient:  
MALATHION \*\* ..... 95.0%  
Inert Ingredients ..... 5.0%

\*\*O,O-dimethyl phosphorodithioate of diethyl mercaptosuccinate.  
(One gallon contains 9.7 pounds of CYTHION<sup>®</sup>)

**CAUTION** KEEP OUT OF REACH OF CHILDREN  
SEE ANTIDOTE ON SIDE PANEL

HARMFUL BY SWALLOWING, INHALATION, OR SKIN CONTACT

Avoid Breathing Spray Mist

Avoid Contact With Skin

Wash Thoroughly After Handling

Change Contaminated Clothing

Do Not Contaminate Food or Feed Products

Highly toxic to fish. Do not contaminate any body of water, by direct application, cleaning of equipment or disposal of wastes and containers.

This product is highly toxic to bees exposed to direct treatment or residues on crops. Protective information may be obtained from your Cooperative Agriculture Extension Service.

MANUFACTURED BY  
**HELENA CHEMICAL COMPANY**  
MEMPHIS, TENNESSEE

CYTHON® ULV CONCENTRATE can be effectively applied with conventional aircraft spray equipment by making a few minor modifications in the plumbing and boom assembly.

**PUMP**

Pumps capable of producing pressures of 40 to 50 psi will be satisfactory. A bleed line at least 3/16 inch in diameter should be installed on the high point of the impeller chamber to release trapped air. This line should bleed back to the top of the tank above the liquid level.

**BY-PASS**

A by-pass is required from the spray pump outlet to the spray pump inlet. This line must be equal in diameter to the pump outlet and should contain a valve controllable from the cockpit that will permit adjustments of boom pressure in flight. The by-pass commonly used to recirculate CYTHON® ULV CONCENTRATE to the spray tank must be closed to avoid aeration of the insecticide.

**BOOM AND NOZZLE PLACEMENT**

The distance between the left and right outboard nozzles should be at least 3/4 of the wing span. The total number of nozzles used should be equally spaced across this span if the aircraft is flown at twenty feet or higher. Trailing edge booms are desirable and the nozzles should be placed on boom where pilot can readily see them to check any plugging of nozzles during spray operation. A bleed line at least 3/16 inch in diameter should be attached to the outer end of each boom and routed back to the top of the spray tank but above the liquid level. This line will bleed off pressures and assure sharp cut-off. If a nozzle is placed at each end of boom as many Ag Cat spray booms are assembled, this bleed line is not necessary.

**NOZZLES**

Use at least 4 to 6 flat fan nozzles, such as Spraying Systems 8001, 80015 or 8002 for small aircraft, such as Piper Pawnees and Stearmans. For aircraft operating at 150 mph or faster, use 10 to 14 8010 or 8015 flat fan nozzles. Nozzles should be pointed straight downward on small aircraft and straight back for faster aircraft. Use 100 mesh screens with 8001, 80015 and 8002 nozzles and a large-volume 50-mesh screen should be used in spray systems. No screens are required for the 8010 or 8015 nozzles. Diaphragm check valves should be used on each nozzle to insure positive cut-off of spray during flight. Do not use cone nozzles.

Rotary atomizers, commonly known as Mini-Spin nozzles, developed by the Plant Pest Control Division, USDA, can be substituted for the flat fan nozzles. Use the same flat fan nozzle tips as mentioned above when using the Mini-Spin nozzle.

**DIRECTIONS FOR USE**

CYTHON® ULV CONCENTRATE is used undiluted for ultra-low volume aerial applications to control adult corn rootworm, beet leafhopper, blueberry maggot, cereal leaf beetle, cotton boll weevil, flies, grasshoppers and mosquitoes as specified below. Aerial applications should be made at altitudes of 20 to 25 feet.

NOTE: CYTHON® ULV CONCENTRATE may cause spotting on automobile paint finish if prolonged exposure is permitted. Cars should not be sprayed directly. If accidental exposure does occur, the car should be washed immediately.

**ALFALFA, CLOVER, COTTON, PASTURE AND RANGE GRASS, GRASS AND GRASS HAY, SAFFLOWER, SOYBEANS, SUGAR BEETS AND NONAGRICULTURAL LANDS** (wastelands, roadsides, soil bank lands):

For control of grasshoppers, apply 8 fluid ounces of CYTHON® ULV CONCENTRATE per acre. Repeat applications as necessary.

