

# LEAF-ALL

**Sodium Cacodylate and Cacodylic Acid Liquid Plus Surfactant  
Cotton Defoliant and/or aid in preharvest defoliation**

**ACTIVE INGREDIENT:**

Sodium Cacodylate . . . . . 27.4%  
Dimethylarsenic Acid (Cacodylic Acid) . . . . . 4.7%

**INERT INGREDIENTS:**

. . . . . 67.9%

**TOTAL:** . . . . . 100.00%

Total arsenic (as elemental), all in water soluble form . . . . . 15.4%

Product contains 3.1 lbs Cacodylic Acid equivalent per gallon

**Keep Out of Reach of Children**

## CAUTION

### STATEMENT OF PRACTICAL TREATMENT

**IF SWALLOWED:** Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

**IF IN EYES:** Immediately flush eyes with plenty of water and get medical attention.

**IF ON SKIN:** Immediately wash skin with plenty of soap and water. If irritation develops, seek medical attention.

**IF INHALED:** Remove victim to fresh air.

**SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS**

FOR CHEMICAL SPILL, LEAK, FIRE OR  
EXPOSURE CALL TOLL FREE:  
**1-800-424-9300**

**AGRICULTURAL CHEMICAL**  
DO NOT SHIP OR STORE WITH FOODS, FEEDS,  
DRUGS OR CLOTHING

EPA Reg. No. 42519-10

EPA Est. No. 42519-ISR-1

**Net contents: 2.5 Gallons**



Manufactured for:  
**LUXEMBOURG-PAMOL, INC.**  
5100 Poplar Avenue, Suite 2746  
Memphis, Tennessee 38137, U.S.A

**ACCEPTED**  
NOV 30 1998  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under  
EPA Reg. No. 42519-10

42519-10

PM 25

42519-10

11/30/98

PM 123

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation. Do not apply this product through any type of irrigation system. Do not feed treated foliage to livestock or graze treated areas. Do not apply this product in a way that will contact workers or other persons, either directly or through spray drift. Only protected handlers may be in the area during application.

#### 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 in farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard. Do not enter or allow worker entry into treated areas during restricted entry interval (REI) of 12 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
- waterproof gloves
- protective eyewear
- shoes and socks
- chemical resistant headgear for overhead exposure

#### STORAGE AND DISPOSAL

**STORAGE:** Do not contaminate water, food, or feed by storage or disposal. Open dumping is prohibited. Avoid contamination of fertilizers, seeds, insecticides, or fungicides in storage. Do not store near heat or open flame. Freezing point of this product is approximately -5°F. If stored below freezing point, warm to 50°F and agitate thoroughly before using. Containers should not be stacked more than six (6) high. Reclose all partially used containers by thoroughly tightening screw cap. Damaged or leaking containers which cannot be used immediately should be transferred to suitable sound containers and properly marked. Absorb any spills with a suitable clay absorbent and dispose of as indicated under "Pesticide Disposal". For safety and prevention of unauthorized use, it is suggested that all pesticides be stored in locked facilities. To prevent accidental misuse, different pesticides should be stored in separate areas with enough distance between to provide clear identification. Opened, partially used pesticides should be stored in original labeled containers when possible. When transfer to another container is necessary because of leakage or damage, carefully mark, and identify contents of the new container.

**PESTICIDE 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:** Triple rinse (or equivalent), adding rinsate to spray tank. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

#### PRECAUTIONARY STATEMENTS

##### CAUTION:

##### Hazards to Humans and Domestic Animals

Harmful if swallowed. May cause irritation of eyes, nose, throat and skin. Avoid breathing spray mist. Avoid contact with skin, eyes, and clothing. In cases of contact, immediately flush eyes or skin with plenty of water. Get medical attention if irritation occurs.

Manufactured by Luxembourg Industries (Pamol) Ltd.  
Made in Israel

#### PERSONAL PROTECTIVE EQUIPMENT

##### Applicators and other workers must wear:

- Long sleeved shirt and long pants
- Waterproof gloves
- Shoes and socks
- Protective eyewear when handling concentrate
- Chemical resistant apron when cleaning equipment, mixing or loading
- For exposure in enclosed areas a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).
- For exposure outdoors a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).

