

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

September 21, 2018

Christopher Davis Registration Manager AMVAC Chemical Corporation 4695 MacArthur Court, Suite 1200 Newport Beach, CA 92660

Subject: Label Amendment – Making several minor label changes Product Name: DEF 6 Emulsifiable Defoliant EPA Registration Number: 5481-9023 Application Date: 2/21/2018 Decision Number: 538735

Dear Mr Davis:

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 previously 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 18 months from the date of this letter. After 18 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.

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

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with FIFRA section 6. If you have any questions, please contact Nathan Mellor by phone at 703-347-8562, or via email at <u>mellor.nathan@epa.gov</u>.

Shaga Blogner

Shaja B. Joyner, Product Manager 20 Fungicide-Herbicide Branch Registration Division 7505P

Enclosure

# **DEF 6 Emulsifiable Defoliant**

VERY LOW ODOR-FOR FAST AND EFFECTIVE COTTON DEFOLIATION

# **ACTIVE INGREDIENT:**

S, S, S-Tributyl phosphorotrithioate*	
INERT INGREDIENTS:	
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.)

	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.				
If on skin or clothing:	<ul> <li>Call a poison control center or doctor for treatment advice.</li> <li>Take off contaminated clothing.</li> </ul>				
If on skin or clotning:					
	<ul> <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>				
If swallowed:	<ul> <li>Can a poison control center or doctor for treatment advice.</li> <li>Immediately call a poison control center or doctor for treatment advice.</li> </ul>				
II Swanoweu.	<ul> <li>Do not induce vomiting unless told to do so by a poison control center or doctor.</li> </ul>				
	<ul> <li>Do not give any liquid to person.</li> </ul>				
	<ul> <li>Do not give any inquite to person.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>				
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.				
	EMERGENCY INFORMATION				
Have the product contain	Have the product container or label with you when calling a poison control center or doctor, or going for treatment.				
	EMERGENCIES, PHONE 24 HOURS A DAY:				
For Medical Emergencies	phone:				
For Transportation Emerg	encies, including spill, leak or fire, phone: CHEMTREC <sup>®</sup> 1-800-424-9300				
For Product Use Information phone: AMVAC <sup>®</sup> 1-888-462-6822					
	NOTE TO PHYSICIAN				
	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					
	and respiratory symptoms which must be treated as separate pathological entities apart from				
	Administer atropine sulfate to reverse cholinergic symptoms; and maintain a systematic,				
	f the cardio-vascular and respiratory effects, even though the cholinergic symptoms have				
	ral nervous system depressants. Watch for pulmonary edema, which may develop in serious				
	after 12 hours. The use of oxygen is recommended in case of respiratory distress. Contains				
	iting 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 4100 E. Washington Blvd. Los Angeles, CA 90023 U.S.A. 1-888-462-6822

# PRECAUTIONARY STATEMENTS

# 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 face shield
- 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 ≥14 mils, or nitrile rubber ≥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 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.
- Mixers and loaders supporting aerial applications 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 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 what 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.

# **DIRECTIONS FOR USE**

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.

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 ≥14 mils, or nitrile rubber ≥14 mils or neoprene rubber ≥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. FOLEX 6E 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 Dropp<sup>®</sup> (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.

## MIXING INSTRUCTIONS

DEF 6 EMULSIFIABLE DEFOLIANT **ALONE:** Fill the spray tank 1/2 to 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 1/2 to 3/4 full with clean water and begin agitation. When tank mixing with Dropp, add the specified amount of Dropp first. After Dropp 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 tank mixture.

**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 Dropp 50WP 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 Applications 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 Dropp can be applied by both ground and aerial equipment.

## **GROUND APPLICATION**

Use a standard high clearance sprayer that provides a uniform accurate application. Sprayer must be equipped with screens no finer than 50 mesh in the nozzle tips and in-line strainers. 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 in 10 mph or less at the application site as measured by an anemometer.

# AERIAL APPLICATION

Use aerial equipment equipped with a diaphragm-type nozzle that produces cone spray patters with a maximum spray pressure of 40 psi at the nozzle tips. Nozzles must be located no farther than 3/4 the distance from the center of the aircraft to the end of the wing or rotor. The aircraft must discharge the spray a maximum of 10 feet above the crop. Do not apply when winds may cause drift to adjacent fields.

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.

**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.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- 1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- 2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they must be observed. The applicator must be familiar with and take into account the information covered in the Aerial Drift Reduction Advisory information.

#### Information on Droplet Size

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

#### **Controlling Droplet Size**

**Volume:** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

**Pressure:** Do not exceed the nozzle manufacturer's specified pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of Nozzles: Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Orientation:** Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the directed practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

**Nozzle Type:** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

# **Boom Length**

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

# **Application Height**

Do not apply at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

# Swath Adjustment

When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase swath adjustment distance with increasing drift potential (higher wind, smaller drops, etc.)

# Wind

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. Avoid application below 2 mph due to variable wind direction and high inversion potential. NOTE: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

# **Temperature and Humidity**

When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

# **Temperature Inversions**

Do not apply during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitudes and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified 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.

# Sensitive Areas

Only apply when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).

