Pesticide Labels & Records

Oregon Department of Agriculture
Linda White
RESTRICTED USE PESTICIDE

DUE TO ACUTE ORAL, ACUTE Dermal, ACUTE INHALATION, PRIMARY DERMAL AND PRIMARY EYE TOXICITY

For retail sale to and use only by Certified Applicators or persons under the direct supervision of a Certified Applicator, and only for those uses covered by the Certified Applicator’s certification.

MOCAP® EC Nematicide-Insecticide

FIRST AID

Ethrop is an organophosphate.

IF SWALLOWED:
- Immediately call a poison control center or doctor.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give any liquid to the person.
- Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING:
- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15-20 minutes.
- Call a poison control center or doctor for treatment advice.

IF INHALED:
- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.

Net Contents: □ 2.5 Gallons □ 55 Gallons

ACTIVE INGREDIENTS: Ethrop: (O-Ethyl S, S-Dipropyl Phosphorodithioate) ............. 69.6%
OTHER INGREDIENTS* .................................................. 30.4%
TOTAL ............................................................ 100.0%

Contains Petroleum distillates*
(Contains 6 pounds active ingredient per gallon)

EPA Reg. No. 5481-9041 EPA Est. No. 5481-AL-1
ACTIVE INGREDIENTS: Ethoprop (O-Ethyl S, S-Dipropyl Phosphorodithioate) ........... 69.6%
OTHER INGREDIENTS*: .................................................................................. 30.4%
Total .................................................. 100.0%
Contains Petroleum distillates* (Contains 6 pounds active ingredient per gallon)

EPA Reg. No. 5481-9041 EPA Est. No. 5481-AL-1

KEEP OUT OF REACH OF CHILDREN
DANGER POISON
PELIGRO

PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que le etiqueta haya sido explicado ampliamente. TRANSLATION TO THE USER: If you cannot read English, do not use this product until the label has been fully explained to you.
SEE INSIDE BOOKLET FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

IF ON SKIN OR CLOTHING:
• Take off contaminated clothing.
• Rinse skin immediately with plenty of water for 15-20 minutes.
• Call a poison control center or doctor for treatment advice.

IF INHALED:
• Move person to fresh air.
• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.
• Call a poison control center or doctor for further treatment advice.

IF IN EYES:
• Hold eye open and rinse slowly and gently with water for 15-20 minutes.
• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing.
• Call a poison control center or doctor for treatment advice.

EMERGENCY INFORMATION
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:
For Medical Emergencies phone: ................................................................. 1-888-681-4261
For Transportation Emergencies, including spill, leak or fire, phone:
CHEMTREC® ................................................................. 1-800-424-9300
For Product Use Information phone: AMVAC® ........................................ 1-888-462-6822

Produced for:
AMVAC Chemical Corporation
4100 E. Washington Blvd., Los Angeles, CA
1-888-462-6822

13077
20141229
NOTE TO PHYSICIAN: This product is a cholinesterase inhibitor. Severe symptoms and signs include diarrhea, pinpoint and non-reactive pupils, respiratory difficulty, pulmonary edema, cyanosis, loss of sphincter control, convulsions, and coma. Support respiration as needed. Measures should include removal of secretions, maintenance of a patent airway, and if necessary, artificial ventilation. If cyanosis is absent, give ATROPINE 2-4 mg intravenously (0.05 mg/kg for children). Repeat atropine at 5-10 minute intervals until atropinization occurs (dry, flushed skin, tachycardia, pupillary dilatation), and maintain for 48 hours. If cyanotic, give initial atropine intramuscularly and start measures to improve ventilation.

Start 2-PAM (PROTOPAM, Ayerst) at the same time. Give 1-2 grams PROTOPAM (20-40 mg/kg for children) in 100cc saline over 15-30 minutes. If pulmonary edema is present, give intravenously slowly as a 5% solution in water over a period of at least 5 minutes. A second dose may be given after one hour if muscle weakness persists. Additional doses may be given cautiously for persistent muscle weakness. May be given by intramuscular or subcutaneous routes if intravenous administration is not feasible.

