

Reg # 264-418  
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# PREP™ BRAND ETHEPHON FOR COTTON AND TOBACCO

For Commercial Use Or Agricultural Use Only. Not For Residential Use

ACTIVE INGREDIENT: Ethephon (2-Chloroethyl) phosphonic acid\* ..... 55.4%  
INERT INGREDIENTS: ..... 44.6%

\*This product contains 6 pounds ethephon per gallon.

EPA Reg. No. 264-418

EPA Est. No. 264-PA-01

## 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.)

For **MEDICAL** And **TRANSPORTATION** Emergencies **ONLY** Call 24 Hours A Day 1-800-334-7577  
For **PRODUCT USE** Information Call 1-800-334-9745

The use of this product for a variety of plant growth regulation uses are protected by United States and foreign patents including U.S. Patents 38,791,188 and 4,240,819. No license is granted to use this product in countries other than the United States or for any use not contemplated by this label. Liability for patent infringement may result from use or sale of this product outside the United States.

### STATEMENT OF PRACTICAL TREATMENT

**IF IN EYES:** Hold eyelids open and flush with a gentle stream of water for at least 15 minutes. Get medical attention, preferably an ophthalmologist.

**IF ON SKIN:** Immediately wash skin with plenty of soap and water.

**IF SWALLOWED:** Do not induce vomiting. Promptly drink a large quantity of milk, egg whites, gelatin solution or if these are not available, drink large quantities of water. Avoid alcohol. Call a physician immediately.

**IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration. Administer oxygen if necessary. Get medical attention.

### PRECAUTIONARY STATEMENTS

#### DANGER HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**CORROSIVE.** Causes eye and skin damage. May be fatal if absorbed through skin. Harmful if swallowed or inhaled. Avoid breathing spray mist. Do not get in eyes, on skin or on clothing. Keep away from domestic animals.

#### NOTE TO PHYSICIAN

There is no specific antidote. All treatment should be based on observed signs and symptoms of distress in the patient. Overexposure to materials other than this product may have occurred.

Victims of severe overexposure, by inhalation, should be kept under medical observation for up to 72 hours for delayed onset of pulmonary edema. In a victim of over-exposure by ingestion, careful gastric lavage is required due to the possibility of stomach or esophageal perforation. This material is an acid, but use of alkaline substances to neutralize it is contraindicated.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear coveralls over short-sleeved shirts and short pants, waterproof gloves, chemical-resistant footwear plus socks, protective eyewear, chemical-resistant headgear for overhead exposure and chemical-resistant apron when cleaning equipment or mixing and loading.

Discard clothing and other absorbed materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables, 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 body thoroughly and put on clean clothing.

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## 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.

Do not contaminate water used for irrigation or domestic purposes.

## USE PRECAUTIONS

Do not apply PREP™ brand Ethephon through any type of irrigation system.

Avoid spray drift to nearby crops as this product will cause modifications in plant growth. Plant injury or reduced yields will result.

Do not plant another crop within 30 days after treatment.

Mix only the amount of spray you expect to use each day. Do not allow mixed solution to stand overnight.

## DIRECTIONS FOR USE

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

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 regulations.

## AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated such as plants, soil or water is coveralls over short-sleeved shirt and short pants, waterproof gloves, chemical-resistant footwear plus socks, protective eyewear and chemical-resistant headgear for overhead exposure.

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

## STORAGE AND DISPOSAL

### STORAGE

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

If container is broken or contents have spilled, follow all precautions indicated above and clean up immediately. Before cleaning up, put on full length trousers, long sleeved shirt, protective gloves, and goggles or face shield. Soak up spill with absorbent media such as sand, earth or other suitable material and dispose of waste at an approved waste disposal facility.

### PESTICIDE DISPOSAL

Pesticide wastes are acutely hazardous. 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

Triple rinse (or equivalent) the empty containers. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by incineration or if allowed by state and local authorities, by burning. If container is burned, stay out of smoke.

