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# TILLAM® 6-E Selective Herbicide

Liquid Herbicide for Weed Control in Tobacco, Tomatoes, and Sugar Beets

 ACTIVE INGREDIENT:
 77.32%

 S-propyl butylethylthiocarbamate
 77.32%

 INERT INGREDIENTS:
 22.68%

 Total
 100.00%

Contains 6 pounds active ingredient per gallon.

EPA Reg. No. 10182-158

### **KEEP OUT OF REACH OF CHILDREN**

CAUTION

## Made in U.S.A. ZENECA Ag Products ZENECA Inc. Wilmington, DE 19850-5458

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# CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product should be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of ZENECA or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold ZENECA and Seller harmless for any claims relating to such factors.

ZENECA warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or ZENECA, and Buyer and User assume the risk of any such use. ZENECA MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

In no event shall ZENECA or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF ZENECA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF ZENECA OR SELLER, THE REPLACEMENT OF THE PRODUCT.

ZENECA and Seller offer this product, and Buyer and User accept it, subject to the foregoing conditions of sale and limitations of warranty and of liability, which may not be modified except by written agreement signed by a duly authorized representative of ZENECA.

This product is sold only for uses stated on the label. No express or implied license is granted to use or sell this product under any patent in any country except as specified: Country: United States of America.

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## STATEMENT OF PRACTICAL TREATMENT

**FIRST AID:** If a known exposure occurs or is suspected, immediately start the recommended procedures below. Simultaneously contact a Poison Control Center, a physician, or the nearest hospital. Describe the situation and follow the advice given.

**IF SWALLOWED:** Immediately give several glasses of water but **DO NOT** induce vomiting. This product contains hydrocarbon solvent. If vomiting occurs, give fluids again. Have a physician determine if condition of patient will permit induction of vomiting or evacuation of stomach. Do not give anything by mouth to an unconscious or convulsing person.

**IF ON SKIN:** Flush affected areas with large amounts of running water for at least 15 minutes and get medical attention.

**IF IN EYES:** Hold eyelids apart and flush eyes with large amounts of running water for 15 minutes. Get medical attention if irritation occurs.

IF INHALED: Remove to fresh air. Get medical attention if respiratory irritation occurs or if breathing becomes difficult.

FOR 24-HOUR EMERGENCY MEDICAL ASSISTANCE, CALL 1-800-F-A-S-T-M-E-D (327-8633).

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

# PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

## CAUTION

HARMFUL IF SWALLOWED. Avoid contact with skin, eyes, and clothing. Avoid inhalation of spray mist. Do not contaminate food or feed.

### Personal Protective Equipment

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for category E on an EPA chemical resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier faminate or nitrile rubber or neoprene rubber or viton
- Shoes plus socks
- Protective eyewear

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft 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 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

Do not apply directly to water or 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.

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## DIRECTIONS FOR USE

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

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 12 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.

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:

- Coverails
- Chemical-resistant gloves, such as barrier laminate or nitrile rubber or neoprene rubber or viton
- Shoes plus socks
- Protective eyewear

# STORAGE AND DISPOSAL

**PROHIBITIONS:** Do not contaminate water, food, feed, or fertilizer by storage or disposal. Open dumping is prohibited.

**STORAGE:** Keep containers closed when not in use. Do not store near seeds, fertilizers, or foodstuffs. Protect from temperatures below 20°F but do not store near sources of heat or open flame. COMBUSTIBLE LIQUID.

**PESTICIDE DISPOSAL:** Rinse spray equipment. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

# CONTAINER DISPOSAL:

Metal: Triple rinse (or equivalent), then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or, by other procedures approved by state and local authorities.

**Plastic:** Triple rinse (or equivalent), then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by other procedures approved by state and local authorities. FOR BULK AND MINI-BULK CONTAINERS

**CONTAINER DISPOSAL:** Reseal container and offer for reconditioning, or triple rinse (or equivalent) and offer for recycling or reconditioning, or clean in accordance with manufacturer's instructions.

**CONTAINER PRECAUTIONS:** Before refilling, inspect thoroughly for damage such as cracks, punctures, bulges, dents, abrasions, and damaged or worn threads on closure devices.

REFILL ONLY WITH TILLAM 6-E. The contents of this container cannot be completely removed by cleaning. Refilling with materials other than TILLAM 6-E will result in contamination and may weaken container.

After filling and before transporting, check for leaks.

Do not refill or transport damaged or leaking container.

# CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER!

# **GENERAL INFORMATION**

TILLAM® 6-E is a selective herbicide which is mixed (incorporated) into the soil, or applied below the surface of the soil, or applied through solid set sprinklers for control of weeds listed on this label. TILLAM 6-E controls weeds by interfering with normal seed germination and seedling development. It does not control established or germinated weeds present at application. All weed growth and crop stubble should be thoroughly worked into the soil before treatment.

# **GENERAL USE PRECAUTIONS**

# READ ALL LABEL DIRECTIONS BEFORE USING.

TILLAM 6-E should be used only for recommended purposes and at recommended rates (do not overdose).

