

FOR ECONOMIC POISON REGISTERED UNDER NO. 3468-42 SUBJECT

# CYTHON®

**THE PREMIUM GRADE MALATHION MALATHION ULV Concentrate**

<b>ACTIVE INGREDIENTS:</b>		One Gallon
<b>MALATHION*</b> .....	<b>95.0%</b>	Contains 9.7
<b>INERT INGREDIENTS</b> .....	<b>5.0%</b>	lbs of Mala-
*O, O-dimethyl phosphorodithioate of diethyl mercaptosuc-		thion
cinate.		

**CAUTION! KEEP OUT OF REACH OF CHILDREN, 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.

**AL USUARIO:** Si usted no lee ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

**(TO THE USER:** If you cannot read English, do not use this product until the label has been fully explained to you.)

Before using, read the directions contained on this label for the proper methods and procedures which must be followed to achieve effective insect control and avoid permanent damage to automobile and other paint finishes.

**DISCLAIMER:** Schall Chemical Inc. does not assume any responsibility for any damages which result from failure to properly design, maintain or operate any ULV equipment or from failure to determine or to obtain proper droplet size.

Schall Chemical Inc. warrants only that the material contained herein conforms to the chemical description on the label and is reasonable fit for the use therein described when used in accordance with the directions for use.

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 values, etc.

Schall Chemical Inc. makes no other express or implied warranty, including any other express or implied warranty of FITNESS or of MERCHANTABILITY.

**BUYER** assumes the risk of any use contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable by Schall Chemical Inc.

Packaged by **SCHALL CHEMICAL INC.**  
MONTE VISTA and DELTA, COLORADO

EPA REG. NO. 3468-42 Net Contents 1 Gallon  
EPA EST. 3468 (C) 1

**IMPORTANT:** Before Using STOP Read Directions on this Label.

**ENVIRONMENTAL CAUTIONS**—"This product is toxic to fish. Keep out of lakes, streams, or ponds. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from areas treated. Do not contaminate water by cleaning of equipment, or disposal of wastes. Apply this product only as specified on this label."

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

**DISPOSAL OF PAILS:** Drain pail completely. Add 1/2 gallon of water, 1/4 cup of detergent and 1/4 pound of lye. Tighten closure. Rotate pail to wet all surfaces and let stand for at least 15 minutes. Drain completely and rinse several times with water. Tighten closure. Puncture and crush pail to prevent re-use. Rinse equipment and dispose of wastes by burying in non-crop lands away from water supplies.

Undiluted spray droplets of MALATHION will permanently damage automobile paint. Cars should not be sprayed. If accidental exposure does occur, the car should be washed immediately. Consult your state experiment station or state extension service for proper timing of sprays.

**AGRICULTURAL USES: DIRECTION FOR USE:** Do not use this product for any uses other than those specified on this label.

**OUTDOOR ADULT MOSQUITO CONTROL:** Treat Shrubbery and Vegetation where Mosquitoes may rest. Shrubbery and Vegetation around Stagnant Pools, Marshy Areas, Ponds and Shore lines may be treated. Application of this product to any Body of Water is Prohibited.

MALATHION is used undiluted in specially designed aircraft or ground equipment capable of applying ultra low volumes for control of the insects indicated below. Aerial applications are most effective when made at a boom height of 5 feet and a swath width of 50 feet. Do not make application when winds exceed 5 mph. Mist blowers and boom sprayers utilizing a controlled air flow to facilitate particle size and spray deposition may be used at a vehicle speed of 4 to 10 mph. Mist blowers with a pump capable of producing up to 40 psi and blower speeds of 2600 rpm are satisfactory. Use flat fan nozzles, 8001 to 8002, placed 30 degrees into air blast or rotary atomizers into the air blast that produce an efficient spray particle with a mass medium diameter of 40 to 100 microns. Swath widths should not exceed 30 feet, and applications should not be made when winds exceed 5 mph.

Boom sprayers with a filtered rotary air compressor, either PTO or gas engine driven or an air pump capable of producing at least 12 psi are satisfactory. Use air pressure on chemical tanks and an accurate metering valve and gauge for proper air and liquid mixture. Pneumatic-type spray nozzles, as suggested by equipment manufacturer, should be used for spray particles with mass medium diameter of 30 to 100 microns. Applications should not be made when winds exceed 5 mph.

Repeat applications should be made as necessary unless otherwise specified.

