



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

September 29, 2023

Oscar Perez Ovilla  
Regulatory Affairs Manager  
AMVAC Chemical Corporation  
4695 MacArthur Court, Suite 1200  
Newport Beach, CA 92660

Subject: Label Amendment to Apply Pre-Registration Review Mitigations to Applicable Tribufos Products  
Product Name: DEF 6 Emulsifiable Defoliant  
EPA Registration Number: 5481-9023  
Application Date: 07/10/2023  
Decision Number: 594475

Dear Mr. Ovilla,

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6.

If you have any questions about this letter, please contact Anna Romanovsky via email at [romanovsky.anna@epa.gov](mailto:romanovsky.anna@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kelly Sherman", with a long horizontal flourish extending to the right.

Kelly Sherman, Chief  
Risk Management and Implementation Branch 3  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

Enclosure

Sep 29, 2023

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 5481-9023

# DEF 6 Emulsifiable Defoliant

VERY LOW ODOR-FOR FAST AND EFFECTIVE COTTON DEFOLIATION

**ACTIVE INGREDIENT:**

S, S, S-Tributyl phosphorotrithioate\* ..... 70.5%

**INERT INGREDIENTS**..... 29.5%

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

\*Contains 6 pounds per U.S. gallon.  
Contains Petroleum Distillates.

**KEEP OUT OF REACH OF CHILDREN**

**DANGER PELIGRO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail.)

<b>FIRST AID</b> <b>Organophosphate</b>	
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Immediately call a poison control center or doctor for treatment advice.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give any liquid to person.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>EMERGENCY INFORMATION</b>	
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	
<b>NOTE TO PHYSICIAN</b>	
This product is corrosive to eyes or skin. This product inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system and the somatic motor nerves. Poisoning with this product also results in cardiovascular and respiratory symptoms which must be treated as separate pathological entities apart from the cholinergic effects. Administer atropine sulfate to reverse cholinergic symptoms; and maintain a systematic, symptomatic treatment of the cardio-vascular and respiratory effects, even though the cholinergic symptoms have ceased. Do not give central nervous system depressants. Watch for pulmonary edema, which may develop in serious cases of poisoning even after 12 hours. The use of oxygen is recommended in case of respiratory distress. Contains petroleum distillate – vomiting may cause aspiration pneumonia. Probable mucosal damage may contraindicate the use of gastric lavage.	

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

EPA Reg. No. 5481-9023  
EPA Est. No.

Net Contents:  
As Marked on Container



AMVAC Chemical Corporation  
4695 MacArthur Court, Suite 1200  
Newport Beach, CA 92660 U.S.A.  
1-888-462-6822

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## PRECAUTIONARY STATEMENTS

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### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER:** Corrosive. Causes irreversible eye damage and skin burns. Harmful if swallowed or inhaled. Do not get in eyes, on skin or on clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Some materials that are chemical-resistant to this product are listed below.

Applicators and other handlers must wear:

- Protective eyewear, chemical goggles or faceshield
- Chemical-resistant headgear for overhead exposure
- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves, made of waterproof materials, including barrier laminate, Viton<sup>®</sup>, butyl rubber  $\geq 14$  mils, or nitrile rubber  $\geq 14$  mils
- Chemical-resistant footwear plus socks
- Chemical-resistant apron when cleaning equipment, mixing or loading
- For exposure in enclosed areas, a NIOSH approved half-mask or a full facepiece respirator equipped with a combination of organic vapor or P-100 particulate filter cartridge with NIOSH approval number prefix TC-23C, or a NIOSH approved gas mask equipped with a combination of organic vapor or P-100 particulate filter canister with NIOSH approval number prefix TC-14G.
- For exposure outdoors, wear a minimum of a NIOSH-approved particulate filtering face-piece respirator with any N, R, or P filter; or a NIOSH-approved elastomeric particulate respirator with any N, R, or P filter; or a NIOSH- approved powered air-purifying respirator with a HE filter.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this products' concentrate. Do not reuse them. 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.