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**Transplants:** TILLAM 6-E may be applied prior to mechanical transplanting only. DO NOT apply TILLAM 6-E prior to hand transplanting.

Applied according to directions and under normal growing conditions, TILLAM 6-E will not harm the treated crop. During germination and early growth, extended periods of unusually cold and wet or hot and dry weather, insect, nematode, or plant disease attack, the use of certain soil applied systemic insecticides, highly saline or alkaline soil conditions, improperly placed fertilizers or soil insecticides may create abnormal conditions that weaken crop seedlings. TILLAM 6-E used under these abnormal conditions could result in crop injury.

WEEDS CONTROLLED		
ANNUAL GRASSES:		
Barnyardgrass (Watergrass)	Echinochloa spp.	
Bermudagrass, seedling	Cynodon dactylon	
Crabgrass	Digitaria spp.	
Foxtails (Giant, Green, Yellow)	Setaria spp.	
Goosegrass	Eleusine indica	
Millet	Setaria spp.	
Narrow Leaf Signalgrass	Brachiaria piligera	
Wild Oats	Avena fatua	
ANNUAL BROADLEAF WEEDS:		
Blackeyed-susan (Sweet Suzy)	Rudbeckia serotina	
Deadnettle (Henbit)	Lamium amplexicaule	
Florida Pusley	Richardia scabra	
Hairy Nightshade*	Solanum villosum	
Lambsquarters	Chenopodium album	
Nettleleaf Goosefoot	Chenopodium murale	
Prostrate Pigweed	Amaranthus graecizans	
Purslane; Common		
Redroot Pigweed	Amaranthus retroflexus	
Shepherd's-purse	Capsella bursa-pastoris	

The above broadleaf weeds will be controlled only if TILLAM® 6-E selective herbicide is applied when conditions are favorable for germination.

\*Suppression (partial control)

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PERENNIAL WEEDS:	
Yellow Nutsedge	Cyperus esculentus
Purple Nutsedge	Cyperus rotundus

Existing stands of nutsedge must be turned under and chopped up thoroughly before treatment.

# SOLID SET SPRINKLERS

**USE PRECAUTIONS:** Apply this product only through solid set sprinkler irrigation system. Do not apply this product through any other type of irrigation system.

- Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
- If you have any questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

# **USE REQUIREMENTS:**

- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back-flow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the waterpump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump), effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

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### TILLAM 6-E WITH FLUID FERTILIZER

TILLAM 6-E may be combined with fluid (solution, slurry, or suspension) fertilizers. However, physical compatibility with these fertilizers must be determined before combining in the spray tank. See Appendix I giving directions for these combinations. Even though found to be compatible, constant agitation is necessary to keep the TILLAM 6-E evenly mixed with the liquid fertilizer.

### IMPREGNATION ON DRY FERTILIZER

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TILLAM 6-E may be impregnated on many dry bulk fertilizers for incorporation prior to transplanting of tobacco to control weeds listed on this label. To ensure optimum results, TILLAM 6-E must be uniformly distributed on the fertilizer particles. See Appendix II for special instructions regarding directions for impregnation and use.

### **APPLICATION DIRECTIONS**

The soil should be well-worked and dry enough to permit good soil mixing (incorporation) or subsurface application. Pour the recommended amount of TILLAM 6-E into the spray tank during the filling operations. Apply in 10 to 50 gallons of water per acre.

For soil incorporated applications, use a properly calibrated, low-pressure, boom-type sprayer having good agitation. For subsurface applications, soil should be free of trash. Special equipment designed for subsurface application must be used. Sweeps must be mounted immediately ahead of the planter unit.

In irrigated areas, do not apply TILLAM 6-E before preirrigation.

For all band applications, use proportionately less material per acre depending upon row spacing and band width to be treated. Do not use band application on rocky ground because thorough incorporation is not possible.

**Transplants:** TILLAM 6-E may be applied prior to mechanical transplanting only. DO NOT apply TILLAM 6-E prior to hand transplanting.

**INCORPORATION DIRECTIONS:** TILLAM 6-E must be mixed (incorporated) into the soil IMMEDIATELY after application to prevent loss by evaporation of the herbicide. Whenever possible, application and incorporation should be done in the same operation.

**Incorporation Before Planting:** Use power-driven cultivation equipment set to cut to a depth of 2 to 3 inches in light soils and 3 to 4 inches in heavy soils OR a tandem disc set to cut to a depth of 6 inches, followed by a spike-tooth harrow or some other leveling device which extends beyond ends of the disc. For thorough mixing, disc in two different directions (cross disc).

**Incorporation At or After Planting:** Use power-driven cultivation equipment set to cut to a depth of 2 to 3 inches, OR on light soils only, ground-driven tillers (rolling cultivators, rotary hoe, row wheels, etc.) set to cut to a depth of 1-1/2 inches and operated at 6 to 8 mph. When using ground-driven tillers, precultivate if soil is crusted. When incorporating after planting, care must be taken not to disturb the crop seedling.

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SUBSURFACE DIRECTIONS: (Tobacco only): Special equipment designed for subsurface sweep application MUST be used. Sweeps must be mounted immediately ahead of the planter unit.

