



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

December 18, 2020

Stephen Adams  
Senior Regulatory Affairs Manager  
Bayer CropScience  
2 T.W. Alexander, P.O. Box 12014  
RTP, NC, 27709

Subject: Registration Review Label Mitigation for Cyclanilide  
Product Name: Cyclanilide 18% SC  
EPA Registration Number: 264-1166  
Application Date: 04/26/2018  
Decision Number: 567958

Dear Mr. Adams:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Cyclanilide Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

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.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label 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.

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If you have any questions about this letter, please contact Quinn Gavin by phone at 703-347-0325, or via email at [gavin.quinn@epa.gov](mailto:gavin.quinn@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read "Linda Arrington".

Linda Arrington, Branch Chief  
Risk Management and Implementation Branch 4  
Pesticide Re-Evaluation Division  
Office of Pesticide Programs

Enclosure

**ACCEPTED**

Dec 18, 2020

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 264-1166

# Cyclanilide 18% SC

For Use In Outdoor Nursery, Plant Production Facilities, For Use As A Foliar Plant Regulator And Harvest Aid For Cotton. Do Not Use In Greenhouses.

<b>ACTIVE INGREDIENT:</b> Cyclanilide (1-[[[(2,4-Dichlorophenyl)amino]carbonyl]cyclopropanecarboxylic acid).....	18.00%
<b>OTHER INGREDIENTS:</b> .....	82.00%
<b>TOTAL:</b>	100.00%

\*Contains 1.62 pounds cyclanilide per gallon.

EPA Reg. No. 264-1166

EPA Est. No.

## KEEP OUT OF REACH OF CHILDREN WARNING

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 1-866-99BAYER (1-866-992-2937)

Please refer to [back panel] [booklet] for additional precautionary statements and directions for use. [Note to reviewer: Location of additional precautionary statements and directions for use will vary between those listed, depending on container type/size.]

### FIRST AID

<b>IF IN EYES</b>	-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. -Call a poison control center or doctor for treatment advice.
<b>IF SWALLOWED:</b>	-Call a poison control center or doctor immediately for treatment advice. -Have person sip a glass of water if able to swallow. -Do not induce vomiting unless told to do so by a poison control center or doctor. -Do not give anything by mouth to an unconscious person.
<b>IF ON SKIN OR CLOTHING</b>	-Take off contaminated clothing. -Rinse skin immediately with plenty of water for 15-20 minutes. -Call a poison control center or doctor for treatment advice.

## PRECAUTIONARY STATEMENTS

### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

#### WARNING

Causes substantial but temporary eye injury. Do not get in eyes or on clothing. Wear protective eyewear (goggles, face shield, or safety glasses). Harmful if swallowed. Avoid contact with skin or clothing. Wear long-sleeved shirt and long pants, socks, shoes and chemical-resistant gloves made of any waterproof material. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before reuse.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear protective eyewear, long-sleeved shirt, long pants, shoes plus socks, and chemical-resistant gloves made of any waterproof material.

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

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

## User Safety Recommendations

Users must wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

Users must remove clothing immediately if pesticide gets inside. Then wash body thoroughly and change into clean clothing. The contaminated clothing should be washed before reuse.

Users must remove PPE immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing. Wash the outside of gloves before removing.

## 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.

## DIRECTIONS FOR USE

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulations. Read entire label before using this product.

## PRECAUTIONS AND RESTRICTIONS

For local recommendations on rates, spray volumes (gallons of water per acre), and spray equipment under varying temperature and rainfall conditions consult Bayer CropScience Representative for his experience with this product in your area (Telephone 1-866-992-2937).

## AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses; and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry 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 24 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; chemical resistant gloves made of any waterproof material; shoes plus socks; protective eyewear.

## SPRAY DRIFT MANAGEMENT

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction 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 application 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 should be observed. The applicator should 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 below).

## 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 recommended 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 recommended 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**

Applications should not be made 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 downward. 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. Swath adjustment distance should increase, 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. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **NOTE:** Local terrain can influence wind patterns and how they affect spray drift. Every applicator should 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**

Applications should not occur 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. 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**

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitats for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas). Do not apply by air if sensitive species are within 200 feet downwind.