### ENGINEERING CONTROL STATEMENTS

- 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 170.607(d-f)], the handler PPE requirements may be reduced or modified as specified in the WPS.
- 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 170.607(d)] for providing dermal 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. per disconnect point. In addition to wearing the specified PPE, all handlers of this product must wear chemical-resistant gloves and a chemical-resistant apron.
- Persons using a closed system that operates under pressure shall wear protective eyewear.
- Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

### USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing immediately if pesticide gets inside. Then wash body 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 and invertebrates. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply when weather conditions favor drift from the treated area. Do not contaminate water when disposing of equipment washwaters or rinsate. Apply this product only as specified on this label.

## PHYSICAL AND CHEMICAL HAZARDS

Do not use or store near heat or open flame.

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## DIRECTIONS FOR USE

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Read entire label before using this product.

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.

## RESTRICTIONS

- Do not apply DEF 6 EMULSIFIABLE DEFOLIANT through any type of irrigation system.
- Do not graze treated fields.
- Do not use on other crops used for food or forage.
- Cotton treated with this product must be mechanically harvested.
- Hand harvesting is prohibited.

## PRECAUTIONS

Avoid spray drift to susceptible plants other than cotton as this product may injure or defoliate other crops. (Coarse sprays are less likely to drift.)

### 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, 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 7 days for fields treated at application rates at or below 0.75 lb ai/A (16 fl oz/A), or 10 days for fields treated at application rates above 0.75 lb ai/A.

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, including plants, soil, or water, is:

- Protective eyewear
- Chemical-resistant headgear for overhead exposure
- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves, made of waterproof materials, including barrier laminate, viton, butyl rubber  $\geq 14$  mils, or nitrile rubber  $\geq 14$  mils or neoprene rubber  $\geq 14$  mils
- Chemical resistant footwear plus socks

## PRODUCT INFORMATION

DEF 6 EMULSIFIABLE DEFOLIANT is a cotton defoliant that is used to remove leaves from cotton plants prior to anticipated harvesting. Formulated as an emulsifiable concentrate, DEF 6 EMULSIFIABLE DEFOLIANT contains 6 pounds active ingredient per gallon. DEF 6 EMULSIFIABLE DEFOLIANT is most commonly mixed with water and applied to cotton using either ground or aerial equipment. However, diesel oil may be substituted for water under adverse weather conditions. DEF 6 EMULSIFIABLE DEFOLIANT is non-corrosive and will not damage metal parts normally used in applying spray chemicals.

DEF 6 EMULSIFIABLE DEFOLIANT usually drops leaves in a green condition and will not appear effective until defoliation actually begins, approximately 3 days after application. By this time, the field will have an "off-cast" color. Under favorable conditions, satisfactory leaf drop will require 5 to 7 days. Adverse conditions, including low temperatures and/or toughened plants (drought stressed, etc.) may

extend this to 10 to 14 days.

DEF 6 EMULSIFIABLE DEFOLIANT is effective when applied to cotton with a heavy dew. Once DEF 6 EMULSIFIABLE DEFOLIANT has dried on the leaf, subsequent rainfall or dew does not adversely affect its activity. Application of DEF 6 EMULSIFIABLE DEFOLIANT is not recommended when a heavy rainfall is expected within 1 hour after treatment. Conditions which delay absorption into the leaves are primarily those which cause the cotton leaves to be wilted, toughened, or leathery. When these conditions prevail, use diesel oil instead of water.

DEF 6 EMULSIFIABLE DEFOLIANT does not suppress second growth especially where rainfall follows defoliation. A second application of DEF 6 EMULSIFIABLE DEFOLIANT will be effective in defoliation of this second growth if excessive regrowth occurs between the first application and first and/or second harvest. DEF 6 EMULSIFIABLE DEFOLIANT must be applied in sufficient water or diesel oil to give thorough coverage of the leaves. Larger droplets more effectively reach the lower leaves. Use the higher DEF 6 EMULSIFIABLE DEFOLIANT rate under conditions of low temperature, low humidity, or plant stress.

DEF 6 EMULSIFIABLE DEFOLIANT may be used alone for bottom defoliation of the leaves on lower portion of the plant as a preconditioner prior to total defoliation, or as a total defoliation treatment. DEF 6 EMULSIFIABLE DEFOLIANT may also be used in combination with thidiazuron (tank mix).