**Covered Sweeps:** Set the sweeps to run below the soil surface deep enough to cover the TILLAM 6-E with 5 to 6 inches of soil. Calibrate by measuring the spray band width at the back of the sweep, not the sweep width. NOTE: When applying with sweeps, TILLAM 6-E must be applied deep enough to allow 3 to 4 inches of soil to remain over the treatment after the transplanting operation.

**BED-OVER METHOD OF APPLICATION:** Apply TILLAM 6-E in a band immediately in front of bedding discs. Set discs so that TILLAM 6-E is covered with 6 inches of soil. Set bedding discs so that treated soil is not folded in. If bed levelers are used at transplanting, beds should be made higher to compensate for leveling, i.e., so that 3 to 4 inches of soil are left above the TILLAM 6-E herbicide treatment.

SOLID SET SPRINKLER APPLICATION: (Tomatoes only, Western Region): Meter the TILLAM 6-E into the irrigation water during the entire period. Apply in 1/4 to 1/2 acre inch of water or sufficient water to penetrate the soil to a depth of 2 to 4 inches.

Time the TILLAM 6-E application to ensure that proper penetration of the herbicide corresponds with the end of the irrigation period. Flush the lines, then turn the water off promptly. Tailwater (run-off water) from irrigation should be recirculated.

Application of more than recommended quantities of irrigation water may result in decreased product performance by removing the chemical from the zone of effectiveness.

**PLANTING:** For maximum weed control benefits, crops should be planted or seeded immediately after application. Do not use a drag behind the planter as it may concentrate TILLAM 6-E over the seed row and cause crop injury.

**Transplants:** TILLAM 6-E may be applied prior to mechanical transplanting only. DO NOT apply TILLAM 6-E prior to hand transplanting.

### CULTURAL PRACTICES FOLLOWING APPLICATION

TILLAM 6-E is not persistent in the soil and susceptible weeds germinating later in the season may not be controlled. Shallow cultivation or approved postemergence herbicides may be necessary to control susceptible weeds that escape control by TILLAM 6-E as well as those weeds not susceptible to TILLAM 6-E. Do not cultivate deeper than the depth of herbicide incorporation.

When cultivating fields where TILLAM 6-E has been banded in the row, use shields to prevent the movement of untreated soil into the treated row.

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### RECOMMENDATIONS

### SUGAR BEETS, PREPLANT

Apply just prior to planting; see DIRECTIONS FOR USE for methods of application and incorporation. Recommended dosages are as follows:

For light textured soils or soils with less than 10% organic matter, apply 2-2/3 qts. TILLAM 6-E per acre.

For heavy textured soils or soils with over 10% organic matter, apply 4 qts. TILLAM 6-E per acre.

#### TOBACCO, FLUE-CURED

**Transplants:** TILLAM 6-E may be applied prior to mechanical transplanting only. DO NOT apply TILLAM 6-E prior to hand transplanting.

Before Bedding and Transplanting: Apply TILLAM 6-E at a broadcast rate of 2-2/3 qts. per acre. Incorporate immediately with a tandem disc and bed up immediately prior to transplanting.

#### OR

After Bedding But Before Transplanting: Apply TILLAM 6-E at a broadcast rate of 2-2/3 qts. per acre prior to transplanting, reducing amount per acre proportionately depending upon band width and row spacing. Incorporate immediately using a power-driven rotary hoe with variable length blades (i.e., one with short blades on the inside and longer blades on the outside). Bed levelers, if used, should be kept shallow as excessive removal of treated soil will destroy weed control.

### OR

Subsurface Sweeps After Bedding But Before Transplanting: Run at a depth so that when bed is in final shape, 3 to 4 inches of soil will cover the TILLAM 6-E. Apply TILLAM 6-E at 2 qts. per acre, just prior to transplanting. For band treatment, reduce amount per acre proportionately depending upon band width and row spacing.

**TOBACCO, LIGHT AIR CURED:** Includes Type 31 (Burley) & Type 32 Tobaccos, Type 41 Cigar Filler. Types 54 and 55 Cigar Binder.

**Transplants:** TILLAM 6-E may be applied prior to mechanical transplanting only. DO NOT apply TILLAM 6-E prior to hand transplanting.

**Before Transplanting:** Apply TILLAM 6-E broadcast at 2-2/3 qts. per acre. Incorporate immediately, only with a tandem disc on flat ground followed by transplanting. For band treatment, reduce amount per acre proportionately depending upon band width and row spacing. Incorporate immediately, using a power-driven rotary hoe.

## TILLAM 6-E/DASANIT® SPRAY CONCENTRATE TANKMIX COMBINATION

TILLAM 6-E IN COMBINATION WITH DASANIT SPRAY CONCENTRATE controls nematodes, wireworms and weeds controlled by TILLAM 6-E in tobacco (flue cured and light air cured).

**NOTE:** Dasanit is a Restricted Use Pesticide. Refer to the label for Dasanit Spray Concentrate for pertinent directions and precautions for use, and restrictions.

