

PM 02 51036-191 10/1/94



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number:
51036-191

Date of Issuance:
JUL 2 1994

NOTICE OF PESTICIDE:
 Registration
 Reregistration

(under FIFRA, as amended)

Term of Issuance:
Conditional

Name of Pesticide Product:
Micro Flo Cotton
Growth Regulator

Name and Address of Registrant (include ZIP Code):

Micro Flo Company
P.O. Box 5948
Lakeland, FL 33807-5948

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of your product under FIFRA section 4.

2. Make the following label changes listed below before you release the product for shipment:

- a. Add the phrase, "EPA Reg. No. 51036-191".
- b. Add the Spanish Signal Word AVISO in close proximity to the Signal Word WARNING on the front panel. 40 Code of Federal Regulations § 156.206(e) specifies that "AVISO" shall be used for products in toxicity category II - WARNING.

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Signature of Approving Official: / s /

Date:

- c. On the front panel in close proximity to the Signal Words add:

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 some one to explain it to you in detail.)

- d. After the heading PRECAUTIONARY STATEMENTS add the headings:

HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)

WARNING

- e. The Statements of Practical Treatment section should appear before or after the Precautionary Statements section.

f. Moved the Personal Protection Equipment (PPE), User Safety Recommendations and Engineering Controls Statement sections to the Hazards to Humans section.

- g. The Hazards to Humans section must read as follows:

May be fatal if swallowed. Harmful if inhaled or absorbed through skin. Avoid breathing dust or spray mist. Avoid contact with skin or clothing.

- h. The following Statements of Practical Treatment must read:

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 on skin: Wash with plenty of soap and water. Get medical attention.

- i. The proposed "If inhaled:" statement on the label is acceptable.

j. The "If in eyes:" statement is not required because the eye irritation study was in toxicity category IV.

k. On the front panel there is a box that refers to supplemental labeling under "Agricultural Use Requirements" in the Directions for Use section. However, since the proposed labeling does not identify a "container" label or "supplemental" directions for use label, this referral statement is not required.

3. Submit one (1) copy of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

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

A stamped copy of the label is enclosed for your records.

Cynthia Giles-Parker
Product Manager (22)
Fungicide-Herbicide Branch
Registration Division (7505C)

Enclosure

) cc: Kathy Davis, SRRD

Jacket Copy

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MICRO FLO Cotton Growth Regulator

Active ingredient

Mepiquat Chloride: N,N-dimethylpiperidinium chloride 99.0%

Inert ingredients 1.0%

Total 100.0%

EPA Reg. No. 51036-

EPA Est. No. 51036-GA-1

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to supplemental labeling under "Agricultural Use Requirements" in the Directions For Use section for information about this standard.

KEEP OUT OF REACH OF CHILDREN.

WARNING

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PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals **WARNING**
May be fatal if swallowed. Do not breathe dust or spray mist. Do not get in eyes, on skin or clothing.

PRACTICAL TREATMENT:

Subsequent to Product Treatment
If swallowed: Contact a physician or poison control center. Do not induce vomiting or give anything by mouth to an unconscious person.

If on skin: Wash affected areas with soap and water. Remove contaminated clothing and launder before reuse. If irritation develops, get medical attention.

If in eyes: Immediately flush eyes with plenty of water. Get medical attention if irritation develops.

If inhaled: Move to fresh air. Aid in breathing, if necessary, and get immediate medical attention.

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Micro Flo Company
P. O. Box 5948
Lakeland, FL 33807-5948

Net Contents _____
(Contains _____ pre-weighed "pills". Each pill weighs 40 grams, or 1.4 oz).

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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 apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when disposing of equipment washwaters.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves and shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining Personal Protective Equipment. If no such instructions for washables, use detergent and hot water. Keep and wash Personal Protective Equipment separately from other laundry.

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 thoroughly and put on clean clothing.
- Remove Personal Protective Equipment immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Engineering Controls Statement: 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 Personal Protective Equipment requirements may be reduced or modified as specified in the Worker Protection Standard.

DIRECTIONS FOR USE:

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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.

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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 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 12 hours.

Personal Protective Equipment 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, and shoes plus socks.

STORAGE AND DISPOSAL

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

STORAGE: Store in original container only, in a cool, dry, locked area. Tightly close or re-seal partially used containers to minimize moisture absorption. Store separately from other pesticides, fertilizers, food or feed to prevent contamination. In case of a spill or broken container, call CHEMTREC at 800-424-9300.

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: Completely empty package into application equipment. Then dispose of empty package in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. Stay out of smoke from burning bags.

IN CASE OF EMERGENCY:

In case of large-scale spillage regarding this product, call CHEMTREC at 800-424-9300.

In case of medical emergency regarding this product, call your local doctor for immediate treatment, or your local poison control center (hospital).