**IMPORTANT:** Observe all cautions and limitations on labels of all products used in mixtures specifically when DEF 6 EMULSIFIABLE DEFOLIANT is tank mixed with products for use on cotton in areas where citrus is grown. Observe buffer zones and other restrictions on the DEF 6 EMULSIFIABLE DEFOLIANT label and/or in the manufacturer's directions for Folex 6 EC.

## MIXING INSTRUCTIONS

Mixing and loading must be done with engineering controls (closed system).

**DEF 6 EMULSIFIABLE DEFOLIANT ALONE:** Fill the spray tank  $\frac{1}{2}$  to  $\frac{3}{4}$  full with clean water. Begin agitation and add the specified amount of DEF 6 EMULSIFIABLE DEFOLIANT. Add water to the spray tank to the desired level. Maintain sufficient agitation to ensure a uniform spray mixture during application. Follow same mixing instructions when diesel oil is substituted for water.

**TANK MIXTURES:** Fill the spray tank  $\frac{1}{2}$  to  $\frac{3}{4}$  full with clean water and begin agitation. When tank mixing with thidiazuron, add the specified amount of thidiazuron first. After thidiazuron is thoroughly mixed with water, add the specified amount of DEF 6 EMULSIFIABLE DEFOLIANT. Add water to the spray tank to the desired level. Maintain sufficient agitation while mixing and during application to ensure a uniform spray mixture. If spray mixture is allowed to remain without agitation for short periods of time, be sure to agitate until uniformly mixed before application. Do not use diesel oil when DEF 6 EMULSIFIABLE DEFOLIANT is used in a tank mixture with other products. For boll opening and defoliation, see below.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tankmixture.

**COMPATIBILITY:** To determine the compatibility of DEF 6 EMULSIFIABLE DEFOLIANT with other products, do the following: (1) pour the directed proportions of the products into a suitable container of water, (2) mix thoroughly and (3) allow to stand at least five minutes. If the combination remains mixed or can be re-mixed readily, it is considered physically compatible. For further information contact your local AMVAC Representative.

**ADDITION OF ADJUVANTS:** To improve spray coverage, DEF 6 EMULSIFIABLE DEFOLIANT may be applied with the following adjuvants: (1) commercial blends of vegetable or petroleum-based oils, (2) non-ionic surfactant and (3) diesel oil (if allowed by local regulations). Diesel oil (3 to 5 gallons by air or 5 to 10 gallons by ground) may be helpful when night temperatures drop below 60°F, plants are under moisture stress or on storm-proof cotton varieties.

Only adjuvants which are exempt from tolerance requirements under 40 CFR 180.1001 may be used. Test the compatibility of DEF 6 EMULSIFIABLE DEFOLIANT plus thidiazuron with the selected adjuvant prior to mixing in the spray tank (see compatibility section).

**DOSAGE:** Use the specified dosage of DEF 6 EMULSIFIABLE DEFOLIANT in water or once refined vegetable oil (see Single Application Rate Range Table) or diesel (see ADDITIONS OF ADJUVANTS). Apply sufficient spray to ensure uniform leaf wetting. All leaves must be treated for complete defoliation. DEF 6 EMULSIFIABLE DEFOLIANT does not suppress secondary growth.

### **SPRAY EQUIPMENT CLEANING AND DECONTAMINATION**

Do not allow pesticide mixtures to dry in spray equipment. Dried pesticides residues may become resuspended and damage other crops if uncleaned spray equipment is used to apply other products during the same or following year.

Thoroughly clean the spray equipment with a chemical cleaner before using for other products. Use a cleaning solution with a commercial detergent or sprayer cleaner or ammonia prepared according to the manufacturer's directions. If chlorate type chemicals have been used in the same spray equipment, thoroughly wash spray tank and particularly dried deposits on aircraft fabric.

Immediately after applying DEF 6 EMULSIFIABLE DEFOLIANT, remove all unused spray mixture and follow directions on this label for disposal. Thoroughly clean the spray tank, lines, nozzles, and exterior surfaces of spray equipment. Use one of the cleaners listed above. Follow directions on this label for disposal of wash and rinse water.

### **APPLICATION PROCEDURES**

Do not apply DEF 6 EMULSIFIABLE DEFOLIANT through any type of irrigation system.