## **USE DIRECTIONS FOR CYCLANILIDE PLANT GROWTH REGULATOR**

FOR USE IN OUTDOOR NURSERY AND PLANT PRODUCTION FACILITIES

DO NOT USE IN GREENHOUSES

#### **Use Information**

Branching is typically induced near actively growing terminals. In some plants, such as California pepper tree and Chinese flame tree (*Koelreuteria bipinnata*), buds also break in blank wood below the terminal shoot apex. Effects on auxin activity are temporary, usually about 3 weeks. Additional treatments may be made to continue the effect. Treatment intervals for each specific use need to be evaluated on a case-by-case basis.

This product may replace the need to prune off the terminal growth to induce branching or can be used in conjunction with pruning or pinching.

Prior to the production-scale use of this product small-scale on-site testing should be implemented for the specific site and variety to determine appropriate rate to provide desirable performance. Cyclanilide may be used in a program approach with other plant growth regulators, but it is recommended that all uses in a program with other plant growth regulators be evaluated on a case-by-case basis.

#### **Application**

Cyclanilide is applied as a broadcast spray. Spray foliage to drip. Entire plants or specific plant parts may be treated. Use of a non ionic adjuvant is recommended. Plants must be vigorously growing to achieve the branching response. This product is acidic. Application of cyclanilide on leaves treated with copper can result in leaf burn.

Cyclanilide can be used in nursery sites on any non-bearing plant. However, testing on a small scale on-site should be conducted to identify performance and impact on plant quality prior to use on a large scale. Consider testing various rates, timing, and one vs. two applications for optimal response at each location. Results may vary from year to year.

**Use on Ornamentals and Cut Flowers**

The following are general guidelines. Plants must be in an active and vigorous growing condition at the time of application and for several weeks following the application. Consult the rate chart below for the correct amount of cyclanilide per gallon of water. Most varieties respond well to 1 to 2 applications of 50 to 200 ppm. Typically one application of 100 ppm is adequate. Responsive plants include Anise (*Illicium parviflorum*), Birch, Camellia, California pepper tree, Cherry, Chinese flame tree, *Codiaeum croton*, *Convolvulus* sp., Crabapple, Eastern redbud, *Euonymous* sp, *Ficus nitida*, Flowering quince, Hawthorn, Honey locust, Hydrangea, Indian hawthorn (*Raphiolepis indica*), Inkberry holly (*Ilex parviflorum*), Linden, Loquat, Oaks (*Quercus* sp), Oleander, Photinia, Rose, Spirea, *Xylosma senticosum*.

For Lilacs use 1-3 applications of 100-200 ppm one month apart to achieve the desired amount of branching.

Use 50 to 75 ppm rate range for Goldenrod (*Solidago*).

Some species respond to 5 to 20 ppm, including Bradford pears, and Myrtle (*Myrtus cummunis*).

Varieties that have been tested that did not exhibit desirable responses include: *Boronia*, *Capensis*, *Dieffenbachia*, *Daphne odora*, *Hosta*, *Jacaranda acutifolia*, *Nandina domestica*, Olive, *Pittosporum*, Norway and Red Maple, *Rhamnus*, *Schefflera*, Strawberry tree, *Wisteria*.

**Use on fruit trees (non-bearing)**

Sweet cherry and Apple varieties: 1 to 2 applications of 50 to 100 ppm. Typically one application at 100 ppm provides acceptable branching. If using a two-spray regime, consider making the second application about 1 week later. Some reduction in growth of the central leader may be observed with two applications.

Pear and Plum varieties: 1 application of 5 to 20 ppm. Typically 10 to 20 ppm provides acceptable branching.

Treatments to nectarine have not been effective.

**Application timing for fruit trees (non-bearing)**

The following information is for initial guidelines for application timing. It is important to have a vigorously growing plant at the time of application and for several weeks following application to obtain satisfactory branching and good development of new branches.

Induced branching of cherries tends to occur 4 to 8 inches above the height of the terminal shoot apex at the time of application. Induced branching in apples occurs about 1 to 4 inches below the height of the terminal shoot apex at the time of application.