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GENERAL INFORMATION:

MICRO FLO Cotton Growth Regulator is a dry, concentrated "pill" form of the chemical active ingredient used in the liquid products sold by BASF Corporation under the PIX® brand name and by Micro Flo under the brand name Mepichlor 4.2% Liquid. This pill form of **Mepiquat Chloride** has been designed to be easy and economical to use and for easy container disposal. The sizes have been chosen so that one "pill" will be equivalent to one quart of 4.2% Liquid product.

MICRO FLO Cotton Growth Regulator is a foliar applied plant regulator. Benefits derived from the use of **MICRO FLO Cotton Growth Regulator** include increased boll retention, reduced plant height which provides a more open canopy, less boll rot, improved defoliation, less trash, and a darker leaf color. These benefits can provide for earlier maturity and often result in improved yields.

Growers may use single or multiple applications. Application rates are dependent on the number of applications to be made and growing conditions. Multiple applications of low rates provide maximum flexibility under a wide range of growing conditions. **MICRO FLO Cotton Growth Regulator** should not be applied to plants under stress. If stress is alleviated plants should be evaluated for vegetative growth before additional applications are made. **MICRO FLO Cotton Growth Regulator** may be tank mixed with insecticides/miticides when application timings coincide (See Restrictions and limitations.)

Fields should be carefully scouted. **MICRO FLO Cotton Growth Regulator** should not be applied if plants are under any form of stress. In the absence of stress, a maximum of four low rate applications can be made each season, generally using 1/16th to 1/8th pill/acre each time. The first application can be applied at the match head square stage. The rate and timing of subsequent applications depend on growing conditions. Under good growing conditions additional treatments (1/16th to 1/8th pill/acre) can be made at 7-14 day intervals. Higher rates of **MICRO FLO Cotton Growth Regulator** (1/8th to 1/4th pill/acre) should be used if vegetative growth becomes excessive and a greater degree of height control is desired. Do not use more than a total of 3/4ths of a pill/acre of **MICRO FLO Cotton Growth Regulator** in a growing season.

Spray volumes: Thorough coverage is required.

In Water:

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Areas other than California:

- Ground Application - Use a minimum of 10 gallons of water per acre.
- Aerial Application - Use a minimum of 3 gallons/acre.

California Only:

- Ground application - Use a minimum of 20 gallons/acre.
- Aerial Application - Use a minimum of 5 gallons/acre.

In Oil:

Do not attempt to add MICRO FLO Cotton Growth Regulator directly to oil in spray tank. Instead, dissolve MICRO FLO Cotton Growth Regulator in water before adding to an oil with added emulsifiers. Do a jar test for compatibility before attempting to mix large quantities.

Use a minimum total oil volume of 2 pints/acre for Ultra low volume (ULV) aerial application. Application in oil is permitted only in AL, AR, FL, GA, LA, MO, MS, NC, OK, SC, TN and TX. Use a nonphytotoxic oil concentrate which contains either a petroleum or vegetable oil base, contains only EPA-exempt ingredients and has been used successfully in your locality. The oil diluent should contain emulsifiers which provide good mixing quality. If using a vegetable oil based product, only highly refined concentrates should be used.

Mix under constant and vigorous agitation. Pour one-half of the required volume of oil into the spray tank, and then add MICRO FLO Cotton Growth Regulator while the remainder of the oil is added. Constant agitation is required during and after mixing and during application.

Rain Wash-off Precaution:

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The use of a high quality, EPA exempt surfactant will enhance the uptake of MICRO FLO Cotton Growth Regulator into the plant. Therefore, the use of a surfactant allows applications made as little as 4 hours prior to rainfall to be effective. Without a surfactant, the product should be used at least 8 hours prior to the expected rainfall.

Compatibility:

MICRO FLO Cotton Growth Regulator is compatible with most insecticides and miticides. MICRO FLO Cotton Growth Regulator should always be added to the spray solution first, before adding emulsifiable concentrates or liquid flowable products. If compatibility is in doubt, perform a jar test to check for compatibility. MICRO FLO Cotton Growth Regulator can be used with foliar fertilizers if your experience shows the combination is compatible and will not injure cotton under your conditions. Caution should be used when applying with foliar fertilizers under conditions of extreme heat.

Restrictions and limitations:

- Insect or mite damage to MICRO FLO Cotton Growth Regulator treated crops can lead to yield decreases or other undesirable effects.
- Do not apply MICRO FLO Cotton Growth Regulator to cotton that is under stress. If using low rate multiple applications, discontinue use until your crop has overcome any stress.