DEF 6 EMULSIFIABLE DEFOLIANT alone and in a tank mixture with thidiazuron can be applied by both ground and aerial equipment.

### **GROUND APPLICATION**

Applicators must select nozzle and pressure that deliver medium or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE S572).

Do not release spray at a height greater than 4 feet above the ground or crop canopy. Do not apply within 25 feet of residential areas with a low boom (up to 2 feet above the ground or crop canopy).

Do not apply within 50 feet of residential areas with a high boom release height (up to 4 feet above the ground or crop canopy).

A minimum spray volume of 10 gallons per acre is directed when DEF 6 EMULSIFIABLE DEFOLIANT is applied with water and a minimum of 5 gallons per acre is directed when DEF 6 EMULSIFIABLE DEFOLIANT is applied with diesel oil.

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

For ground rig applications, apply product no more than 4 feet above the ground or the crop canopy and only when wind speed is 10 mph or less at the application site as measured by an anemometer.

### **AERIAL APPLICATION**

Applicators must select nozzle and pressure that deliver medium or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 641 (ASABE S641).

If the windspeed is 10 miles per hour or less, applicators must use ½ swath displacement upwind at the downwind edge of the field. The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.

Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.

Do not apply within 200 feet of residential areas.

Use a minimum spray volume of 5 gallons per acre when DEF 6 EMULSIFIABLE DEFOLIANT and tank mixtures with DEF 6 EMULSIFIABLE DEFOLIANT are applied with water. DEF 6 EMULSIFIABLE DEFOLIANT alone may be applied in a minimum of 3 gallons of spray volume per acre when using diesel oil (minimum of 5 GPA in California).

Aerial applicators must be in enclosed cockpits.

Mixers, loaders, and applicators must limit the amount handled per person to 100 gallons of product per day.

**Aerial Drift Reduction Advisory:** Avoiding spray drift at the application site is the responsibility of the applicator. The interactions of many equipment- and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

## **MANDATORY SPRAY DRIFT MANAGEMENT**

### **Aerial Applications:**

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy, unless a greater application height is necessary for pilot safety.
- Applicators must select nozzle and pressure that deliver medium or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 641 (ASABE S641). If the windspeed is 10 miles per hour or less, applicators must use ½ swath displacement upwind at the downwind edge of the field.
- Do not apply when wind speeds exceed 10 miles per hour at the application site.
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Do not apply during temperature inversions.
- Do not apply within 200 feet of residential areas.

### **Ground Boom Applications:**

- Do not release spray at a height greater than 4 feet above the ground or crop canopy.
- Applicators must select nozzle and pressure that deliver medium or coarser droplets in accordance with American Society of Agricultural & Biological Engineers Standard 572 (ASABE S572).
- Do not apply when wind speeds exceed 10 mph at the application site.
- Do not apply during temperature inversions.
- Do not apply within 25 feet of residential areas with a low boom (up to 2 feet above the ground or crop canopy).
- Do not apply within 50 feet of residential areas with a high boom release height (up to 4 feet above the ground or crop canopy).

## **SPRAY DRIFT ADVISORIES**

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT.

Be aware of nearby non-target sites and environmental conditions.

## **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

### **Controlling Droplet Size – Ground Boom**

- Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.
- Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

### **Controlling Droplet Size – Aircraft**

- Adjust Nozzles - Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

## **BOOM HEIGHT – Ground Boom**

For ground equipment, the boom should remain level with the crop and have minimal bounce.

## **RELEASE HEIGHT - Aircraft**

Higher release heights increase the potential for spray drift.

## **SHIELDED SPRAYERS**

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

## **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

## **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a



concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

#### WIND

Drift potential generally increases with wind speed. Drift potential is lowest between wind speeds of 2-10 mph. However, many factors including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