### RETURNABLE -- REFILLABLE CONTAINERS

After use, return the container to the point of purchase or designated locations. This container must only be refilled with PREP™ brand Ethephon for Cotton and Tobacco. **DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE.** Prior to refilling, inspect thoroughly for damage such as cracks, punctures, abrasions and damaged or worn out threads on closure device. Do not refill or transport damaged or leaking containers. Check for leaks after refilling and before transportation. For information on the disposal of unused, unwanted product, contact Rhône-Poulenc at 1-800-334-9745. For information on cleanup of spills, contact Rhône-Poulenc at 1-800-334-7577. If the container is not being refilled, return it to the point of purchase.

## GENERAL INFORMATION

### COTTON

A foliar spray of PREP™ brand Ethephon will accelerate opening of mature unopened cotton bolls and enhance defoliation which can result in earlier harvest with an increased recoverable yield. PREP™ brand Ethephon treatment on cotton allows increased efficiency from a once-over harvest.

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**TOBACCO (FLUE-CURED):** A foliar spray of PREP™ brand Ethephon promotes early, uniform "yellowing" of mature tobacco. PREP™ reduces curing time, allowing more efficient use of curing barn space, and increased control over harvest schedules.

**SPRAY PREPARATION**

Add 1/2 to 3/4 of the required amount of water to the spray tank. Start agitation. Add the required amount of PREP™ brand Ethephon, and the remaining amount of water. Prepare only as much spray solution as can be used on the day of mixing. Do not allow spray solution to stand overnight. Do not spill the concentrated product on spray equipment, or any airplane parts.

**ANY SPILLS SHOULD BE RINSED IMMEDIATELY WITH PLENTY OF WATER.**

Use of a nurse tank is highly recommended for avoiding possible spills of concentrated formulation on spray equipment or any airplane parts.

**TANK MIXTURES WITH DEFOLIANTS AND INSECTICIDES**

PREP™ brand Ethephon is compatible with DEF<sup>1</sup>, FOLEX®, Dropp<sup>2</sup>, Harvade<sup>3</sup>, Methyl Parathion, Guthion<sup>1</sup>, and Malathion<sup>4</sup>. PREP™ may be applied in sequence or as a tank mixture (DO NOT TANK MIX WITH DESICCANTS IF COTTON IS TO BE SPINDLE HARVESTED). Follow all applicable use precautions and rate per acre recommendations on labels of products applied as tank mixtures or in sequence with PREP™ brand Ethephon. In some cases slight reduction in boll opening response has been observed when tank mixes with defoliants were used.

Good agitation in the spray tank is essential and a tank mixture should not be allowed to stand without agitation for more than 5 to 10 minutes. Read and observe all appropriate label use directions and precautions for the defoliants and insecticides used.

**NOTE:** Under certain conditions, tank mixtures of PREP™ brand Ethephon with desiccants containing sodium chlorate could result in the formation of hypochlorous acids which on heating will emit toxic chloride fumes.

**EQUIPMENT CLEANING**

Because of the acidic nature of this product, prolonged exposure to spray deposit will damage acrylic plastics, certain paints, and metals.

Rinse thoroughly with a detergent and water all exposed acrylic plastic-type materials (e.g., aircraft windshields), and painted surfaces within an hour after exposure to spray deposits.

At the end of each day, rinse thoroughly with a detergent and water all the metal parts of the aircraft and the associated spray equipment exposed to the spray deposits.