Cyclanilide Rate Chart				
Final Concentration PPM	Amount Cyclanilide per volume of water			
	1 gallon Water	50 gallons Water	100 gallons Water	100 gallons Water
1	.02 ml	1 ml	2 ml	.07 fl oz
5	.1 ml	5 ml	10 ml	.34 fl oz
10	.2 ml	10 ml	20 ml	.68 fl oz
20	.4 ml	20 ml	40 ml	1.35 fl oz
50	1 ml	50 ml	100 ml	3.38 fl oz
100	2 ml	100 ml	200 ml	6.76 fl oz
200	4 ml	200 ml	400 ml	13.53 fl oz
500	10 ml	500 ml	1000 ml	33.83 fl oz
1000	20 ml	1000 ml	2000 ml	67.65 fl oz

**Do not tank mix Cyclanilide SC with pesticides or liquid fertilizers containing micronutrients.**

Use Restrictions

- Do not apply more than 0.34 lb ai/A per crop per year
- Do not apply more than 3 applications per crop per year

## FOR USE AS A COTTON PLANT GROWTH REGULATOR

### USE INFORMATION

Cyclanilide 18% SC in a 1:4 ratio with the active ingredient mepiquat chloride modifies plant growth to reduce plant height resulting in a more manageable cotton crop. Additional benefits include: earliness, increased fruit retention, less boll rot, better light interception of lower leaves, improved defoliation and harvest efficiency.

### APPLICATION INSTRUCTIONS

Cyclanilide 18% SC must be tank mixed with the active ingredient mepiquat chloride. The table below provides an example of the ratios required to provide plant growth regulation in cotton. Sequential applications can be made, with a minimum of 7 days between applications. (See Timing and Application Rate Table). Cyclanilide 18% SC in combination with the active ingredient mepiquat chloride can be tank mixed with insecticides, miticides and foliar fertilizer. (See Mixing Instructions).

Prior to application(s) the field should be carefully scouted for stress from factors including: weather, nematode, mite or insect damage, disease stress, herbicide injury or fertility stress. Application(s) should not be made to cotton under stress.

- For ground application use a minimum of 10 gallons of water per acre using nozzles that will develop a Medium spray category as defined by ASAE S-572. Typical nozzles include hollow cone, flat fans, extended range flat fans, and Turbo Teejet.
- For aerial equipment apply in a minimum of 2 gallons of water per acre.

### APPLICATION TIMING AND RATES

Begin applications at matchhead square (first square of a typical cotton plant is  $\frac{1}{8}$  to  $\frac{1}{4}$  inch in diameter.) First application should be applied when 50% of the cotton plants have one or more matchhead squares. Begin sequential applications 7-14 days later, or when regrowth occurs. Allow a minimum of 7 days between applications. Use rates are based on field examination and the degree of vegetative vigor. (See Timing And Application Rate Table For Cotton Plant Growth Regulator Table)

For sequential applications following a matchhead square treatment or for applications initiated after matchhead square, use 0.23 fl oz to 0.34 fl oz per acre Cyclanilide 18% SC plus the appropriate volume of mepiquat chloride as needed based on field examination and degree of vegetative vigor. (See Timing And Application Rate Table For Cotton Plant Growth Regulator Table)

### CYCLANILIDE 18% SC TIMING AND APPLICATION RATE TABLE FOR COTTON PLANT GROWTH REGULATOR

	Fl oz Cyclanilide 18% SC/ A	Fl oz of 0.35 lb / gal formation of Mepiquat chloride /A
Application beginning at the matchhead square growth stage	0.23	4.2
and sequential applications or applications beginning after matchhead square growth stage	0.34	6.3
For High Management Situations*	0.57	10.5

\*High management situations are defined as situations where any one of the following conditions may occur: aggressive watering, aggressive fertilization or aggressive varieties.

Allow a minimum of 7 days between applications.

Do not exceed 2.53 fl oz per acre per year.

### LATE SEASON APPLICATIONS

Applications of Cyclanilide 18% SC plus the appropriate volume of mepiquat chloride can help manage certain late season crop situations such as fields that don't cut out completely, fields where cotton continues to grow after cut-out and other similar situations. Late season applications alone are not a substitute for appropriate early season crop management and should not replace early season usage of Cyclanilide 18% SC plus the appropriate volume of mepiquat chloride. Very rank fields with vigorous regrowth due to poor boll load and optimum growing conditions may not fully respond to a late season application at the maximum suggested use rate.