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APPLICATION DIRECTIONS AND RECOMMENDATIONS: The soil should be well worked and dry enough to permit good soil incorporation (mixing into the soil). Apply 2-2/3 qts. TILLAM 6-E and 4 qts. Dasanit Spray Concentrate in 20 to 50 gallons water per acre. Use a properly calibrated low-pressure boom-type sprayer having good agitation.

**SOIL INCORPORATION:** The tankmix must be incorporated (mixed) into the soil immediately after application to prevent loss of the herbicide by evaporation. Whenever possible, application and incorporation should be done in the same operation. Use power-driven cultivation equipment set to cut to a depth of 3 inches in light soil and 3 to 4 inches in heavy soil or a tandem disc set to cut to a depth of 4 to 6 inches.

Cross disc at right angles for thorough mixing. The bedding operation should follow the incorporation as soon as is practical. Planting may be done immediately after bedding or at a later date; however, to insure long-term weed control, the crop should be planted as soon as possible after application and bedding.

# TILLAM 6-E/MOCAP® EC NEMATICIDE-INSECTICIDE TANKMIX COMBINATIONS

A tankmix of TILLAM 6-E and Mocap EC can be applied and mixed into the soil before transplanting for control of weeds, wireworms, and nematodes in tobacco.

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**NOTE:** Mocap is a Restricted Use Pesticide. Refer to the label for Mocap EC for pertinent directions and precautions for use, and restrictions.

**TANK MIXING DIRECTIONS:** The TILLAM 6-E/Mocap EC tankmix combination can be mixed with water and applied as a spray. Pour the recommended amount of TILLAM 6-E directly into the nearly filled spray tank while agitating. Next, add the recommended amount of Mocap EC. Fill the remaining portion of the tank with water; mix thoroughly. Maintain a moderate agitation to provide a uniform mix during application.

APPLICATION DIRECTIONS AND RECOMMENDATIONS: The soil should be well-worked and dry enough to permit good soil mixing (incorporation). Apply 2-2/3 qts. TILLAM 6-E plus 1 gallon Mocap EC in 10 to 50 gallons water per acre. Use a properly calibrated low-pressure, boom-type sprayer having good agitation.

**INCORPORATION DIRECTIONS:** The TILLAM 6-E/Mocap EC tankmix combination must be mixed (incorporated) into the soil immediately after application to prevent loss by evaporation. Whenever possible, application and incorporation should be done in the same operation. Use a tandem disc set to cut to a depth of six inches, followed by spike-toothed harrow or some other leveling device which extends beyond the ends of the disc. For thorough mixing, disc in two different directions (cross disc).

# TILLAM 6-E/PAARLAN® EC HERBICIDE TANKMIX COMBINATIONS

A tankmix of TILLAM 6-E and Paarlan EC can be applied and mixed into the soil before transplanting for additional weed control and longer season grass control in tobacco.

**NOTE:** Refer to the label of Paarlan EC for pertinent directions and precautions for use, and restrictions.

**TANK MIXING DIRECTIONS:** The TILLAM 6-E/Paarlan EC tankmix combination can be mixed with water and applied as a spray. Pour the recommended amount of TILLAM 6-E directly into the nearly filled spray tank while agitating. Next, add the recommended amount of Paarlan EC. Fill the remaining portion of the tank with water; mix thoroughly. Maintain a moderate agitation to provide a uniform mix during application.

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APPLICATION DIRECTIONS AND RECOMMENDATIONS: The soil should be well-worked and dry enough to permit good soil mixing (incorporation). Apply 2-2/3 qts. TILLAM 6-E plus 2 pints Paarlan EC in 10 to 50 gallons water per acre. Use a properly calibrated low-pressure, boom-type sprayer having good agitation.

**INCORPORATION DIRECTIONS:** The TILLAM 6-E/Paarlan EC tankmix combination must be mixed (incorporated) into the soil immediately after application to prevent loss by evaporation. Whenever possible, application and incorporation should be done in the same operation. Use a tandem disc set to cut to a depth of six inches, followed by a spike-toothed harrow or some other leveling device which extends beyond the ends of the disc. For thorough mixing, disc in two different directions (cross disc).

## TOMATOES

## SEE DIRECTIONS FOR USE FOR METHODS OF APPLICATION AND INCORPORATION.

- Do not use more than 4 quarts of TILLAM 6-E per acre per season on direct seeded or transplanted tomatoes. Exception: Up to 6% quarts of TILLAM 6-E per acre per season may be applied preplant to plug planted tomatoes in the Western Region only.
- For all band applications, use proportionately less material per acre depending upon row spacing and band width to be treated. When banded at two different times on the same crop (such as at planting and again at layby), make sure that the maximum rate per acre per season is not exceeded for the soil type. When two bands per year are applied to the crop, do not overlap or apply the second band over the top of the first.

**Transplants:** TILLAM 6-E may be applied prior to mechanical transplanting only. DO NOT apply TILLAM 6-E prior to hand transplanting. For specific transplant use directions, see TILLAM 6-E + Telone® Combination for Specific Pest Control in Transplanted Tomatoes grown under Polyethylene Film Mulch.