On alfalfa, clover, pasture and range grass, grass and grass hay, may be applied on day of harvest or grazing. Do not apply to alfalfa and clover in bloom.

On soybeans, make no application within 7 days of harvest or forage use; on corn, within 5 days of harvest or forage use.

On safflower, make no application within 3 days of harvesting seeds.

On sugar beets, make no application within 7 days if tops are to be used for food.

**NET CONTENTS**

**U.S. GALLONS**

**BLUEBERRIES (grown in Michigan and Indiana):**

For control of blueberry maggot on blueberries, apply 10 fluid ounces of CYTHION® ULV CONCENTRATE per acre. Apply uniformly and repeat applications as necessary.

No waiting period is necessary between last application and harvest.

**GRASSES:**

For control of cereal leaf beetle on grasses, apply 8 fluid ounces of CYTHION® ULV CONCENTRATE when adult beetles become active in the Spring. Repeat application within 7 to 14 days for control of adults and young larvae.

Make no application on cereal crops within 7 days of harvest or forage use.

On grasses, may be applied on day of harvest or grazing.

**CORN:**

For control of adult corn rootworm on corn, apply 4 fluid ounces of CYTHION® ULV CONCENTRATE per acre. Repeat application as necessary. Make no application on corn within 5 days of harvest or forage use.

**COTTON:**

For control of boll weevil on cotton, apply 8 to 12 fluid ounces of CYTHION® ULV CONCENTRATE per acre. Repeat applications as necessary.

For late season control of bollweevil use 16 fluid ounces per acre.

**ALFALFA, CLOVER, PASTURE AND RANGE GRASS, GRASS AND GRASS HAY, BEANS, RICE, TOMATOES AND NONAGRICULTURAL LANDS (wastelands, roadsides, soil bank lands):**

Adult mosquitoes and flies — Apply CYTHION® ULV CONCENTRATE at the rate of 2 to 4 fluid ounces for control of adult mosquitoes and at 6 to 8 fluid ounces per acre for control of adult flies. Repeat applications as necessary.

On alfalfa, clover, pasture and range grass, grass and grass hay, may be applied on day of harvest or grazing. Do not apply to alfalfa and clover in bloom.

On corn make no application within 5 days of harvest or forage use; on rice, within 7 days of harvest; on beans and tomatoes, within 1 day of harvest.

**NONAGRICULTURAL LANDS:**

For control of beet leafhopper on wild host plants, use 8 fluid ounces of CYTHION® ULV CONCENTRATE per acre. (CONSULT STATE AGRICULTURAL AUTHORITIES FOR PROPER TIMING OF SPRAYS.)

Before using CYTHION® ULV CONCENTRATE for the preparation of malathion insecticides, manufacturers should consult American Cyanamid Company for manufacturing and safe handling instructions.

**DISPOSAL OF DRUMS:** Drain drum completely. Add 5 gallons of water, 1 cup of detergent and 12 pounds of lye. Tighten bungs. Rotate drum to wet all surfaces and let stand for at least 15 minutes. Drain completely and rinse several times with water. Tighten bungs. Transport to a professional drum reconditioner having burning equipment for reconditioning.

**NOTE TO PHYSICIAN**

Atropine is antidotal. 2-PAM is also antidotal and may be administered in conjunction with atropine.

**WARRANTY AND LIMITATION OF DAMAGES.** Helena Chemical Company warrants that this material conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use and Conditions of Sale, subject to the inherent risks referred to therein. Helena Chemical Company makes no other express or implied warranty, including any other express or implied warranty of FITNESS or of MERCHANTABILITY, and no agent of Helena Chemical Company is authorized to do so except in writing, with a specific reference to this warranty. Any damages arising from a breach of this warranty shall be limited to direct damages, and shall not include consequential commercial damages such as loss of profits or value, etc.

\*Trademark Agricultural Division American Cyanamid Company, Princeton, N. J.

E.P.A. REG. NO. 5905-112

**DO NOT RE-USE THIS CONTAINER FOR ANY PURPOSE**