Late season applications of Cyclanilide 18% SC plus the appropriate volume of mepiquat chloride may provide better response on fields that have also received early season applications of Cyclanilide 18% SC plus the appropriate volume of mepiquat chloride.

Apply up to 0.91 fl oz of Cyclanilide 18% SC per acre plus the appropriate volume of mepiquat chloride for a late season application(s). Consult with your local Bayer CropScience Representative or Cotton Extension Specialist for guidance with exceptionally challenging situations.

ALLOW A MINIMUM OF 7 DAYS BETWEEN APPLICATIONS. DO NOT EXCEED 2.53 FL OZ PER ACRE PER YEAR.

APPLICATIONS OF CYCLANILIDE 18% SC PLUS MEPIQUAT CHLORIDE CAN BE MADE UP TO 30 DAYS PRIOR TO HARVEST.

## USE OF ADJUVANTS

Cyclanilide 18% SC is rain-safe in 4-8 hours. If rain is expected within 4 hours, use of a high quality EPA-exempt surfactant can reduce the rain- safe period to 2 hours.

## MIXING INSTRUCTIONS

Cyclanilide 18% SC is a suspension concentrate (SC) formulation and must be applied with calibrated spray equipment. Cyclanilide 18% SC is formulated to mix readily in water. Prior to adding Cyclanilide 18% SC to the spray tank, ensure that the spray tank is thoroughly cleaned and free of other pesticides that may injure cotton. Cyclanilide 18% SC is compatible with most insecticides and miticides. Cyclanilide 18% SC can be tank mixed with foliar fertilizers if prior experience and/or test strips has proven to be compatible and non-injurious. Prior to preparing a tank mix always perform a compatibility test mix with all tank mix components. Mix the finished spray solution as follows:

1. Fill the spray tank  $\frac{1}{2}$  to  $\frac{3}{4}$  full with water.
2. Start agitation.
3. Add Cyclanilide 18% SC and continue agitation.
4. Add the appropriate amount of mepiquat chloride (see table above)
5. If mixing with a dry flowable/wettable powder tank mix partner, prepare a slurry of the proper amount of the product in a small amount of water. Add the slurry of dry materials to the spray tank.
6. If mixing with a liquid tank mix partner, add the liquid tank mix partner.
7. Complete filling the spray tank with water.
8. Maintain agitation during tank filling and spraying process.

Ensure that all spray system lines including pipes, booms, and screens have the correct concentration of the spray solution by flushing out the system lines before starting the crop application. Maintain agitation until the contents of the tank is sprayed. If the spray mixture is allowed to settle, thorough agitation is required to re-suspend the mixture before spraying is resumed. Screen size in nozzles or line strainers must be 50 mesh or larger.

## RESTRICTIONS

- Do not apply within 30 days of harvest.
- Do not apply this product through any kind of irrigation equipment. Do not plant another crop within 75 days of last application.
- Small grain and leafy vegetable crops may be planted 75 days after last application. Any crops other than small grain and leafy vegetable crops may be planted 4 months after last application.
- Do not graze or feed cotton forage to livestock.
- Do not apply more than 2.53 fl oz of Cyclanilide 18% SC per acre per season.
- Do not exceed a maximum of 0.132 lb of mepiquat chloride active ingredient per acre per year through combined or repeated uses of any products containing mepiquat chloride.
- Do not exceed a maximum of 0.25 lb of cyclanilide active ingredient per acre per year through combined or repeated uses of any products containing cyclanilide, such as STANCE and FINISH 6 PRO. The total annual maximum use rate of Cyclanilide 18% SC at 2.53 fl oz equals 0.0316 lb of cyclanilide active ingredient per acre per year. The annual maximum use rate of FINISH 6 PRO at 42.6 fl oz equals 0.125 lb of cyclanilide active ingredient per acre per year. The combined annual maximum use rates of STANCE and FINISH 6 PRO equals 0.157 lb of cyclanilide active ingredient per acre per year.
- Stress: Prior to application(s) the field should be carefully scouted for stress from factors including: weather, nematode, mite or insect damage, disease stress, herbicide injury or fertility stress. Application(s) should not be made to cotton under stress.