DIRECT SEEDED (Western Region Only): Apply TILLAM 6-E just prior to planting.

For light textured soils or soils with less than 10% organic matter, apply 2-2/3 qts. TILLAM 6-E per acre.

For heavy textured soils or soils with more than 10% organic matter, apply 4 qts. TILLAM 6-E per acre.

OR

DIRECT SEEDED, LAYBY (Not preplant): Apply TILLAM 6-E as a directed spray to clean, cultivated soil. Do not apply within eight (8) days of harvest.

For light textured soils or soils with less than 10% organic matter, apply 2-2/3 qts. TILLAM 6-E per acre.

For heavy textured soils or soils with more than 10% organic matter, apply 4 qts. TILLAM 6-E per acre.

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OR

**DIRECT SEEDED, SPRINKLER APPLICATION (Western Region only):** Apply TILLAM 6-E through solid set sprinklers prior to or immediately after planting, before weeds emerge.

For light textured soils or soils with less than 10% organic matter, apply 2-2/3 qts. TILLAM 6-E per acre.

For heavy textured soils or soils with more than 10% organic matter, apply 4 qts. TILLAM 6-E per acre.

OR

PLUG PLANTED, PREPLANT (Western Region only): Prior to plug planting tomatoes, apply and soil incorporate up to 6-2/3 quarts of TILLAM 6-E per acre. Use higher rate for hairy nightshade.

### TOMATO TRANSPLANTS (DO NOT USE HOTCAPS)

**Transplants:** TILLAM 6-E may be applied prior to mechanical transplanting only. DO NOT apply TILLAM 6-E prior to hand transplanting.

Before Transplanting: Apply TILLAM 6-E prior to transplanting.

OR

After Transplanting: Apply TILLAM 6-E as a directed spray to clean, cultivated soil. Do not apply within eight (8) days of harvest.

For light textured soils or soils with less than 10% organic matter apply 2-2/3 qts. TILLAM 6-E per acre.

For heavy textured soils or soils with more than 10% organic matter, apply 4 qts. TILLAM 6-E per acre.

TOMATO TRANSPLANTS (South Carolina Only):

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**Transplants:** TILLAM 6-E may be applied prior to mechanical transplanting only. DO NOT apply TILLAM 6-E prior to hand transplanting.

**Before Bedding and Transplanting:** Apply TILLAM 6-E at a broadcast rate of 2 qts. per acre just prior to bedding and transplanting, reducing the amount per acre proportionately depending upon band width and row spacing. Use bed-over method of application.

OR

After Bedding But Before Transplanting: Apply TILLAM 6-E at a broadcast rate of 2 qts. per acre just prior to transplanting, reducing amount per acre proportionately depending upon band width and row spacing. Apply to the top of the bed and incorporate 4 to 6 inches into the bed top.

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**Postemergence or After Transplanting:** Apply TILLAM 6-E at a broadcast rate of 2 qts. per acre, reducing amount per acre proportionately depending upon band width and row spacing. Apply in a directed spray to soil around base of tomato plants using bands on either side of the row. Immediately after treatment, sweep out row centers to effectively cover TILLAM 6-E treatment with a layer of soil two inches deep. Do not apply within eight (8) days of harvest.

# TILLAM 6-E<sup>®</sup> + TELONE<sup>®</sup> COMBINATION FOR SPECIFIC PEST CONTROL IN TRANSPLANTED TOMATOES GROWN UNDER POLYETHYLENE FILM MULCH

# **TOMATOES (transplanted):**

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Apply TILLAM 6-E at 2% to 4 quarts per acre in a minimum of 10 gallons of water per acre as a broadcast application prior to bed formation or as a band application to pre-beds. Do not apply TILLAM 6-E in a band immediately in front of bedding discs or other bed forming equipment. Do not exceed spray pressures of 50 psi at the nozzle tip. TILLAM 6-E must be mixed (incorporated) into the soil immediately after application. Inject Telone into the bed immediately following the TILLAM 6-E application. Apply polyethylene film mulch over the finished bed immediately after the TILLAM 6-E + Telone application. Allow a minimum of 21 days from the TILLAM 6-E + Telone application before transplanting tomatoes. Use transplanting equipment that is capable of planting through plastic mulch. Chemical resistant gloves, Category A (waterproof), must be worn when setting plants by hand.

Refer to the Telone label for precautionary statements, restrictions, rates, and a list of pests controlled. Always read and follow the recommendations, restrictions, and limitations for all products whether used alone, sequentially, or in a tankmix. The most restrictive labeling of any product used applies.

# TILLAM 6-E/DEVRINOL® (50-WP, 50-DF, OR 2-E) SELECTIVE HERBICIDE TANKMIX COMBINATION APPLIED PREPLANT INCORPORATED

A tankmix combination of TILLAM 6-E and DEVRINOL (50-WP, 50-DF, or 2-E) can be applied and mixed (incorporated) into the soil before planting for weed control in tomatoes and tobacco.