**ALFALFA:** Alfalfa caterpillar, Western yellow striped armyworm use 8-12 fluid ounces per acre. Use lower rate when larvae are small. May be applied on day of harvest or grazing. Use higher rate when larvae are large or when alfalfa is thick. When using higher rate wait 5 days before grazing or harvest. Alfalfa weevil larvae use 1 pint per acre. Apply when day temperatures are expected to exceed 65 degrees F. and when 50-75% of leaves show feeding damage. Wait 5 days for grazing or harvest. Beet Armyworms use 1/2-1 pint per acre. Use lower rate when larvae are small. May be applied on day of harvest or grazing. Use higher rate when larvae are large or when alfalfa is thick. Wait 5 days to graze or harvest when using higher rate. Grasshoppers use 1/2 pint per acre. May be applied on day of harvest or grazing. Do not apply to alfalfa in bloom. Do not apply to seed alfalfa. **BEANS** (lima, green, snap, Navy, red kidney, wax, dry, blackeye) Mexican Bean Beetle, Leafhoppers, Green Cloverworm, Lygus Bug use 1/2 pint per acre. Apply 1 day before harvest. **CLOVER, PASTURE and RANGE GRASS, GRASS, GRASS HAY, NON-AGRICULTURAL LAND** (wastelands, roadsides, soil bank lands) Grasshoppers use 1/2 pint per acre. May be applied on day of harvest or grazing. Do not apply when clover is in bloom. **CORN:** Adult Corn Rootworm use 1/2 pint per acre. Apply before 5 days of harvest, or forage use. **GRAIN CROPS** (barley, corn, oats, rye, grain sorghum and wheat) Grasshoppers use 1/2 pint per acre. Use before 7 days of harvest or forage use and 5 days on Corn. **SUGAR BEETS:** Grasshoppers, Sugar Beet Root Maggot Adults use 1/2 pint per acre. Use before 7 days of harvest if tops are to be used as feed. **NONAGRICULTURAL LANDS:** Beet Leafhopper (on wild host plants) use 1/2 pint per acre. No time limitations. **BEEF CATTLE-FEED LOTS and HOLDING PENS:** Adult Flies and Mosquitoes use 6-8 ounces per acre. No time limitations.

**OTHER AGRICULTURAL USES:** ALFALFA, CLOVER, PASTURE and RANGE GRASS, GRASS and GRASS HAY, GRAIN CROPS, BEANS, TOMATOES and NON-AGRICULTURAL LANDS (wastelands, soil bank lands) Adult mosquitoes and flies, apply MALATHION at the rate of 2 to 4 ounces for the control of adult mosquitoes and at 6 to 8 ounces per acre for control of adult flies and mosquitoes. 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. Do not use on seed alfalfa. On grain crops, make no application within 7 days of harvest or forage use. On corn, within 5 days of harvest or forage use. On beans and tomatoes, within 1 day of harvest.

**FOREST INSECTS:** Apply with aircraft equipped for ultra low volume application. Make application when air is calm and temperature is below 68 degrees F. Do not allow spray to contact ferns, hickory and maples as injury may result. Do not spray on plants under extreme heat, drought and disease condi-

tions. DOUGLAS FIR, TRUE F. highest percentage of larvae are in. Apply when most larvae are in. Spittlebug use 10 ounces per acre. instar or before they reach 1/2. It has become adult. LARCH, La break hibernation and begin feed

**FOR ULTRA LOW VOLUME PLEASURE BOATS ARE PRE** Generally, spraying should not be above 82 degrees F.

Spray droplets of this product following conditions are met: 1. ultra low volume spray system, the wind. 4. Diaphragm check. Dosage of this product does not system produces droplets of th with no more than 10% of the microscope slides coated with D

**NONTHERMAL AEROSOLS** not be used undiluted as a non control of adult mosquitoes.

This use is restricted to profess and equipment necessary to foll requirements cannot be met, DIRECTIONS FOR USE: Ad. swath with nonthermal aerosol: ing flow rates at the indicated tr

Vehicle Speed	
Miles Per Hour	
	5
	10

Flow rate must be constantly rate.