# FOR USE AS A COTTON HARVEST AID

## USE INFORMATION

A foliar spray of Cyclanilide 18% SC in combination with ethephon will accelerate opening of mature cotton bolls, promote defoliation of both mature and juvenile foliage and reduce terminal regrowth. Treatments of Cyclanilide 18% SC in combination with ethephon can promote earlier harvest and enhances the potential for high quality, high yield, and an once-over harvest. Rainfall, stress, temperature fluctuations, residual nitrogen and yield potential can affect defoliation and/or regrowth.

## 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 Cyclanilide 18% SC, then the required amount of ethephon, and the remaining amount of water. Mix only as much spray solution as can be used on the day of application. Storage and use of previous day's spray mix may result in equipment corrosion and reduced activity.

Do not spill the concentrated product on spray equipment, or any airplane parts. ANY SPILLS SHOULD BE IMMEDIATELY RINSED WITH PLENTY OF WATER AS Cyclanilide 18% SC and ethephon, IS CORROSIVE. Use of a nurse tank is highly recommended for avoiding possible spills of concentrated formulation on spray equipment.

## TANK MIXTURES WITH OTHER PRODUCTS

### For Cotton Harvest

Cyclanilide 18% SC must be mixed with ethephon to be used as a Cotton Harvest Aid and may be applied as a tank mix or in sequential application with other harvest aid and insecticide products.

In some cases, crop conditions, such as rank growth, weed or insect infestations, drought, unutilized nitrogen, low temperature, high moisture, and heavy juvenile growth will require the inclusion of other products for satisfactory defoliation and terminal regrowth suppression. Cyclanilide 18% SC and ethephon can be tank mixed or sequentially applied with other products such as DEF® 6, FOLEX® 6EC, DROPP® 50WP, HARVADE® 5F, GINSTAR®, DROPP® ULTRA™, ROUNDUP®, METHYL PARATHION 4E or 4 lb, GUTHION® 2L or 3 and MALATHION™ 57EC for use on cotton in accordance with the most restrictive of the label limitations and precautions. No label dosage rates should be exceeded. Proper mixing sequences should be followed when making a tank mix. This product cannot be mixed with any product containing a label prohibition against such mixing. Follow all applicable use precautions and rate per acre recommendations on labels of products applied as tank mixtures or in sequence with Cyclanilide 18% SC and ethephon. In some cases, slight reduction in boll opening response has been observed when tank mixes with phosphate defoliant were used.

Cyclanilide 18% SC and ethephon tank mixes with DROPP® or DROPP® ULTRA™ on picker cotton and GINSTAR® on stripper cotton will enhance regrowth suppression and removal of juvenile foliage.

Under some conditions such as high temperatures or low soil moisture, tank mixtures with products such as FOLEX®, DEF®, DROPP® ULTRA™, GINSTAR® and METHYL PARATHION may result in leaf stick or leaf burn due to increased desiccation activity. To minimize leaf stick and leaf burn occurrence under these conditions, it is important to follow local recommendations and use the lower labeled rate of the tank mix partner product(s).

Good agitation in the spray tank is essential. A tank mixture should not be allowed to stand without agitation. Read and observe all appropriate label use directions and precautions for the defoliant used.

To improve mixing and coverage, it is recommended that Cyclanilide 18% SC and ethephon and tank mixtures Cyclanilide 18% SC and ethephon be mixed with adjuvants and/or compatibility agents which are cleared for application on cotton. Cyclanilide 18% SC and ethephon should be added to the tank after the addition of an adjuvant. Read and observe all appropriate label use directions and precautions for the adjuvant used.

**NOTE:** UNDER CERTAIN CONDITIONS, TANK MIXTURES OF CYCLANILIDE 18% SC AND ETHEPHON WITH DESICCANTS CONTAINING SODIUM CHLORATE COULD RESULT IN THE FORMATION OF A HYPOCHLOROUS ACID WHICH ON HEATING WILL EMIT TOXIC CHLORIDE FUMES.

DO NOT MIX CYCLANILIDE 18% SC AND ETHEPHON WITH AMMONIUM THIOSULFATE. SUCH TANK MIXTURES MAY RESULT IN FORMATION OF TOXIC FUMES.