#### DEF 6 EMULSIFIABLE DEFOLIANT SINGLE APPLICATION RATE RANGE

Rate fl oz/A		Directions
Air	Ground	
4-16 (0.188-0.750 lb ai/A)	4-24 (0.188-1.125 lb ai/A)	<p>Application rates and timing are determined on a field-by-field basis depending on crop size, maturity, environmental conditions, and overall defoliation program. <b>Consult your AMVAC sales representative, crop consultant or university extension for local recommendations.</b></p> <p><b>Bottom Defoliation:</b> For Ground application Only: Apply when bottom bolls are mature or when youngest bolls cannot be dented by pressure between the thumb and the forefinger or cut through with a sharp knife. Direct spray to thoroughly cover the leaves on the desired portion of plants to be defoliated. For Bottom Defoliation of Seed Cotton, see below.</p> <p><b>Bottom Defoliation of Seed Cotton:</b> Losses from rot and weathering can be reduced by using DEF 6 EMULSIFIABLE DEFOLIANT to increase air movement and sunlight to bottom bolls. Use shielded drop nozzles to direct spray to the lower leaves. Remove the picker's top 8 to 12 rows of spindles to harvest the lower bolls. The picker will not injure the untreated top leaves and immature bolls. DEF 6 EMULSIFIABLE DEFOLIANT may be applied for complete defoliation when top bolls are mature.</p> <p><b>Complete Defoliation:</b> Apply when fiber quality of top bolls will not be damaged by loss of top leaves, or when top bolls are firm to thumb pressure. Application can be made up until first frost.</p> <p><b>Defoliation of Rank Cotton:</b> Apply when 50% or more of the bolls are open. Treatment can consist of two applications (example: tank mix) but the total cannot exceed 2 ½ pints/A per year (40 fl oz/A per year). Applications can be made until first frost.</p> <p><b>Long Staple (Pima) Cotton Defoliation:</b> Apply specified dosage as a tank mix with 0.2 to 0.4 lb. thidiazuron per acre. For best results, apply the combination to mature cotton plants with 60% or more open bolls.</p> <p>Recommended spray volume (gallons per acre): 10 gallons for aerial application and 5 gallons for ground application.</p>

Note: The maximum single application rate of DEF 6 EMULSIFIABLE DEFOLIANT for aerial application is 16 fl oz/A (0.750 lb ai/A), and for ground application is 24 fl oz/A (1.125 lb ai/A).

#### TANK MIXTURES AND SEQUENTIAL APPLICATIONS

DEF 6 EMULSIFIABLE DEFOLIANT can be tank mixed with other harvest-aid products or used sequentially to improve crop preparation for more efficient harvest. Use caution in selecting partner products, rates and application timing appropriate for your conditions. Consult your AMVAC sales representative, crop consultant or university extension for local recommendations. In some instances rates as low as 0.25 pints/A of DEF 6 EMULSIFIABLE DEFOLIANT when combined with a second harvest-aid product may be advisable for desired defoliation and or boll opening while avoiding unwanted leaf stick.

Sequential applications may be made 7 days after the initial application when using 16 fl oz or less of DEF 6 EMULSIFIABLE DEFOLIANT

and 10 days after the initial application when using rates of DEF 6 EMULSIFIABLE DEFOLIANT greater than 16 fl oz/A.

### DEFOLIATION AND BOLL OPENING

The combination of DEF 6 EMULSIFIABLE DEFOLIANT and ethephon is used for total plant defoliation and to accelerate cotton boll opening. DEF 6 EMULSIFIABLE DEFOLIANT and ethephon may be applied as a tank mixture or used in 2 separate sequential applications. Tank mixture of DEF 6 EMULSIFIABLE DEFOLIANT + ethephon is directed for use in all cotton growing states as is applications of DEF 6 EMULSIFIABLE DEFOLIANT sequential to ethephon . Apply DEF 6 EMULSIFIABLE DEFOLIANT + ethephon tank mixtures or sequential applications to cotton when there is sufficient mature unopened bolls to produce the desired yield and when 30% to 60% of the cotton bolls are open. If used in rank cotton, a pretreatment with DEF 6 EMULSIFIABLE DEFOLIANT (see Single Application Rate Range Table) may be useful to ensure thorough coverage of unopened bolls by later sequential application of ethephon. Refer to and observe all label use directions and precautions on the ethephon label. Occasionally slight reduction on boll opening response has been observed when tank mixtures of DEF 6 EMULSIFIABLE DEFOLIANT + ethephon have been used.

It is the pesticide user’s responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tankmixture.