**DROPLET SIZE:** 1. The Ma microns. The MMD is the dro i.e., 50% of the volume is in droplets should not exceed 32 200) can exceed 32 microns pr a maximum of 48 microns. Lar readily on objects in their pat than one-half of the total spray adequate dispersal of insectic four-fifths of the total spray

**OPERATING EQUIPMENT:** I Insecticide. The Premium Grad adult mosquitoes must have mi **DROPLET SIZE.** The initial c vehicle and prior to its use frequently as necessary to u Determination of droplet size e good operating condition. E maintenance of the unit must correct any leaks or obstructio parts are worn and need repla determine that the pressure re must be regulated by accurate **DIRECTION** rear of the vehic than 10 miles per hour. shut droplets of undiluted MALA conditions described and recom

ions on this Label.

is toxic to fish. Keep out of lakes, streams, or ponds. Do not apply when weather conditions favor drift from drifting of equipment, or disposal of wastes. Apply this

direct treatment or residues on crops. Protective in Agricultural Extension Service

Add 1/2 gallon of water, 1/4 cup of detergent and 1/4 cup of wet all surfaces and let stand for at least 15 minutes. Tighten closure. Puncture and crush pail to prevent by burying in non-crop lands away from water

permanently damage automobile paint. Cars should be washed immediately. Consult service for proper timing of sprays.

USE: Do not use this product for any uses other than

Treat Shrubbery and Vegetation where Mosquitoes are present. Ponds, Marshy Areas, Ponds and Shore Lines may be treated. Use of Water is Prohibited.

Designed aircraft or ground equipment capable of applying as indicated below. Aerial applications are most effective with swath width of 50 feet. Do not make application when wind velocity utilizing a controlled air flow to facilitate particle speed of 4 to 10 mph. Mist blowers with a pump speed of 2600 rpm are satisfactory. Use flat fan nozzles or rotary atomizers into the air blast that produce droplet diameter of 40 to 100 microns. Swath widths should be made when winds exceed 5 mph.

Motor, either PTO or gas engine driven or an air pump motor. Use air pressure on chemical tanks and an accurate liquid mixture. Pneumatic-type spray nozzles, as used for spray particles with mass medium diameter should be made when winds exceed 5 mph.

unless otherwise specified.

Striped armyworm use 8-12 fluid ounces per acre. Use on day of harvest or grazing. Use higher rate when grazing higher rate wait 5 days before grazing or harvest. Beetles when day temperatures are expected to exceed 65 degrees Fahrenheit. Wait 5 days for grazing or harvest. Beetles when larvae are small. May be applied on day of harvest or when alfalfa is thick. Wait 5 days to graze on alfalfa. Use 1/2 pint per acre. May be applied on day of harvest. Do not apply to seed alfalfa. BEANS (lima, green, snap, Broad Bean, Leafhoppers, Green Cloverworm, Lygus Beetles, CLOVER, PASTURE and RANGE GRASS, GRASSLAND (wastelands, roadsides, soil bank lands.) Grasshoppers use 1/2 pint per acre. Apply before 5 days of harvest, or before 5 days on rye, grain sorghum and wheat) Grasshoppers use 1/2 pint per acre and 5 days on Corn. SUGAR BEETS: Grasshoppers use 1/2 pint per acre. Use before 7 days of harvest if tops are present. Beet Leafhopper (on wild host plants) use 1/2 pint per acre. LE-FEED LOTS and HOLDING PENS: Adult Flies use 1/2 pint per acre. Limitations.

CLOVER, PASTURE and RANGE GRASS, GRASSLAND, TOMATOES and NON-AGRICULTURAL LANDS: Adult flies, apply MALATHION at the rate of 2 to 4 fluid ounces per acre for control of adult flies and on alfalfa, clover, pasture and range grass, grass and alfalfa. Do not apply to alfalfa and clover in bloom. No application within 7 days of harvest or forage use. Do not apply on beans and tomatoes, within 1 day of harvest

Use for ultra low volume application. Make application when temperatures are above 60 degrees F. Do not allow spray to contact ferns, hickory, elm, or other trees under extreme heat, drought and disease conditions.

DOUGLAS FIR, TRUE FIR, SPRUCE, Spruce Budworm use 13 ounces per acre. Apply when highest percentage of larvae are in the fifth instar. HEMLOCK, Hemlock Looper use 1/2 pint per acre. Apply when most larvae are in the third and fourth instar. PINES, European Pine Sawfly, Saratoga Spittlebug use 10 ounces per acre. European Pine Sawfly apply when larvae are in the first or second instar or before they reach 1/2 inch in length. Saratoga Spittlebug apply when 95% of the population has become adult. LARCH, Larch Casebearer use 1/2 pint per acre. Apply in spring as soon as larvae break hibernation and begin feeding on new foliage.