## MIXING INSTRUCTIONS FOR USE AS A COTTON HARVEST AID

1. Fill the spray tank  $\frac{1}{2}$  to  $\frac{3}{4}$  full with water.
2. Start agitation.
3. Add compatibility agents / adjuvants.
4. Add Cyclanilide 18% SC and continue agitation.
5. Add the appropriate amount of ethephon (see table)
6. If mixing with a dry flowable/wettable powder tank mix partner, prepare a slurry of the proper amount of the product in a small amount of water. Add the slurry of dry materials to the spray tank.
7. If mixing with a liquid tank mix partner, add the liquid tank mix partner.
8. Complete filling the spray tank with water.
9. Maintain agitation during tank filling and spraying process.

## EQUIPMENT CLEANING

Because of the acidic nature of this mixture, prolonged exposure to spray deposit will damage acrylic plastics, certain paints and metals. Rinse thoroughly with 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 detergent and water all metal parts of the aircraft and the associated spray equipment exposed to the spray deposits.

## COTTON

HOW TO USE	EXPECTED CONDITIONS	DOSAGE RATE FOR COTTON HARVEST AID APPLICATION		
		Cyclanilide 18% SC: fl oz/acre	Ethephon (6 lb/gal): fl oz/acre	Gals Water per acre
<p><b>Cyclanilide 18% SC (Under Normal Conditions):</b> The cotton crop must be in <b>cut-out</b> condition for Cyclanilide 18% SC to provide the expected boll opening, defoliation and terminal regrowth suppression.</p> <p>Cyclanilide 18% SC may be applied by air or ground equipment. For aerial applications, optimal gallonage should be 5 GPA and applied in a way to prevent drift. Ground applications should optimally use between 15 – 25 GPA and a spray boom with 3 hollow cone nozzles per row and a minimum spray pressure of 40 psi. For best performance, by either air or ground, choose the spray equipment and volumes which will ensure uniform coverage of foliage and bolls.</p>	Hot, dry over 80° F Dry	1.0	15.75	<p>3 Minimum (Aerial)</p> <p>10 Minimum (Ground)</p>
	75 to 80° F	1.5	24	
	Cool, but over 65° F or Rank cotton	2.0	31.5	
<p><b>Cyclanilide 18% SC Tank Mix Options for Unusual Situations:</b> Use Cyclanilide 18% SC with low rates of DROPP® (warm weather) or Cyclanilide 18% SC with low rates of FOLEX®/DEF® or GINSTAR® (warm or cool weather) on picker cotton.</p> <p>In addition to the above, GINSTAR® may be used on stripper cotton.</p>	When the cotton crop has been under stress conditions such as hot weather, drought, unutilized nitrogen, weed or insect infestations, low temperature, high moisture, heavy juvenile growth or rank cotton, defoliation and terminal regrowth suppression may be enhanced by tank mixing.	1.0 – 1.5	15.75 – 24.0	<p>3 Minimum (Aerial)</p> <p>10 Minimum (Ground)</p>

## **WHEN TO APPLY**

Apply Cyclanilide 18% SC and ethephon when the cotton crop has cut-out and there are sufficient mature unopened bolls present (40 to 60%) to produce the desired yield. This state of growth may be estimated when the crop has reached 2100 - 2400 DD 60's for the year.

Two additional methods should also be used to estimate the proper crop maturity for applications of Cyclanilide 18% SC and ethephon.

### **SHARP KNIFE TECHNIQUE**

Apply when the number of mature unopened bolls is sufficient to produce the desired crop and bolls have become very hard, cannot be sliced easily by a sharp knife, have seed coats that are tan in color, and the seed kernel is completely filled inside the cavity. At this stage, no gelatinous material is present inside the boll or seed.

### **NODES ABOVE CRACKED BOLL**

The crop is ready to treat when the top-most, first-position harvestable boll is 4 nodes above the uppermost, first-position cracked boll. Delaying treatment past this date is not likely to result in additional recoverable bolls at harvest.

## **USE PRECAUTION**

Do not apply Cyclanilide 18% SC and ethephon if rain is expected within 6 hours. Rainfall within 6 hours of application may reduce product performance.