### DEFOLIATION AND INHIBITION OF REGROWTH

A tank mixture of defoliant with two modes of action (e.g. DEF 6 EMULSIFIABLE DEFOLIANT and thidiazuron) is recommended for defoliation when heavy regrowth control is required. Defoliation and inhibition of regrowth is obtained when the tank mixture is applied to mature cotton plants when 60% or more bolls are open. A second application of labeled rates of DEF 6 EMULSIFIABLE DEFOLIANT + thidiazuron, or DEF 6 EMULSIFIABLE DEFOLIANT alone may be made where necessary.

Product	Rate fl oz/A		Directions
	Air	Ground	
DEF 6 EMULSIFIABLE DEFOLIANT	4-16 (0.188-0.750 lb ai/A)	4-24 (0.188-1.125 lb ai/A)	Application rates and timing are determined on a field-by-field basis depending on crop size, maturity, environmental conditions, and overall defoliation program. Consult your AMVAC sales representative, crop consultant or university extension for local recommendations.
thidiazuron (4lbs ai/gal)	1.6 (0.05 lb ai/A)	6.4 (0.20 lb ai/A)	

Note: The maximum single application rate of DEF 6 EMULSIFIABLE DEFOLIANT for aerial application is 16 fl oz/A (0.750 lb ai/A), and for ground application is 24 fl oz/A (1.125 lb ai/A).

#### Use Limitations

- Tank mix activity is maximum when 60% or more bolls are open and the mean 24-hour temperature before and after application is above 60°F.
- Use the lower rate of each product when conditions are favorable, for example, high temperatures and high humidity.
- Use the high rate of thidiazuron when environmental conditions favor heavy regrowth. When minimum night temperature is below 60°F use DEF 6 EMULSIFIABLE DEFOLIANT alone.
- Adverse conditions may require a longer time for complete defoliation or a second application.
- Refer to ethephon and thidiazuron labels for additional use directions and precautions when using tank mixtures of DEF 6 EMULSIFIABLE DEFOLIANT.
- Do not exceed 2 ½ pints/Acre/Year of DEF 6 EMULSIFIABLE DEFOLIANT for California and Arizona, and 1 ½ pints/Acre/Year for all other states.
- Do not apply DEF 6 EMULSIFIABLE DEFOLIANT plus thidiazuron to immature cotton (less than 60% bolls open), as desiccation and leaf freezing may occur.
- REI is 7 days after applications of 16 fl oz/A or less per application (0.75 lb ai/A).
- REI is 10 days after applications of 16 fl oz/A or greater per application (0.75 lb ai/A).

### DEFOLIATION AND WEED CONTROL

**DEF 6 EMULSIFIABLE DEFOLIANT + PPO HERBICIDES:** For additional desiccation of certain weed species, DEF 6 EMULSIFIABLE DEFOLIANT may be tank mixed at labeled rates with PPO herbicides that are registered for use in cotton defoliation.

**DEF 6 EMULSIFIABLE DEFOLIANT + GLYPHOSATE:** In States permitted by the glyphosate label, the full labeled rate of DEF 6 EMULSIFIABLE DEFOLIANT (16-24 oz/A) can be tank mixed with glyphosate to obtain defoliation, regrowth inhibition and to provide additional weed control to better facilitate harvesting. Refer to the glyphosate label for use directions, regrowth inhibition statement, and weeds controlled.

Always follow the mixing directions found on this label, tank mix product labels and spray adjuvant product labels. Contact your local AMVAC representative for additional information or call 1-888-GO-AMVAC.

### STORAGE AND DISPOSAL

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

**STORAGE:** Do not store near fertilizers, seeds, insecticides, fungicides, feed or foodstuffs. Store in a cool, dry place away from open flame and extreme heat. Store in original container and out of reach of children, preferably in a locked storage area.

**PESTICIDE DISPOSAL:** Do not contaminate water, food or feed by storage or disposal. Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate 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:** Nonrefillable container. Do not reuse or refill. Triple rinse (or equivalent) 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 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local procedures. If container is leaking, invert to prevent leakage. Carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements for hazards associated with the handling of this product. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides above. In spill or leak incidents, keep unauthorized persons away.

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### LIMITED WARRANTY AND DISCLAIMER

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The Manufacturer warrants (a) that this product conforms to the specifications on this label; and (b) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests for effectiveness. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE. Product storage, use and growing conditions are beyond Manufacturer's control.

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