WEEDS CONTROLLED		
ANNUAL GRASSES:		
Barnyardgrass (Watergrass)	Echinochloa crus-galli	
Bermudagrass, seedling	Cynodon dactylon	
Crabgrass	Digitaria spp.	
Foxtails (Giant, Green, Yellow)	Setaria spp.	
Goosegrass	Eleusine indica	
Millet	Setaria spp.	
Narrow Leaf Signalgrass	Brachiaría piligera	
Wild Oats	Avena fatua	

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ANNUAL BROADLEAF WEEDS:	
Blackeyed-susan (Sweet Suzy)	Rudbeckia serotina
Deadnettle (Henbit)	Lamium amplexicaule
Florida Pusley	Richardia scabra
Hairy Nightshade*	Solanum villosum
Lambsquarters	Chenopodium album
Nettleleaf Goosefoot	Chenopodium murale
Prostrate Pigweed	Amaranthus graecizans
Purslane, Common	Portulaca oleracea
Redroot Pigweed	Amaranthus retroflexus
Shepherd's-purse	Capsella bursa-pastoris

\*Suppression (partial control)

The above broadleaf weeds will be controlled only when the TILLAM 6-E/DEVRINOL (50-WP, 50-DF, or 2-E) tankmix is applied when conditions are favorable for germination.

PERENNIAL WEEDS:	
Purple Nutsedge	Cyperus rotundus
Yellow Nutsedge	Cyperus esculentus

Existing stand of nutsedge must be turned under and chopped up thoroughly before treatment.

Note: Observe all cautions and limitations on labeling of all products used in combination.

Make only one application per season.

In each case where a range of rates is given, the lower rates should be used on light (coarse) textured soils or soils low in organic matter. The higher rates should be used on heavy (fine) textured soils.

After harvest or prior to planting of succeeding crops, a deep moldboard or disc plowing operation must be carried out.

TANK MIXING DIRECTIONS: The TILLAM 6-E/DEVRINOL (50-WP, 50-DF, or 2-E) tankmix combination can be mixed with water and applied as a spray. Pour the recommended amounts of TILLAM 6-E and DEVRINOL (50-WP, 50-DF, or 2-E) into a spray tank during the filling operations. When using DEVRINOL 50-WP or 50-DF, add first to the spray tank, then add the TILLAM 6-E. Maintain adequate agitation of the tankmix. Apply in 25 to 50 gallons of water per acre.

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**APPLICATION DIRECTIONS AND RECOMMENDATIONS:** The soil should be well-worked and dry enough to permit good soil mixing (incorporation).

For soil incorporated applications, use a properly calibrated, low-pressure, boom-type sprayer having good agitation.

In irrigated areas do not apply before preirrigation. For all band applications, reduce dosage proportionately depending upon row spacing and band to be treated. Do not use band application on rocky ground because thorough incorporation is not possible.

**Transplants:** TILLAM 6-E may be applied prior to mechanical transplanting only. DO NOT apply TILLAM 6-E prior to hand transplanting.

**INCORPORATION DIRECTIONS:** The herbicides must be mixed (incorporated) into the soil immediately after application to prevent loss by evaporation. Wherever possible, application and incorporation should be done in the same operation.

**INCORPORATION BEFORE PLANTING:** Use power-driven cultivation equipment set to cut to a depth of 2 to 3 inches in coarse soils and 3 to 4 inches in heavy soils OR a tandem disc set to cut to a depth of 6 inches, followed by a spike-toothed harrow or some other leveling device which extends beyond ends of the disc. For thorough mixing, disc in two different directions (cross disc).

**INCORPORATION AT PLANTING:** Use power-driven cultivation equipment set to cut to a depth of 2 to 3 inches OR, on coarse soils only, ground-driven tillers (rolling cultivators, rotary hoe, row wheels, etc.) set to cut to a depth of 1-1/2 inches and operated at 6 to 8 mph. When using ground-driven tillers, precultivate if soil is crusted.

**PLANTING:** Crops should be planted or seeded immediately after application and incorporation. Do not use a drag behind the planter as it may concentrate the herbicides over the seed row and cause crop injury.

**Transplants:** TILLAM 6-E may be applied prior to mechanical transplanting only. DO NOT apply TILLAM 6-E prior to hand transplanting.

### CULTURAL PRACTICES FOLLOWING APPLICATION

Shallow cultivation may be necessary to control those susceptible weeds that escape control as well as those weeds not susceptible to either herbicide. Do not cultivate deeper than the depth of herbicide incorporation.

When cultivating fields where the tankmix has been banded in the row, use shields to prevent the movement of untreated soil into the treated row.

#### **RECOMMENDATIONS:**

**Transplants:** TILLAM 6-E may be applied prior to mechanical transplanting only. DO NOT apply TILLAM 6-E prior to hand transplanting.

Tomatoes (Direct Seeded (California Only) and Transplanted): Apply 2 to 4 pounds DEVRINOL 50-WP or 50-DF, or 2 to 4 qts. DEVRINOL 2-E, plus 2-2/3 to 4 qts. TILLAM 6-E per broadcast acre. Use the lower rates on light soils (coarse textured-sandy) and the higher rate on heavy soils (fine textured-clay). DO NOT use hotcaps on transplanted tomatoes.