## **RESTRICTIONS**

- Do not harvest cotton sooner than 7 days after a treatment with Cyclanilide 18% SC and ethephon.
- Do not apply this product through any kind of irrigation equipment.
- Do not plant any food crop within 30 days after last application. Small grains planted earlier than 1 month or intercropped within the cotton crop to which Cyclanilide 18% SC and ethephon will be applied may only be used as cover crops and may not be harvested for food or feed. Cyclanilide 18% SC and ethephon may cause yellowing and growth inhibition of treated small grains.
- In Arizona and California, any food crop can be planted 30 days after the last application. In the rest of the US, small grain or leafy vegetable crops can be planted only after 30 days, and all other food crops can be planted only after 4 months.
- Do not exceed a maximum of 2.0 lb ethephon active ingredient per acre per year through combined or repeated uses of any ethephon products.
- Do not exceed 0.25 lb cyclanilide active ingredient per acre per year.

## STORAGE AND DISPOSAL

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

### PESTICIDE STORAGE

Store in original container away from feed and food. Store in cool, dry area. Do not store in direct sunlight. Do not allow prolonged storage in temperatures that exceed 105°F (40°C) or in temperatures that fall below 14°F (-10°C).

### PESTICIDE DISPOSAL

To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

### CONTAINER DISPOSAL

#### **Rigid, Non-refillable containers (equal to or less than 5 gallons)**

Non-refillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse or pressure rinse container (or equivalent) promptly after emptying. Triple rinse 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 1/4 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.

Pressure rinse as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill.

#### **Rigid Non-refillable containers (greater than 5 gallons or 50 lb)**

##### **Non-refillable Containers**

Non-refillable containers - Do not reuse or refill this container. Refer to Bottom Discharge IBC or Top Discharge IBC, Drums, Kegs information as follows.

Bottom Discharge IBC (e.g. – Schuetz Caged IBC or Snyder Square Stackable)

Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal. Completely remove the top lid of the IBC. Use water pressurized to at least 40 PSI to rinse all interior portions. Continuously pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

Top Discharge IBC, Drums, Kegs (e.g.– Snyder 120 Next Gen, Bonar B120, Drums, Kegs).

Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. To triple rinse the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container at least 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill.

##### **Refillable Containers**

Refillable container – Refer to Bottom Discharge IBC or Top Discharge IBC, Drums, Kegs information as follows. Refill this container with pesticide only. Do not reuse this container for any other purpose. Contact your Ag retailer or Bayer CropScience for container return, disposal and recycling information.

Bottom Discharge IBC (e.g. – Schuetz Caged IBC or Snyder Square Stackable)

Pressure rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To pressure rinse the container before final disposal, empty the remaining contents from the IBC into application equipment or mix tank. Raise the bottom of the IBC by 1.5 inches on the side which is opposite of the bottom discharge valve to promote more complete product removal. Completely remove the top lid of the IBC. Use water pressurized to at least

40 PSI to rinse all interior portions. Continuously pump or drain rinsate into application equipment or rinsate collection system while pressure rinsing. Continue pressure rinsing for 2 minutes or until rinsate becomes clear. Replace the lid and close bottom valve.

Top Discharge IBC, Drums, Kegs (e.g.– Snyder 120 Next Gen, Bonar B120, Drums, Kegs).

Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To triple rinse the containers before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container at least 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Rinse all interior surfaces. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this procedure two more times.

Once container is rinsed, offer for recycling if available or puncture and dispose of in a sanitary landfill.

End users are authorized to remove tamper evident cables as required to remove the product from the container unless the container is equipped with one way valves and refilling or returning is planned. If this is the case, end users are not authorized to remove tamper evident cables, one way valves or clean container. See Container Disposal instructions under Storage Disposal.

## WARRANTY STATEMENT

### IMPORTANT: READ BEFORE USE

Read the entire Directions for Use, Conditions, Disclaimer of Warranties and Limitations of Liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Bayer CropScience LP. All such risks shall be assumed by the user or buyer.

**DISCLAIMER OF WARRANTIES:** TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE LP MAKES NO OTHER WARRANTIES, EXPRESS OR IMPLIED, OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE, THAT EXTEND BEYOND THE STATEMENTS MADE ON THIS LABEL. No agent of Bayer CropScience LP is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BAYER CROPSCIENCE LP DISCLAIMS ANY LIABILITY WHATSOEVER FOR SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.

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Produced for



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