In case of skin contact, wash patient with soap and water followed by wash with 95% ethyl alcohol. Keep patient under constant observation for 24-36 hours. Symptoms may persist for one month. The use of theophylline, morphine, barbiturates, phenothiazines, reserpine, and succinyl choline is contraindicated.

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS

DANGER

Fatal if swallowed. Fatal if absorbed through skin. Fatal if inhaled. Corrosive. Causes irreversible eye damage. Do not breathe spray mist. Do not get into eyes, on skin, or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

SYMPTOMS OF POISONING: Nausea, vomiting, abdominal cramps, diarrhea, excessive salivation, headache, dizziness, weakness, blurring or dimness of vision, excessive tearing, loss of muscular coordination, slurring of speech, twitching of muscles (especially of tongue and eyelids), mental confusion, disorientation, drowsiness, difficulty in breathing (chest tightness), runny nose.
SYMPTOMS OF POISONING: Nausea, vomiting, abdominal cramps, diarrhea, excessive salivation, headache, dizziness, weakness, blurring or dimness of vision, excessive tearing, loss of muscular coordination, slurring of speech, twitching of muscles (especially of tongue and eyelids), mental confusion, disorientation, drowsiness, difficulty in breathing (chest tightness), runny nose.

PHYSICAL OR CHEMICAL HAZARDS
Do not use or store near heat or open flame.
Do not store in or around home or residence.

PERSONAL PROTECTIVE EQUIPMENT (PPE)
Some materials that are chemical-resistant to this product are barrier laminant, butyl rubber (>14 mils), nitrile rubber (>14 mils) or Viton® (>14 mils). If you want more options, follow the instructions for category F on an EPA chemical-resistant category selection chart.
Mixers, loaders, applicators, and other handlers using engineering controls must wear:
- long-sleeved shirt and long pants, and
- shoes plus socks.
In addition, mixers and loaders must wear chemical-resistant gloves and a chemical-resistant apron.
See engineering controls for additional requirements.
Handlers engaged in those activities for which use of an engineering control is not possible, such as cleaning up a spill or leak and cleaning or repairing contaminated equipment, must wear:
- coveralls over long-sleeved shirt and long pants,
- chemical-resistant gloves,
- protective eyewear,
• chemical-resistant footwear plus socks,
• chemical-resistant apron if exposed to the concentrate,
• chemical-resistant headgear for overhead exposure, and
• a respirator with an organic-vapor removing cartridge with a prefilter (MSHA/NIOSH approval number prefix TC 23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH-approved respirator with an organic vapor (OV) cartridge or canister with any N,R,P or HE-filter.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS
Mixers and loaders must use a mechanical transfer system that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4)] for providing dermal and inhalation protection. The system must be capable of removing the pesticide from the shipping container and transferring it into mixing tanks and/or application equipment. At any disconnect point, the system must be equipped with a dry disconnect or dry couple shut-off device that is warranted by the manufacturer to minimize drippage to not more than 2 mL. (0.068 oz.) per disconnect point.

In addition, mixers and loaders must:
• wear the personal protective equipment required in the PPE section of this labeling for mixereloaders,
• wear protective eyewear if the system operates under pressure,
• be provided with, must have immediately available for use, and must wear in case of an emergency, such as a broken package or spill, the PPE specified in the PPE section of this labeling for handlers engaged in those activities for which use of an engineering control is not possible.
Applicators using motorized ground equipment must use an enclosed cab that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(5)] for dermal protection. In addition, applicators must:

- wear the personal protective equipment required in the PPE section of this labeling for applicators,
- either wear the type of respirator specified in the PPE section of this labeling or use an enclosed cab that is declared in writing by the manufacturer or by a government agency to provide at least as much respiratory protection as the type of respirator specified in the PPE section of this labeling,
- be provided with, must have immediately available for use, and must wear in case of an emergency when they must exit the cab, the PPE specified in the PPE section of this labeling for handlers engaged in those activities for which use of an engineering control is not possible,
- take off any PPE that was worn in the treated area before reentering the cab, and
- store all such PPE in a chemical-resistant container, such as a plastic bag, to prevent contamination of the inside of the cab.