# **DEF 6 EMULSIFIABLE DEFOLIANT DIRECTIONS**

DEF 6	Minimum Sn	ray Volumes	Directions
EMULSIFIABLE	Minimum Spray Volumes		Directions
	(Gallons per acre)		
DEFOLIANT			
Rate			
Pints/Acre/Year	Ground	Air	
1 to 1-1/2	10		<b>Bottom Defoliation</b> : 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.
CA and AZ	15	5	Complete Defoliation: Apply when fiber quality of top bolls will
1-1/3 to 2			not be damaged by loss of top leaves, or when top bolls are firm to
All other states	15	5	thumb pressure. Application can be made up until first frost.
1-1/3 to 1-1/2			
CA and AZ	15	5	Defoliation of Rank Cotton: Apply when 50% or more of the bolls
2-1/2	-	-	are open. Treatment can consist of two applications (example: tank
All other States	15	5	mix) but the total cannot exceed $2-1/2$ pints/A. Applications can be
1-1/2	15	5	made until first frost.
	1.5	E	
CA and AZ	15	5	Long Staple (Pima) Cotton Defoliation: Apply specified dosage
2 to 2-1/2			as a tank mix with 0.2 to 0.4 lb. Dropp 50WP per acre. For best
All other States	15	5	results, apply the combination to mature cotton plants with 60% or
1-1/2			more open bolls.

**BOTTOM DEFOLIATION OF SEED COTTON:** 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.

# TANK MIXTURES AND SEQUENTIAL APPLICATIONS

## **DEFOLIATION AND BOLL OPENING**

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 directions. In some instances rates as low as 0.33 pints/acre 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.

The combination of DEF 6 EMULSIFIABLE DEFOLIANT and PREP<sup>TM</sup> brand Ethephon Plant Regulator is used for total plant defoliation and to accelerate cotton boll opening. DEF 6 EMULSIFIABLE DEFOLIANT and PREP may be applied as a tank mixture or used in 2 separate sequential applications. Tank mixture of DEF 6 EMULSIFIABLE DEFOLIANT + PREP is directed for use in all cotton growing states as is applications of DEF 6 EMULSIFIABLE DEFOLIANT sequential to PREP<sup>TM</sup> (minimum of 4 days between applications). Apply DEF 6 EMULSIFIABLE DEFOLIANT + PREP 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 DEF 6 EMULSIFIABLE DEFOLIANT directions for use rate) may be useful to ensure thorough coverage of unopened bolls by later sequential application of PREP. Refer to and observe all label use directions and precautions on the PREP label. Occasionally slight reduction on boll opening response has been observed when tank mixtures of DEF 6 EMULSIFIABLE DEFOLIANT + PREP 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 tank mixture.

# **DEFOLIATION AND INHIBITION OF REGROWTH**

A tank mixture of defoliants with two modes of action (e.g. DEF 6 and a thiadiazuron product such as Dropp) 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 + Dropp, or DEF 6 EMULSIFIABLE DEFOLIANT alone maybe made where necessary.

Product	Rate	Directions
DEF 6	1 to 1-1/2 Pints/Acre	Mixing Order:
EMULSIFIABLE		(1) water
DEFOLIANT	+	(2) Dropp 50WP [follow Dropp label directions]
		(3) Adjuvant, if used and
+	0.066 to 0.1 lb./Acre	(4) After Dropp 50WP has dispersed add DEF 6 EMULSIFIABLE
		DEFOLIANT
Dropp 50WP		Apply by ground or air.

## **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 Dropp 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 Dropp label for additional use directions and precautions when using tank mixtures of DEF 6 EMULSIFIABLE DEFOLIANT with Dropp.

# Restrictions

- Do not exceed 2-1/2 pints/Acre/Year of DEF 6 EMULSIFIABLE DEFOLIANT for California and Arizona, and 1-1/2 pints/Acre/Year for all other states.
- Do not apply DEF 6 EMULSIFIABLE DEFOLIANT plus Dropp 50WP to immature cotton (less than 60% bolls open), as desiccation and leaf freezing may occur.
- Do not apply DEF 6 EMULSIFIABLE DEFOLIANT within 7 days of harvest.

# **DEFOLIATION AND WEED CONTROL**

**DEF 6 EMULSIFIABLE DEFOLIANT + HARVADE®:** For additional desiccation of certain weed species, DEF 6 EMULSIFIABLE DEFOLIANT may be tank mixed at labeled rates with Harvade according to the directions for use on the Harvade label.

**DEF 6 EMULSIFIABLE DEFOLIANT + ROUNDUP**<sup>®</sup>: In States permitted by the Roundup label, the full labeled rate of DEF 6 EMULSIFIABLE DEFOLIANT (1 to 1-1/2 pints/A) can be tank mixed with Roundup to obtain defoliation, regrowth inhibition and to provide additional weed control to better facilitate harvesting. Refer to the Roundup 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.

# LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; and (b) 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. THIS WARRANTY DOES NOT EXTEND TO THE USE OF THIS PRODUCT CONTRARY TO LABEL INSTRUCTIONS, OR UNDER CONDITIONS NOT REASONABLY FORESEEABLE.

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AMVAC Chemical Corporation 4100 E. Washington Blvd. Los Angeles, CA 90023 U.S.A. 1-888-462-6822