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

#### User Safety Recommendations

##### User should:

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

#### ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water by disposal of equipment washwaters. Do not contaminate waters used by animals, wildlife or aquatic life, or water used for domestic or irrigation purposes. Do not apply when weather conditions favor drift from target area.

Potential spray drift from ground or air applications may be reduced by:

1. Keeping the spray discharge as near to the target as possible while obtaining good coverage.
2. Increasing the volume of spray mixture per acre.
3. Using low spraying pressures (as measured at the nozzle tips).
4. Using nozzles which produce the largest spray droplets that still provide adequate coverage.
5. Avoiding application when wind is blowing toward susceptible crops or valuable plants.
6. Making applications when wind velocity is more favorable for on-target deposition. The following table is a general guide:

Wind Velocity	Comments
0-2 mph	Still air may indicate a temperature inversion which can permit drift.
3-7 mph	Generally good conditions, but check wind direction relative to susceptible crops. Allow for wind shift of swath.
7-10 mph	Possibly acceptable if wind direction is favorable and no susceptible crops are in the vicinity. Allow for wind shift of swath.
10-15 mph	Not usually desirable except in areas of stronger prevailing winds when direction is favorable and no susceptible crops are in the general vicinity. Use an agriculturally accepted drift retardant and allow for wind shift of swath.
Over 15 mph	Do not spray.

7. Properly maintaining and calibrating all spray equipment.
8. For aerial applications, using an effective spray boom length that is no more than 75% of the wingspan or rotor diameter.
9. Using an agriculturally accepted drift retardant designed to increase droplet size.

#### GENERAL INFORMATION

Leaf-All is a defoliant and/or an aid in the preharvest defoliation of irrigated and dryland cotton. Stripper and picker crops may be treated. The phytotoxic properties of this product can affect most vegetation contacted, but are quickly inactivated on contact with soil. Leaf-All is a combination of a defoliating agent and the required amount of surfactant for certain common applications. Additional surfactant may be used as recommended with tank mix products or to improve coverage with ground applications.

**CARE OF EQUIPMENT:** Although Leaf-All is only slightly corrosive, avoid prolonged contact with equipment made of zinc, tin, or aluminum. Clean such equipment with water as needed.

**MIXING INSTRUCTIONS:** Leaf-All is a water soluble concentrate. To prepare the spray mixture, fill the spray equipment reservoir about half full with water. If wettable powders or flowables are to be used in a tank mix, add them next with agitation on. Emulsifiable concentrate formulations should follow. Then add the required amount of Leaf-All and finish filling the reservoir with water. Adjuvants should be added last. Maintain agitation during application and until tank is emptied. After use, clean equipment thoroughly by flushing with water. Do not store spray mixture in tank for a prolonged period. If DROPP<sup>®</sup> is used in the tank mix, special cleanout procedures should be followed. See DROPP<sup>®</sup> label for cleanout directions.

**APPLICATIONS:** Leaf-All may be applied with aerial or ground equipment. For the most effective defoliation good coverage of all leaves is essential. *Horries must be arranged to provide thorough coverage of the foliage.* If applied by airplane, use 3 to 10 gallons of spray mixture per acre. (Note: Spray volumes of less than 5 gallons per acre may reduce coverage and result in less consistent defoliation.) The range of 5 to 10 gallons per acre will generally provide adequate coverage. If applied by ground equipment, a spray volume of 15 to 25 gallons of water per acre is preferred.

The condition of cotton plants, their stage of growth and the environmental conditions will determine the specific application rate and timing. In general, use the lower listed rates of Leaf-All under high temperature conditions and the higher listed rates under low temperature conditions.

**ADJUVANT USAGE:** Adjuvants may improve the activity of defoliants and/or make their results more consistent. The following guidelines are provided for selecting adjuvants, but current product labels take precedence. Use only adjuvants approved for application to growing crops.