### User Safety Recommendations

Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

### ENVIRONMENTAL HAZARDS

This product is toxic to aquatic organisms (fish and invertebrates) and wildlife and extremely toxic to birds. Birds in treated areas may be killed. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Runoff from treated areas may be hazardous to
aquatic organisms in neighboring areas. For specific No-Spray Zone requirements, see the Spray Zone Application Restrictions. Cover, incorporate or disc product that is spilled, either during loading or application, into the soil surface. Do not contaminate water when disposing of equipment wash waters.

This product is toxic to bees exposed to direct treatment. Do not apply this product while bees are actively visiting the treatment area.

**DIRECTIONS FOR USE**

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling.  
Read entire label before using this product.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**REstrictions**

- Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.
- Do not allow this product to drift.
- Not for residential use.
- Do not store or use in or around home or residence.
- Do not apply by air.
- Do not apply more than one application per crop season.
- Application must be incorporated into the soil.
- This product is not registered in Nassau & Suffolk Counties of New York State. State law prohibits distribution, sale, or use of the product in these counties.
AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), notification to workers, and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow workers to enter treated areas during the restricted entry interval (REI) of 48 hours. The 48 hour REI is increased to 72 hours in outdoor areas where average rainfall is less than 25 inches a year.

**EXCEPTION:** If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early re-entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- coveralls over long-sleeved shirt and long pants,
- chemical-resistant gloves,
- chemical-resistant footwear plus socks, and
- protective eyewear.

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.
SPRAY ZONE APPLICATION RESTRICTIONS

Do not apply this product within 140 feet of inland freshwater habitats. Along the Atlantic seaboard, do not apply within 800 feet of brackish water habitats. Under no circumstances is this product to be applied within 140 feet of people or these surface water bodies.

Do not allow spray to drift from the application site and contact people, structures people occupy at any time and the associated property, parks and recreation areas, nontarget crops, aquatic and wetland areas, woodlands, pastures, rangelands, or animals.

For ground boom applications, apply with nozzle height no more than 4 feet above the ground and only when wind speed is 10 mph or less at the application site as measured by an anemometer. Use medium or coarser spray as described according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles.

The applicator also must use all other measures necessary to control drift.

APPLICATION RESTRICTIONS

• For application only by motorized ground boom equipment and through irrigation systems if specified in crop-specific use directions. Do not apply with liquid backpack sprayers, low-pressure handwand liquid equipment, sprinkler cans or hand-held measuring containers, or by hand-dipping of seedlings.

• For use on ornamentals: only preplant broadcast application to soil for field nursery stock, which may only be mechanically transplanted into the treated area, and not until 72 hours after treatment.

• This product is to be soil incorporated (except chemigation applications using SDI) to a depth of at least 2 to 4 inches, during or immediately following application by mechanical means, including by rotary tiller, rotary hoe, springtooth harrow, or by double-discing.

• Calibrate and adjust application equipment to ensure proper rate and accurate placement. Clean application equipment thoroughly after use. For any leftover material, see instruction for “Storage and Disposal” on this label.

• Apply this product only as specified on this label.

• Do not apply in Long Island, New York.
ROTATIONAL CROP RESTRICTIONS
• Do not plant leafy vegetables within 30 days of last application.
• Do not plant small grains within 8 months of last application.
• Except for potatoes and sweet potatoes, do not rotate to any root or tuber crops within 12 months of last application.

PLANT RESPONSE PRECAUTIONS
• To avoid possible injury to cabbage, do not use as a seed furrow treatment or allow spray to contact the seed.