**ACCEPTED**

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for the Federal Insecticide,  
Fungicide, and Herbicide Act.  
registered for the pesticide  
under  
EPA Reg. No. 864-H-18

**COTTON**

USE	EXPECTED CONDITIONS	PREP™ RATE		ONE GALLON PREP™ TREATS	SPRAY VOLUME (Gals/A)		APPLICATION TIMING
		Pints/A	LBS A.I.	Acres	Ground	Air**	
PREP™ Boll Opener*	Hot and dry 80°F or higher	1 1/3	1.0	6			Apply when the number of mature unopened bolls is sufficient to produce the desired crop. See below for test of boll maturity. Treatment uniformly opens bolls 7 to 14 days earlier.
	Dry and 75 to 80°F	2	1.5	4	15 - 50	2 - 5	
	Cool but above 65°F or Rank cotton	2 2/3	2.0	3			
PREP™ + FOLEX® Defoliant Tank Mix	High soil moisture or High fertility level or Rank cotton	1/3	0.25	24	15 - 50	5 - 10	Apply 4 to 7 days prior to PREP™ boll opening application. To be used as a sequential treatment with, not in place of PREP™ boll opening treatment.
PREP™+ Dropp <sup>2</sup> Defoliant Tank Mix	High soil moisture High fertility level Rank cotton	1/3	0.25	24	10 - 50	3 - 10	Apply 4 to 7 days prior to PREP™ boll opening application. To be used as a sequential treatment with, not in place of PREP™ boll opening treatment.
Pre-Conditioner for Defoliation	Hot, dry, above 80°F	2/3	0.5	12			Apply 4 to 7 days prior to defoliant. Enhances top crop defoliation reducing deterioration of bottom crop and allows for earlier harvest.
	Cool, above 65°F	1 1/3	1.0	6	15 - 50	2 - 5	
	Rank cotton						

**\*Pretreatment With Defoliants Prior to PREP™ Boll Opening Treatment**

If the cotton is overly rank or laying down in the middles and good spray coverage of the bolls with PREP™ is difficult, a pretreatment with defoliants will be useful to improve boll coverage with PREP™. Use dosage rates of PREP™ brand Ethephon recommended for boll opening. Read and observe all appropriate label use directions and precautions for the defoliant used.

\*\*In California and Arizona use a volume of no less than 5 gallons per acre for aerial applications.

**Boll Maturity**

A boll is mature when it is too hard to be dented when squeezed between thumb and fingers, too hard to be sliced with a sharp knife, and when the seed coat becomes light brown in color.

**Use Limitations**

- Do not exceed a maximum of 2.0 lb. ai/A for combined uses of PREP™ per acre per year.
- Boll Opening: Do not tank mix PREP™ brand Ethephon with a desiccant if the cotton is to be spindle harvested.
- Pre-Condition for Defoliation: Do not tank mix PREP™ with desiccants unless plant desiccation is required. Do not use a defoliant before there is sufficient mature unopened bolls to produce the desired yield (see General Information section on how to test for boll maturity).

**WHEN TO HARVEST COTTON**

Do not harvest cotton sooner than 7 days after a treatment with PREP™ brand Ethephon.

Observe the treated crop and harvest when optimum boll opening has been reached. Too early harvest might reduce the full advantage of the treatment and too late a harvest may result in reduced quality and loss of lint which will drop from the plant.

# TOBACCO (Flue-Cured Only)

Crop Situation	PREP™ Pints/Acre	Spray Volume Gallons/ Acre	Specific Directions
Directed Spray Application	1 1/3	50 - 60	Use drop nozzles. Choose TG or OC spray tips designed to apply 50 - 60 gpa at 35-40 psi and at tractor speed of 2-3 mph. Use 2 nozzles per row; one on each side of the row dropped low enough to direct the spray to the leaves to be ripened and harvested. Thorough spray coverage is essential. With a directed spray, be sure to harvest all leaves with 20% or more yellowing.
Over-The-Top Application	1 1/3 - 2 2/3	40 - 60	<p>Treat only when leaves remaining on the stalk are mature. To ensure remaining leaves are mature, test spray several tobacco plants as described under the section "Proper Time of Treatment." Use the lower rate in a normally mature crop when experience indicates that minimum ripening inducement is required. Use the higher rate when the crop is heavy and has a tendency to be more rank or when temperatures are lower than normal. Always test spray to determine if the tobacco is mature enough to respond to treatment with PREP™ brand Ethephon.</p> <p>Apply over-the-top PREP™ brand Ethephon spray as a fine mist using three nozzles (one nozzle tips over the center of the plant, and one on each side) so all leaves are covered thoroughly, similar to the application pattern of systemic sucker control agents. Use a spray pressure of 40 to 60 psi.</p>