Type of Leaf-All Application	Adjuvant Selection Guidelines
Leaf-All alone, ground application, 15 to 25 gallons of water per acre	Use adjuvant manufacturer's recommended rate of: Nonionic surfactant (minimum 80% active) such as Activator 90, LI 700 <sup>®</sup> , Surfac 820, or X-77 <sup>®</sup> , or Organosilicone surfactant such as silwet L-77 <sup>®</sup>
Leaf-All alone, aerial application, 3 to 10 gallons of water per acre	Additional adjuvant is usually not needed, but surfactants listed above for ground application may be used if conditions warrant. Excessive runoff can reduce defoliation.
Most tank mixes recommended on this label	Crop oil concentrate adjuvants such as HERBIMAX <sup>®</sup> or CLEAN CROP <sup>®</sup> Oil Concentrate, or Nonionic surfactants such as those listed above for Leaf-All alone, or Organosilicone surfactant such as listed above for Leaf-All alone
CYCLONE <sup>®</sup> STARFIRE <sup>®</sup> tank mixes	Nonionic surfactants such as those listed above for Leaf-All alone at 1 pt/100 gallons by ground and 2 pts/100 gallons by air
HARVADE <sup>®</sup> tank mix	Crop oil concentrate such as HERBIMAX <sup>®</sup> , or CLEAN CROP <sup>®</sup> Oil Concentrate at 1 to 2 pts per acre

#### DEFOLIATION OF COTTON:

Apply Leaf-All before harvest when 50% or more of the bolls are open (about 7 to 10 days prior to anticipated picking). Use a rate of 1-1.6 pints of Leaf-All per acre, preferably in a tank mix as specified below: DO NOT exceed 1.6 pints Leaf-All per acre per year.

#### DEFOLIATION TANK-MIX RECOMMENDATIONS:

**General:** Leaf-All is frequently tank mixed with other defoliants or harvest aids for more consistent results over a range of environmental conditions (except for preconditioning application). For optimum defoliation results, apply when at least 50% of the bolls are open. Follow-up treatment may be necessary, within label limitations of products used. Observe the most restrictive label directions and precautions of the various products tank mixed.

**Defoliation (Most Areas):** Suggested tank mix partners include products such as DROPP<sup>®</sup>, 50 WP, DEF<sup>®</sup> 6, PREP<sup>®</sup>, CYCLONE<sup>®</sup>, Sodium Chlorate and HARVADE<sup>®</sup>. Use 1/2 to 1.6 pints of Leaf-All per acre in these mixtures.

**Defoliation (California):** Suggested tank mix partners include products such as ACCELERATE<sup>®</sup>, DEF<sup>®</sup> 6, FOLEX<sup>®</sup> 6EC, DROPP<sup>®</sup> 50WP, PREP<sup>®</sup>, Sodium Chlorate, and STARFIRE<sup>®</sup>. Use 1 to 1.6 pints of Leaf-All per acre in combination with the labeled defoliants or harvest aids. Consult with your Pest Control Advisor before using the highest rates of Leaf-All.

**PRECONDITIONING FOR DEFOLIATION:** Leaf-All may be used to precondition cotton for final defoliation. This application removes some leaves to open up the plant canopy thereby providing better air movement and sunlight penetration. Apply 1/2 to 1/4 pint of Leaf-All per acre after approximately 50% of the bolls have opened. Preconditioning also usually results in more complete and thorough defoliation when the final preharvest application is made.

#### WARRANTY - CONDITIONS OF SALE

OUR RECOMMENDATIONS FOR USE of this product are based on field use and tests believed reliable and should be followed carefully. It is however impossible to eliminate all risks associated with use of this product. Because such factors as weather conditions, foreign material and manner of use for application are all beyond the control of the Seller of this product, such things as crop injury, ineffectiveness or other unintended consequences may result. ALL SUCH RISKS ARE ASSUMED BY THE BUYER. Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the directions. Seller makes no other warranties, expressed or implied, including FITNESS OR MERCHANTABILITY. In no case shall the Seller be liable for consequential, special or indirect damages resulting from the use or handling of this product. The foregoing is a condition of sale by the Seller and is accepted as such by the Buyer.

ACCELERATE is a Reg. TM of Eli Atochem North America.  
CLEAN CROP is a Reg. TM of Platte Chemical Co.  
CYCLONE<sup>®</sup> is a Reg. TM of a Zeneca Group Company.  
DEF is a Reg. TM of Bayer AG, Germany.  
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\*CYCLONE and STARFIRE are Restricted Use Pesticides