MIXING, LOADING, AND HANDLING INSTRUCTIONS
• MOCAP EC Nematicide-Insecticide spray mixture may affect some plastic materials after prolonged use. Inspect spray tubing, hoses and gaskets frequently, particularly black-colored materials. Replace any material which is softened or swollen. Polyethylene, polypropylene, nylon, and Teflon® materials are satisfactory. Polyvinyl chloride (PVC) materials are not satisfactory.
• Add the specified amount of MOCAP EC Nematicide-Insecticide to the water in the spray tank and mix well. Agitate frequently during use.
• If MOCAP EC Nematicide-Insecticide is to be tank mixed with liquid fertilizers, test for physical compatibility prior to mixing. To test for compatibility, use a small container and mix a small amount (0.5 to 1 qt.) of spray, combining all ingredients in the same ratio as the anticipated use. If any indications of physical incompatibility develop, do not use this mixture for spraying. Indications of incompatibility usually will appear within 5-15 minutes after mixing.
## MINT

<table>
<thead>
<tr>
<th>APPLICATION TIMING</th>
<th>PEST CONTROLLED</th>
<th>RATE (QUARTS PER ACRE)</th>
<th>GALLONS WATER PER ACRE</th>
<th>APPLICATION DIRECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Mint: Apply preplant</td>
<td>Symphylans</td>
<td>2</td>
<td></td>
<td>Spray with ground equipment, broadcast, over the field. Do not apply by air or through any type of irrigation equipment. This product is to be soil incorporated to a depth of at least 2 to 4 inches, during or immediately following application by mechanical means, including by rotary tiller, rotary hoe, springtooth harrow, or by double discing, or by immediate application of 1 to 2 inches of overhead irrigation. Repeat irrigation before soil dries.</td>
</tr>
<tr>
<td></td>
<td>Nematodes</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mint: Apply after last harvest of the growing season</td>
<td>Symphylans Mint Root Borer</td>
<td>2</td>
<td>20 - 30</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Nematodes</td>
<td>4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### RESTRICTIONS FOR MINT
- Make only 1 MOCAP EC Nematicide-Insecticide application per growing season (either preplant, or after last harvest of the growing season).
- Do not apply by air or through any type of irrigation equipment.
- Use 20 to 30 gallons of water per acre for thorough coverage.
- Do not harvest within 225 days of application.

### PRECAUTIONS FOR MINT
- Application of MOCAP EC Nematicide Insecticide to actively growing foliage may result in a phytotoxic response due to solvent burn.
STORAGE AND DISPOSITION

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE
Do not store in or around home or residence.

PESTICIDE DISPOSAL
Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinseate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL
Non-refillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinseate into application equipment or a mix tank or store rinseate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

RETURNABLE — REFILLABLE CONTAINERS
Refillable container. Refill this container with MOCAP EC Nematicide-Insecticide only. Do not reuse this container for any other purpose. After use, return the container to the point of purchase or designated locations. Prior to refilling, inspect thoroughly for damage such as cracks, punctures, abrasions and damaged or worn out threads on closure devices. Do not refill or transport damaged or leaking containers. Check for leaks after refilling and before transportation. For information on the disposal of unused, unwanted product, contact AMVAC at 1-888-462-6822. For information on cleanup of spills, contact Chemtrec at 1-800-424-9300. If the container is not being refilled, return it to the point of purchase.
LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use, subject to the inherent risks referred to herein, when it is used in accordance with such directions; and (c) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions.

THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW BUYER’S EXCLUSIVE REMEDY AND MANUFACTURER’S OR SELLER’S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER’S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW MANUFACTURER OR SELLER SHALL NOT BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

© 2014 AMVAC Chemical Corporation. All Rights Reserved. AMVAC, the Beaker logo and Mocap are U.S. registered trademarks owned by AMVAC Chemical Corporation. Chemtrec is a trademark of the American Chemistry Council, Inc. Viton and Teflon are trademarks of E. I. Du Pont de Nemours.

AMVAC Chemical Corporation
4100 E. Washington Blvd.
Los Angeles, CA
1-888-462-6822
A preemergence surface-applied herbicide for the control of many annual grasses and certain broadleaf weeds in citrus, fruit and nut trees, berries, vineyards, Christmas tree plantations and established trees grown for pulp.

**ACTIVE INGREDIENT:**
Oryzalin: 3,5-dinitro-\(N^4,N^4\)-dipropylsulfanilamide .......................................................... 40.4%

**OTHER INGREDIENTS:** .............................................................................................................. 59.6%

**TOTAL:** ........................................................................................................................................ 100.0%

Contains 4 pounds of active ingredient per gallon.