### USE LIMITATIONS

- Do not apply PREP™ brand Ethephon to immature leaves as this can result in unsatisfactory coloring, weight loss and reduced leaf quality.
- Do not allow the crop to over ripen in the field after using PREP™ brand Ethephon, since this may cause some reduction in yield and quality.
- Do not treat before anticipated major storm which could prevent harvest and result in crop loss.
- Do not apply PREP™ brand Ethephon if rain is expected within 4 hours.

### APPLICATION TIMING

Successful results with PREP™ call for treatment when leaves are mature, not overly rank green when sprayed. To easily determine the proper treatment timing and the number of leaves per stalk ready for harvest, test spray several plants in more than one location in each field and observe the response. Mature leaves will begin to yellow in 24 to 72 hours. Test leaves that fail to yellow in 72 hours are not mature and are not ready for PREP™ brand Ethephon treatment. Wait a few days to permit further natural maturing, then make another test spray or "maturity" check.

To avoid quality loss and or possible leaf drop, harvest any yellowed leaves prior to application. Use lower rates under most conditions. Limit use of higher rates to cool (below 65F at the time of treatment) slow ripening conditions.

When you have confirmed the desired number of leaves per plant that will color, you can determine the number of acres to treat in order to fill the barn.

Prepare your test spray by mixing one teaspoon of PREP™ in 1 quart of water. Spray each test plant with about 1 oz. of this mixture, covering all leaves with a fine mist. PREP™ brand Ethephon will not color immature sprayed leaves.

### WHEN TO HARVEST

All mature, sprayed leaves will begin to color within 24 to 72 hours after PREP™ brand Ethephon application. The yellowing process is weather dependent; cool weather will delay, while hot, sunny weather can speed up the process. Harvest treated tobacco when leaves have reached the desired color intensity.

Harvest can commence 48 hours after PREP™ brand Ethephon application. To determine harvest timing and avoid quality loss or leaf drop, closely monitor treated crop and weather conditions.

### CURING PREP™ TREATED TOBACCO

Curing procedures are as much an art as a science and each cure must be judged on the basis of tobacco condition, interval between treatment and harvest, weather and type of curing facility before prescription temperature and ventilation schedules can be established. To obtain maximum quality, care must be taken to observe and control the curing process closely, especially during the late "coloring" and early "drying" stages of the leaf.

PREP™ brand Ethephon treated tobacco will have started the coloring process when harvested, reducing the time required in the coloring phase of curing. Treated tobacco should be dried faster. If tobacco leaves are green or contain some green when harvested, it may be necessary to color them for a few hours. If the leaves are completely yellow, temperature and ventilation must be adjusted in a manner to dry the tobacco as fast as possible without scalding. Once the leaf is dried (3/4 dry), you should follow normal procedures for curing. Since PREP™ brand Ethephon treated leaves cure faster, treated and untreated leaves should not be cured together in the same barn.

### LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use when it is used in accordance with such directions; and (c) that the directions, warning and other statements on this label are based upon responsible experts' evaluation of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants, and of residues on food crops and upon reports of field experience. Tests have not been made on all varieties or in all states or under all conditions. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE TO MAKE, ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.

BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. IN NO EVENT SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

#### NOTICE TO BUYER

Purchase of this product does not confer any rights under patents governing this product or the use thereof in countries outside of the United States.

<sup>1</sup>DEF and Guthion are registered trademarks of Bayer AG, Germany.

<sup>2</sup>Dropp is a registered trademark of NOR-AM Chemical Company.

<sup>3</sup>Harvade is a registered trademark of Uniroyal Company.

<sup>4</sup>Malathion is a trademark of American Cyanamid Company.

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PREP is the trademark of Rhône-Poulenc.

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