FOR ULTRA LOW VOLUME AERIAL APPLICATION WHERE AUTOMOBILES, TRAILERS AND PLEASURE BOATS ARE PRESENT. Apply with aircraft equipped for ultra low volume application. Generally, spraying should not be attempted when the wind is at or above 10 mph or temperatures are above 82 degrees F.

Spray droplets of this product undiluted will permanently damage automobile paint unless all of the following conditions are met: 1. Aircraft is operated at 150 mph or more. 2. There are no leaks in the ultra low volume spray system. 3. Nozzles are placed on the boom at a 45 degree angle down and into the wind. 4. Diaphragm check valves are used on all nozzles to insure positive cut-off of the spray. 5. Dosage of this product does not exceed 3.2 fluid ounces per acre (40 acres per gallon). 6. The spray system produces droplets of this product in the 50 to 60 mass median diameter (MMD) micron range, with no more than 10% of the droplets exceeding 100 microns, as determined by readings made from microscope slides coated with Dri-Film.

NONTHERMAL AEROSOLS APPLIED BY GROUND EQUIPMENT. Malathion Insecticide must not be used undiluted as a nonthermal aerosol applied ultra low volume by ground equipment for the control of adult mosquitoes.

This use is restricted to professional mosquito control personnel who have the experience, knowledge and equipment necessary to follow the highly technical and specific instructions which follow. If these requirements cannot be met, do not use these products for nonthermal aerosol ULV application. DIRECTIONS FOR USE: Adult Mosquito Control - For control of adult mosquitoes over a 300 foot swath with nonthermal aerosols of MALATHION using the ultra low volume method, use the following flow rates at the indicated truck speeds:

Vehicle Speed Miles Per Hour	Flow Rate of MALATHION Fluid Ounces per Minute	Maximum Flow Rate per Hour
5	1.0 to 2.1 fluid ounces	1 gallon
10	2.0 to 4.3 fluid ounces	2 gallons

Flow rate must be constantly monitored by the operator to maintain uniform control of discharge rate.

DROPLET SIZE. 1. The Mass Median Diameter (MMD) of the droplets should not exceed 17 microns. The MMD is the drop diameter which divides the spray volume into two equal parts, i.e., 50% of the volume is in the drop sizes below the MMD and 50% is above the MMD. 2. Spray droplets should not exceed 32 microns in size. Three percent of the spray droplets (6 droplets out of 200) can exceed 32 microns providing the MMD does not exceed 17 microns and no droplets exceed a maximum of 48 microns. Larger droplets, when transported by natural air currents, impinge more readily on objects in their pathway and will permanently damage automobile-type paints. 3. More than one-half of the total spray mass must consist of droplets in the 6 to 18 micron range to achieve adequate dispersal of insecticide over a 300-foot swath. 4. A minimum of two-thirds, preferably four-fifths of the total spray mass must consist of droplets not exceeding 24 microns in range.

OPERATING EQUIPMENT: Each Nonthermal Aerosol Generator used for dispersal of CYTHION Insecticide. The Premium Grade Malathion or MALATHION ULV Concentrate Insecticide to control adult mosquitoes must have minimum capability of producing the droplet spectrum described under DROPLET SIZE. The initial determination of droplet size is made after the unit is installed in a vehicle and prior to its use in mosquito control operations. The unit should be rechecked as frequently as necessary to insure that proper droplet size is maintained for each operation. Determination of droplet size every two months is usually sufficient if the unit has been maintained in good operating condition. Equipment manufacturer's instructions setting forth cleaning and maintenance of the unit must be followed. The unit must be inspected before each operation to correct any leaks or obstructions in the spray system; to detect whether the nozzle, hoses, or other parts are worn and need replacement; to insure that the flow meter is properly calibrated; and to determine that the pressure recommended by the manufacturer is being maintained. FLOW RATE must be regulated by accurate flow meter. -not greater than 1 gallon per hour at 10 mph. NOZZLE DIRECTION-rear of the vehicle. -upward at an angle of 45 or more. VEHICLE SPEED-not greater than 10 miles per hour. -shut off spray equipment when vehicle is stopped. IMPORTANT -spray droplets of undiluted MALATHION will permanently damage automobile paint unless all the conditions described and recommended in this leaflet are met.