EPA Reg. No. 70506-43

EPA Est. No. 70815-GA-002
KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID

If in eyes:

- Hold eye open and rinse slowly and gently with water for 15-20 minutes.
- Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.
- Call a poison control center or doctor for treatment advice.

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

Shake Well Before Using.

NET CONTENTS: 2.5 GALLONS

United Phosphorus, Inc.  •  630 Freedom Business Center, Suite 402  •  King of Prussia, PA 19406 U.S.A.  •  1-800-438-6071
PRECAUTIONARY STATEMENTS
Hazards to Humans and Domestic Animals

CAUTION
Causes moderate eye irritation. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with eyes or clothing.

PERSONAL PROTECTIVE EQUIPMENT (PPE)
Applicators and other handlers must wear:
• Long-sleeved shirt and long pants
• Chemical-resistant gloves
• Shoes plus socks
• Mixers and loaders must wear a chemical-resistant apron in addition to other PPE.

Discard clothing/PPE and other absorbent materials that have been drenched or heavily contaminated with this product’s concentrate. Do not reuse them. Follow manufacturer’s instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

ENGINEERING CONTROLS STATEMENTS
When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.
USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters. Cover or incorporate spills.

DIRECTIONS FOR USE

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

Read all Directions for Use carefully before applying.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.
AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours. **Exception:** If the product is soil-injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

Workers may enter treated areas without required PPE during the reentry interval following 1/2 to 1 inch of rainfall or irrigation, if they are performing tasks that do not involve contact with the soil subsurface; otherwise, PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves
- Shoes plus socks
STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Pesticide Storage: Store in original container only. In case of leak or spill, use absorbent materials to contain liquids and dispose as waste.

Pesticide Disposal: Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying.

[for containers less than or equal to 5 gallons] Triple rinse as follows: empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.
[for containers greater than 5 gallons] Triple rinse or pressure rinse as follows: Triple rinse: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Turn the container over on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.
Pressure rinse: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after flow begins to drip.
[all sizes] Offer for recycling if available, or puncture and dispose of in a sanitary landfill or by incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.
GENERAL INFORMATION

SURFLAN A.S. herbicide is a preemergence, surface applied herbicide for the control of many annual grasses and certain broadleaf weeds. SURFLAN A.S. controls susceptible annual weeds by disrupting plant growth processes during germination. SURFLAN A.S. may be applied in liquid sprays of water or liquid fertilizer, and may be tank mixed with other herbicides to control existing vegetation or improve the spectrum of weeds controlled. SURFLAN A.S. alone does not control established weeds.

Crop uses: citrus fruits, fruit and nut trees, berries, vineyards (bearing and non-bearing).

Other uses: Christmas tree plantations, established trees grown for pulp, noncropland areas and industrial sites.

SURFLAN A.S. is orange in color and may cause temporary discoloration of sprayed surfaces. If this discoloration is undesirable, it may be altered by using a commercially available colorant such as Blazon or removed by spraying surface with water or washing with an industrial cleaner immediately after application. SURFLAN A.S. may also be applied with colorants, such as Mulch Magic or Nu-Mulch.

SURFLAN A.S. may be applied before or after transplanting of the crop. If applied prior to transplanting: (1) disturbance of surface soil should be minimized to prevent loss of weed control; and (2) exposure of the roots of transplants to treated soil should be minimized to avoid any possibility of crop injury.
GENERAL USE PRECAUTIONS AND RESTRICTIONS

- Do not graze or feed forage from treated areas to livestock.
- Poor weed control may result if directions are not carefully followed.
- Do not over-apply SURFLAN A.S. Over-application may result in crop injury.
- Do not plant any root crop for 12 months following a SURFLAN A.S. application.
- Do not use SURFLAN A.S. on soils containing more than 5% organic matter.
- Apply SURFLAN A.S. directly to the soil surface in orchards or vineyards.
- For orchard crops, including citrus, pome fruits, stone fruits, and tree nuts, apply product only as a strip treatment in the tree rows; do not apply to row middles or drive rows.
- Carefully follow label directions to avoid poor weed control or crop injury.