- Do not use MICRO FLO Cotton Growth Regulator on the short-staple variety Delta & Pineland 70.
- Do not apply more than 3/4ths pill of MICRO FLO Cotton Growth Regulator per acre per season.
- Do not apply MICRO FLO Cotton Growth Regulator within 30 days of harvest.
- Do not graze or feed cotton forage to livestock within 30 days of application.
- Do not graze or feed cotton forage to livestock at all if applied in oil as a ULV application by air.
- MICRO FLO Cotton Growth Regulator forms a clear solution when added to water. Effectiveness is not related to the color of the spray solution of MICRO FLO Cotton Growth Regulator products.
- Do not tank mix with other products other than those mentioned under "Compatibility".
- Do not apply this product through any type of irrigation system.



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Time and rate of application: Short-staple and long staple (Pima) cotton

Directions for use should be observed as specified below:

I. Single or dual applications:

Use these instructions when you are not able to start growth regulation treatments early, or when you want to make the fewest number of applications.

Area	Time of Application	Rate per Acre
AL, AR, AZ, CA, FL, GA, LA, MO, MS, NM, NC, SC, TN, VA	First application: Apply when cotton is actively growing and is between 20" and 30" tall, but not more than 7 days beyond early bloom (5-6 blooms per 25 row feet). Also apply if cotton is 24" tall and has no blooms. Use 1/4 pill per acre rate on cotton where excessive vegetative growth is not expected and use 1/2 pill per acre in areas where excessive vegetative growth has historically occurred. See Restrictions and limitations.	1/4th to 1/2 pill
	Second application: Make another application in 3 to 4 weeks if additional growth control is desired.	1/4th pill
	Areas <u>without</u> a history of excessive vegetative growth:	
OK, TX, (except Rio Grande Valley)	First application: Apply when cotton is in early bloom stage (5-6 blooms per 25 row feet) and actively growing. Also apply if no blooms are present and the cotton is 24" tall and actively growing. See Restrictions and limitations.	1/4th pill
	Second application: Make a second application in 3-4 weeks if additional growth control is desired.	1/4th pill
	Areas <u>with</u> a history of excessive vegetative growth:	
OK, TX	First application: For best results, apply when plants are in early bloom stage (5-6 blooms per 25 row feet) and an average of 24" tall. Treatments can also be made when cotton height averages a minimum of 20" and a maximum of 28", provided cotton is not more than 7 days beyond early bloom. See Restrictions and limitations.	1/2 pill
	Second application: For fields with a history of excessive growth, or if conditions after the first application favor excessive growth, make a second application in 3-4 weeks.	1/4th pill

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II. Low-rate multiple applications:

Use these instructions when you want to maintain maximum flexibility in plant regulation treatments.

Area	Time of Application	RATE PER ACRE	
		Excessive Growth Not Expected or Lower Rates Have Worked in the Past.	Excessive Growth Expected or Higher Rates Have Been Necessary in the Past.
AL, AR, AZ, CA, FL, GA, LA, MO, MS, NC, NM, OK, SC, TN, TX, VA	First application: Apply at the matchhead square ¹ stage of growth.	1/16th pill	1/8th pill
	Second application: 7-14 days later, or when regrowth occurs.	1/16th to 1/8th pill*	1/8th to 1/4th pill*
	Third application: 7-14 days later, or when regrowth occurs.	1/16th to 1/8th pill*	1/8th to 1/4th pill*
	Fourth application: 7-14 days later, or when regrowth occurs.	1/16th to 1/8th pill*	1/8th to 1/4th pill*

* Use the higher rate if previous application was not made or if growing conditions favor excessive growth.

¹ Matchhead square is when the first square of a typical cotton plant is 1/8-1/4" in diameter. Make the first application when 50% of the plants have one or more matchhead squares.

CONVERSION CHART

Use this chart to compare "pill" and liquid equivalents.

MICRO FLO COTTON GROWTH REGULATOR	4.2% Liquid	ACRES TREATED PER PILL
1/16th pill	1/8th pint (2 fl. oz.)	16
1/8th pill	1/4 pint (4 fl. oz.)	8
1/4th pill	1/2 pint (8 fl. oz.)	4
1/2 pill	1 pint (16 fl. oz.)	2

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Conditions of sale and warranty:

The Directions for use of this product are believed to be reliable and should be followed carefully. However, it is impossible to eliminate all risks inherently associated with 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 use of the product in a manner inconsistent with its labeling, all of which are beyond the control of MICRO FLO COMPANY ("MICRO FLO") or the Seller. All such risks shall be assumed by the Buyer.

MICRO FLO warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes set forth in the Directions for use when it is used in accordance with such directions, subject to the inherent risks mentioned above. MICRO FLO 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. MICRO FLO and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing Conditions of sale and warranty.

Draft Label Page 9 of 9

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ACCEPTED
with COMMENTS
In EPA Letter Dated:

JUL 21 1994

Under the Federal Insecticide, Fungicide, and Rodenticide Act
and Executive Order 12473
the following is true:

51026-191