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**Tobacco (Transplanted):** Before transplanting, apply 2 pounds DEVRINOL 50-WP or 50-DF, or 2 qts. DEVRINOL 2-E, plus 2-2/3 quarts TILLAM 6-E per broadcast acre.

To avoid injury to crops not specified on the label, do not plant until 12 months after the last DEVRINOL herbicide application.

## TILLAM 6-E/DYFONATE® 4-EC EMULSIFIABLE LIQUID INSECTICIDE/ DEVRINOL (50-WP, 50-DF, or 2-E) TANKMIX COMBINATION

A tankmix combination of TILLAM 6-E, DYFONATE 4-EC and DEVRINOL 50-WP, 50-DF, or 2-E can be applied and mixed into the soil before transplanting tomatoes and tobacco, for control of weeds and soil insects. Refer to TILLAM 6-E/DEVRINOL Tankmix Combination for list of weeds controlled.

**Note:** DYFONATE 4-EC is a Restricted Use Pesticide. Observe all cautions and limitations on labeling of all products used in combinations. Make only one application per season. Do not contaminate water when disposing of equipment washwaters.

### **DIRECTIONS FOR USE:**

The recommended tankmix controls weeds by interfering with normal seed germination and seedling development. It does not control established or germinated weeds present at application. All weed growth and crop stubble should be thoroughly worked into the soil before treatment.

For GENERAL USE PRECAUTIONS and DIRECTIONS FOR USE refer to TILLAM 6-E/DEVRINOL Tankmix Recommendations for methods of tank mixing, application, and incorporation.

### **RECOMMENDATIONS:**

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**Transplants:** TILLAM 6-E may be applied prior to mechanical transplanting only. DO NOT apply TILLAM 6-E prior to hand transplanting.

**Tomatoes (Direct Seeded (California Only) and Transplanted):** Apply 2-2/3 to 4 qts. TILLAM 6-E plus 2 to 4 pounds DEVRINOL 50-WP or 50-DF, or 2 to 4 qts DEVRINOL 2-E plus 2 qts. DYFONATE 4-EC for control of symphylans or 4 quarts for control of symphylans and wireworms in 25 to 50 gallons of water per broadcast acre. Use the lower DEVRINOL and TILLAM herbicide rates on light soils (coarse texture-sandy) and the higher rates on heavy soils (fine textured-clay). Do not use hotcaps on transplanted tomatoes.

**Tobacco (Transplanted):** Before transplanting, apply 2-2/3 qts. TILLAM 6-E plus 2 pounds DEVRINOL 50-WP or 50-DF, or 2 qts. DEVRINOL 2-E plus 2 quarts DYFONATE 4-EC for control of wireworms in 25 to 50 gallons of water per broadcast acre.

To avoid injury to crops not specified on the label, do not plant until 12 months after the last DEVRINOL application.

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### APPENDIX I

#### TILLAM 6-E WITH FLUID FERTILIZERS

The following procedure is suggested for determining whether TILLAM 6-E may be combined with a specific fluid fertilizer for spray tank application.

### MATERIALS REQUIRED:

- 1. TILLAM 6-E.
- 2. Fluid fertilizer to be used.
- 3. Adjuvant for fertilizer tankmix: Compex<sup>™</sup>, Sponto<sup>™</sup> 168-D, Uni-Mix<sup>™</sup>, or equivalent. The adjuvant which provides the best emulsification depends on the specific fertilizer under consideration.
- 4. Two one-quart, wide-mouth glass jars with lid or stopper.
- 5. Measuring spoons (a 25 mL pipette or graduated cylinder provides more accurate measurement).
- 6. Measuring cup, 8 oz. (237 mL).

#### PROCEDURE:

- 1. Pour a pint (about 473 mL) of the fluid fertilizer into each of the quart jars.
- 2. Add adjuvant to one of the jars and mix (see rate table).
- 3. Add the TILLAM 6-E to both jars (see rate table).
- 4. Close both jars with lid or stopper and mix the contents by turning the jars upside down ten times.
- 5. Inspect the surface and body of the mixtures-
  - (A) Immediately after completing the jar inversions.
  - (B) After allowing the jars to stand quietly for 30 minutes.
  - (C) And then again after turning the jars upside down 10 times.

If the uniform mix cannot be made, the mixture should not be used. If either mixture remains uniform for 30 minutes, the combination may be used. Should either mixture separate after 30 minutes, but readily remix uniformly with the jar inversions, the mixture can be used if adequate agitation is maintained in the tank. If the mixture with adjuvant is satisfactory, but the one without adjuvant is not, be sure to use the adjuvant in the spray tank. Add the adjuvant first at a rate of 3 pints per 100 gallons of fluid fertilizer; foaming can be minimized by using moderate agitation.

If nondispersible oil, sludge, or clumps of solids form in the mixtures, the combinations should not be used.