**Chemigation:** See instructions for chemigation in “Application Methods”.

- Do not aerially apply this product.

**Precaution:** Avoid spray drift to non-target areas when applying SURFLAN A.S. Spray drift may result in reduced emergence of non-target plants adjacent to the treated area. Poor weed control may result if directions are not followed. Over-application may result in crop injury and in residues that exceed tolerance regulations, or in excessive soil residue that may be injurious to rotational crops. **Rotation Crop Interval:**

To avoid crop injury, a 24 month rotational interval is recommended when rotating from tree and vine crops to row crops.
CROP-SPECIFIC USE DIRECTIONS

Tree and Vine Crops - Citrus, Fruit and Nut Trees, Berries and Vineyards (Non-Bearing and Bearing)

Apply SURFLAN A.S. as a preemergence treatment to control annual grasses and broadleaf weeds listed in “General Information” section. Observe all precautions and restrictions in the “General Information” section.

**Crop Listing:** SURFLAN A.S. may be applied to crops listed under the following crop groupings:

<table>
<thead>
<tr>
<th>Citrus Fruits</th>
<th>Pome and Stone Fruits</th>
<th>Tree Nuts</th>
<th>Berries</th>
<th>Vineyards</th>
</tr>
</thead>
<tbody>
<tr>
<td>citrus</td>
<td>apple</td>
<td>almond</td>
<td>blackberry</td>
<td>grapes</td>
</tr>
<tr>
<td>citron</td>
<td>apricot</td>
<td>chestnut</td>
<td>blueberry†</td>
<td></td>
</tr>
<tr>
<td>citrus hybrids</td>
<td>cherry</td>
<td>chinquapin</td>
<td>boysenberry</td>
<td></td>
</tr>
<tr>
<td>grapefruit</td>
<td>crabapple</td>
<td>filbert</td>
<td>currant</td>
<td></td>
</tr>
<tr>
<td>kumquat</td>
<td>loquat</td>
<td>hickory nut</td>
<td>dewberry</td>
<td></td>
</tr>
<tr>
<td>lime</td>
<td>mayhaw</td>
<td>macadamia nut</td>
<td>elderberry</td>
<td></td>
</tr>
<tr>
<td>lemon</td>
<td>nectarine</td>
<td>pecan</td>
<td>gooseberry</td>
<td></td>
</tr>
<tr>
<td>mandarin (tangerine)</td>
<td>peach</td>
<td>pistachio</td>
<td>loganberry</td>
<td></td>
</tr>
<tr>
<td>orange</td>
<td>pear</td>
<td>walnut</td>
<td>raspberry</td>
<td></td>
</tr>
<tr>
<td>pummelo</td>
<td>plum</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>prune</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>quince</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

†Do not apply SURFLAN A.S. to lowbush blueberries.

In addition to the crops within crop groupings listed above, SURFLAN A.S. may be used in the following crops: avocado, fig, guava, kiwi fruit, olive, papaya, and pomegranate.
WEEDS AND GRASSES CONTROLLED (continued)

SURFLAN A.S. provides partial control or suppression of:

<table>
<thead>
<tr>
<th>Common Name</th>
<th>Scientific Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>groundsel, common</td>
<td><em>Senecio vulgaris</em></td>
</tr>
<tr>
<td>horseweed</td>
<td><em>Cynara canadensis</em></td>
</tr>
<tr>
<td>ladysthumb</td>
<td><em>Polygonum persicaria</em></td>
</tr>
<tr>
<td>lettuce, prickly</td>
<td><em>Lactuca serriola</em></td>
</tr>
<tr>
<td>mallow, common</td>
<td><em>Malva neglecta</em></td>
</tr>
<tr>
<td>milkweed, climbing</td>
<td><em>Sarcostemma cynanchoides</em></td>
</tr>
<tr>
<td>morningglory, annual</td>
<td><em>Ipomoea spp.</em></td>
</tr>
<tr>
<td>mustard, black</td>
<td><em>Brassica nigra</em></td>
</tr>
<tr>
<td>mustard, wild</td>
<td><em>Sinapis arvensis</em></td>
</tr>
<tr>
<td>nightshade, black</td>
<td><em>Solanum nigrum</em></td>
</tr>
<tr>
<td>prickly sida (teaweed)</td>
<td><em>Sida spinosa</em></td>
</tr>
<tr>
<td>ragweed, common</td>
<td><em>Ambrosia artemisiifolia</em></td>
</tr>
<tr>
<td>ragweed, giant</td>
<td><em>Ambrosia trifida</em></td>
</tr>
<tr>
<td>smartweed, annual</td>
<td><em>Polygonum spp.</em></td>
</tr>
<tr>
<td>sowthistle, annual</td>
<td><em>Sonchus oleraceus</em></td>
</tr>
<tr>
<td>spurge, spotted</td>
<td><em>Euphorbia maculata</em></td>
</tr>
<tr>
<td>teaweed (prickly sida)</td>
<td><em>Sida spinosa</em></td>
</tr>
<tr>
<td>velvetleaf</td>
<td><em>Abutilon theophrasti</em></td>
</tr>
<tr>
<td>wheat, volunteer</td>
<td><em>Triticum spp.</em></td>
</tr>
</tbody>
</table>
SOIL PREPARATION

SURFLAN A.S. controls weeds growing from seed. SURFLAN A.S. will not control emerged weeds. SURFLAN A.S. does not control established weeds, weeds growing from stolons, rhizomes, or root pieces. Therefore, areas to be treated should be free of emerged weeds. Weed residues, prunings, and trash should be thoroughly mixed into the soil or removed prior to treatment. In field applications, the soil should be in good tilth and free of clods at the time of application.
### Broadcast Application Rates

<table>
<thead>
<tr>
<th>Soil Texture</th>
<th>Length of Control</th>
<th>SURFLAN A.S. (qt/acre)</th>
<th>Minimum Time Between Applications (months)</th>
<th>Total Amount Allowed Per Year (qt/acre)</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Soil Textures</td>
<td>Short Term (2 - 4 months)</td>
<td>2</td>
<td>2.5</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Long Term (6 - 8 months)</td>
<td>4</td>
<td>2.5</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>(8 - 12 months)</td>
<td>6</td>
<td>2.5</td>
<td>12</td>
</tr>
</tbody>
</table>

### ACTIVATION AND CULTIVATION

A single 1/2 to 1 inch rainfall or sprinkler irrigation is required to activate SURFLAN A.S. and move the herbicide into the zone of weed germination. Rainfall or irrigation of 1 inch or more is needed to activate SURFLAN A.S. on fine-textured, high organic matter soils. If weeds begin to emerge, a shallow cultivation to a depth of 1 to 2 inches will destroy existing weeds and place SURFLAN A.S. in the zone of weed germination.
APPLICATION METHODS

Ground Broadcast Application
Apply SURFLAN A.S. directly to the soil surface of the orchard or vineyard in a total spray volume of 20 to 40 gallons per acre (broadcast basis), using any properly calibrated low pressure herbicide sprayer that will apply the spray uniformly. Use herbicide nozzle tips and screens no finer than 50 mesh for nozzle and in-line strainers. As the amount of spray volume per acre decreases, the importance of accurate calibration and uniform application increases. Check the sprayer daily to insure proper calibration and uniform application. Avoid boom overlaps that will increase rates above those recommended.

Band Application
Recordkeeping
How do I know what to record?

- Pesticide Licensing Guide
  - ORS 634
- ODA website
- Oregon Core Manual Addendum
- ODA brochures
Elements

- 1: Firm / Person
- 2: Location of property
- 3: Time / Date
- 4: Supplier or product
- 5: Identity of product
- 6: Amount / dilution

used
- 7: Specific property
- 8: Method / equipment
- 9: Name / License #
- 10: Records kept for 3 years
Elements

1: Firm or person for whom the application was made.
   - Ex: Sean’s Awesome Ornaments!

2: Location of the land or property where the application took place.
   - Ex: Address, GPS, description. As long as I can get there.
Elements

3: Date and approximate time of application.
   - Ex: 3/24/16 @ 1:30pm–4:00pm
   - Why: Look up corresponding weather. Complaints matching up with information. Proof it was / was not them. Time restrictions (day/night). Pre-plant, pre-harvest.

4: Supplier of the pesticide.
   - Ex: Wilco, Wilbur-Ellis, Ace Hardware, Wal-Mart.
Elements

5: Identity of the product (EPA Reg. # -OR-specific product name, manufacturer).
   - Ex: 7969-210. OR. BASF - Termidor SC Termiticide/Insecticide
   - Why: Site specific, human health, drift, embargo, etc.

6: Amount of product applied / dilution rate. Size of area treated.
   - Ex: Oz/Ac, Lb/Sqft, etc. Math…
   - Why: Rate confirmation with label. Over / Under.
7: Specific property to which the product was applied.
   - Ex: Baseboards in bathrooms, front/back yard, 5 ft. out from house, corn, alfalfa grown for seed, fallow, rangeland, etc.
   - Why: Site specific labels, buffer zones, environmental/human health concerns.

8: Summary of application equipment.
   - Ex: JD gator, truck 1, shankar, backpack, etc.
   - Why: Label specific application methods, probability of drift, sample locations.
9: Name and license number of everyone involved in the application (applicator, trainee, apprentice).
   - Ex: Sean Kretovics 1234567
   - Why: Categories, appropriate chemicals.

10: Records kept for 3 years.
   - Note: Record elements can be kept in multiple places on the same premises.
Good Records (No Action)

- Characteristics:
  - Contain all of the elements.
  - Clearly written / typed
  - Organized – codes have keys.
Work Order

Date: 3-20-14  
Customer: Curtis Troyer  
Acres: 50  
Crop: Baby Bluegrass  
Field Id.: C1 S\1\3  
Remarks:  
Wind: Q  
Temp: 50°  
Time: 11:00

Batch Chart

<table>
<thead>
<tr>
<th>Chemical</th>
<th>Rate / AC</th>
<th>Total Applied</th>
<th>Cost/Unit</th>
<th>Total $</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beacon</td>
<td>41 oz</td>
<td>410 oz</td>
<td>11.31</td>
<td>463.71</td>
</tr>
<tr>
<td>Sol 32</td>
<td>150 gal</td>
<td>150 gal</td>
<td>16.50</td>
<td>252.92</td>
</tr>
<tr>
<td>Motant Crop</td>
<td>10 gal</td>
<td>10 gal</td>
<td>16.50</td>
<td>165.00</td>
</tr>
<tr>
<td>Pulse</td>
<td>6.25 gal</td>
<td>6.25 gal</td>
<td>N/C</td>
<td>-</td>
</tr>
<tr>
<td>SS100</td>
<td>12.5 gal</td>
<td>12.5 gal</td>
<td>N/C</td>
<td>-</td>
</tr>
<tr>
<td>C4</td>
<td>3 gal</td>
<td>3 gal</td>
<td>N/C</td>
<td>-</td>
</tr>
<tr>
<td>Wakeup</td>
<td>2</td>
<td>2</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Water

Acres Applied 50  
Application Rate 5-

Total $ 2286.95

Thank you!
Customer Name: Mrs. Price
Address: 89587 Lakeside Dr.
Warrenton, OR 97146

Phone No.: 503-738-6760

When Application Made: Lower grade bank next to lake & berm front, spot spray
sq. ft.

Date: 9/24/2007

Time Start: 10:00 am
Time End: 10:30 am

Product Supplier: Fred Meyer
EPA Reg. No.: 72155-5

Bayer Advanced Weed Killer Concentrate

Amount Used: 1 gal.
Rate: 4 oz. per gal. water

Target Site: Weeds

Equipment Description: 1 gal. hand sprayer

Applicator Name: William C. Winlaw
Questions

Michael Odenthal
Oregon Department of Agriculture
503-986-4655
modenthal@oda.state.or.us