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Gallons of fluid fertilizer to be applied per acre	mL or Tsp. of TILLAM 6-E* to be added to 1 pint of fertilizer 6-E	
	 mL	Tsp.
10	8	1-2/3
15	5	1
20	4	3/4
25	3	2/3
30	2-1/2	1/2
40	2	2/5

# RATE TABLE FOR TILLAM 6-E AND ADJUVANT\*\* WITH THE FLUID FERTILIZER

\*Based on field rate of 1 pound active ingredient per acre in the fertilizer volumes indicated. Increase volume proportionately to correspond with intended field rate in terms of pounds active ingredient per acre (e.g., for field rate of 4 pounds actual TILLAM 6-E in 40 gallons fertilizer per acre, add 8 mL or 2 tsp. TILLAM 6-E to each jar for compatibility testing purposes).

\*\*Two (2) milliliters or one-half (½) teaspoon of adjuvant to be added to 1 pint of fluid fertilizer in order to equal the rate of 3 pints of adjuvant per 100 gallons of fluid fertilizer.

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#### APPENDIX II

## TILLAM 6-E IMPREGNATION ON DRY BULK FERTILIZERS FOR USE ON TOBACCO

**CAUTION:** TILLAM 6-E must not be impregnated on ammonium nitrate, sodium nitrate, or potassium nitrate. Such mixtures may cause explosion and fire.

TILLAM 6-E may be impregnated on many dry bulk fertilizers (see following table) and applied and incorporated in the soil before planting for the control of grasses and broadleaf weeds in tobacco.

Field results have shown that TILLAM 6-E on bulk dry fertilizers gives weed control equal to TILLAM 6-E applied as a spray in water. However, uniform impregnation of TILLAM 6-E on the dry fertilizer particles and uniform application in the field are necessary to assure good results.

For impregnating TILLAM 6-E on dry fertilizer, use a closed rotary-drum mixer or a similar type of closed blender equipped with suitable spray equipment. The spray nozzle (or nozzles) should be positioned inside of the mixer to provide <u>uniform</u> spray coverage of the tumbling fertilizer. The physical properties of fertilizers vary, particularly in liquid absorptive capacity. When absorptivity is sufficient, simple spray impregnation of the fertilizer with TILLAM 6-E provides a satisfactory, dry mixture. If the absorptive capacity is inadequate, use of a highly absorptive powder is required to provide a dry, flowable mixture. Micro-Cel™ E is the recommended absorbent powder. It should be added separately and uniformly to the prepared TILLAM 6-E fertilizer mixture in a quantity that is sufficient to provide a suitably flowable mixture. Generally less than 2% by weight of Micro-Cel E is required. The amount of TILLAM 6-E actually required in the manufacture of individual fertilizer mixtures should be determined carefully for each production operation. This is necessary to ensure that the amount of TILLAM 6-E actually contained in the mixture applied to the soil represents the correct rate of use.

All TILLAM 6-E supplementary literature instructions and label recommendations regarding rates per acre, soil incorporation, application, cautions, general use precautions, and other directions must be followed.

All individual state regulations relating to bulk dry fertilizer blending, registration, labeling, and application are the responsibility of the individual and/or company selling the fertilizer and TILLAM 6-E mixture.

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A minimum of 200 pounds and a maximum of 2,000 pounds of approved ingredients (see following table) impregnated with TILLAM 6-E at the recommended rate must be applied per acre.

Bulk fertilizer impregnated with TILLAM 6-E should be applied immediately, not stored. It is recommended that all bulk containers be tightly covered while the product is being transported and applied to reduce chances of TILLAM 6-E loss via volatilization.

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	N	Р	ĸ
Ammonium sulfate	21	0	0
Diammonium phosphate	18	46	0
Potassium chloride	0	0	60
Potassium sulfate	0	0	52
Super-phosphate (single)	0	20	0
Super-phosphate (triple)	0	46	0
Urea	45	0	0
Ammonium phosphate sulfate	16	20	0
11-48-0	11	48	0

# APPROVED DRY FERTILIZER INGREDIENTS

Note:K-Mag and two MAP fertilizers (12.5-50-0, 11-54-0) have been shown to be compatible with TILLAM 6-E and are approved for use.

Fertilizer Rate Per Acre	Tillam 6-E Rate Per Acre (2-2/3 qts./acre)	
200	26-2/3 qts./ton	
300	17-4/5 qts./ton	
400	13-1/3 qts./ton	
500	10-2/3 qts./ton	
600	8-7/8 qts./ton	
800	6-2/3 qts./ton	
1000	5-1/3 qts./ton	
1500	3-3/5 qts./ton	
2000	2-2/3 qts./ton	

## RATE CHART FOR IMPREGNATION OF DRY BULK FERTILIZERS WITH TILLAM 6-E

DEVRINOL®, DYFONATE®, and TILLAM® are trademarks of ZENECA Group Companies. Compex<sup>™</sup> is a trademark of Kalo, Inc.

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Micro-Cel<sup>™</sup> is a trademark of Manville Sales Corporation.

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Paarlan® is a trademark of DowElanco.

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Uni-Mix<sup>™</sup> is a trademark of Thompson-Hayward Chemical Company.