

51036-189

6, 1988

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PM22
51036-189

NOTICE OF PESTICIDE: REGISTRATION
 REREGISTRATION
(Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended)

TERM OF ISSUANCE

Conditional

NAME OF PESTICIDE PRODUCT

Mepiquat Chloride Liquid Concentrate

NAME AND ADDRESS OF REGISTRANT (Include ZIP code)

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

NOTE: Changes in labeling formula 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 U.S. 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.

A copy of the labeling accepted in connection with this Registration/Reregistration is returned herewith.

Registration is in no way to be construed as an indorsement or approval of this product by this 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 labeling changes listed below before you release the product for shipment:

- a. Add the phrase "EPA Registration No. 51036-189"
- b. Delete "Do not apply directly to water or wetlands." from the front panel and replace with "Do not apply directly to water to areas where surface water is present or to intertidal areas below the mean high water mark."
- c. Under "Rat Wash-off Precaution", delete the first "to be" from the second sentence.

ATTACHMENT IS APPLICABLE

SIGNATURE OF APPROVING OFFICIAL

[Handwritten Signature]

DATE

4. Submit five (5) copies of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of the 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.

Sincerely Yours,

Cynthia Giles-Parker
Product Manager (22)
Fungicide-Herbicide Branch
Registration Division (H7505C)

Enclosure

MEPIQUAT CHLORIDE LIQUID CONCENTRATE

51036-189

Active ingredient	
Mepiquat Chloride: N,N-dimethylpiperidinium chloride	23.5%
Inert ingredients	<u>76.5%</u>
Total	100.0%

Contains two (2) pounds active ingredient per gallon.

EPA Reg. No. 51036-189

EPA Est. No. 51036-GA-001

KEEP OUT OF REACH OF CHILDREN.

CAUTION

Harmful if swallowed or absorbed through the skin. Causes eye irritation. Avoid contact with eyes, skin or clothing. In case of contact immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.

PRACTICAL TREATMENT:

If in eyes: Flush with plenty of water. Get medical attention if irritation persists.

ENVIRONMENTAL HAZARDS:

Do not apply directly to water or wetlands. Do not contaminate water when disposing of equipment wastewaters.

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).

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

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DIRECTIONS FOR USE:

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

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. 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: Triple rinse container (or equivalent). 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 burned, stay out of smoke.

GENERAL INFORMATION:

Mepiquat Chloride Liquid Concentrate is a Micro Flo product which is equivalent to PIX[®] CONCENTRATE Plant Regulator produced by BASF Corporation. Mepiquat Chloride is a foliar applied plant regulator. Benefits derived from the use of Mepiquat Chloride 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. Mepiquat Chloride should not be applied to plants under stress. If stress is alleviated, plants should be evaluated for vegetative growth before additional applications are made. Mepiquat Chloride may be tank mixed with insecticides/miticides when application timings coincide. (See Restrictions and limitations.)

Fields should be carefully scouted. Mepiquat Chloride Liquid Concentrate 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 1/3 to 2/3 fl. oz/acre each time. The first application can be applied at the matchhead square stage. The rate and timing of subsequent applications depend on growing conditions and desired benefits. Under good growing conditions additional treatments of 1/3 to 2/3 oz/acre can be made at 7-14 day intervals. Higher rates of Mepiquat Chloride Liquid Concentrate (2/3 to 1 1/3 oz/acre) should be used if vegetative growth becomes excessive or a greater degree of height control is desired. Do not use more than a total of 4.2 fl. oz/acre of Mepiquat Chloride Liquid Concentrate in a growing season.

Spray volumes: Thorough coverage is required.

In Water:

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:

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 agitation. Pour one-half of the required volume of oil into the spray tank, and then pour in the Mepiquat Chloride Liquid Concentrate while the remainder of the oil is added. Constant agitation is required during and after mixing and during application.

Rain Wash-off Precaution:

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

Compatibility:

Mepiquat Chloride Liquid Concentrate is water based, and is compatible with most insecticides and miticides. If compatibility is in doubt, perform a jar test to check for compatibility. Mepiquat Chloride Liquid Concentrate 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 Mepiquat Chloride treated crops can lead to yield decreases or other undesirable effects.
- Do not apply Mepiquat Chloride to cotton that is under stress. If using the low rate multiple applications, discontinue use until your crop has overcome any stress.
- Do not use Mepiquat Chloride Liquid Concentrate on the short-staple variety Delta & Pineland 70.
- Do not apply more than 4.2 fl. oz. of Mepiquat Chloride Liquid Concentrate per acre per season.
- Do not apply this product 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.
- Mepiquat Chloride Liquid Concentrate contains a dye and effectiveness is not related to the color of the spray solution.
- 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, NH, 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.	1 1/3 to 2 2/3 fl. oz
	Use the 1 1/3 fl. oz. rate on cotton where excessive vegetative growth is not expected and use 2 2/3 fl. oz. where excessive vegetative growth has historically occurred. See Restrictions and limitations.	
	Second application: Make a subsequent application in 3 to 4 weeks if additional growth control is desired.	1 1/3 fl. oz.
Areas without a history of excessive vegetative growth:		
OK, TX, (except Rio Grande Valley)	First application: Apply when cotton is in the 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 1/3 fl. oz
	Second application: Make a second application in 3-4 weeks if additional growth control is desired.	1 1/3 fl. oz.
Areas with 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.	2 2/3 fl. oz.
	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 1/3 fl. oz.

SEE CONVERSION CHART ON NEXT PAGE

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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	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.	1/3 fl oz	2/3 fl oz
	Second application: 7-14 days later, or when regrowth occurs.	1/3 to 2/3 fl oz*	2/3 to 1 1/3 fl oz*
	Third application: 7-14 days later, or when regrowth occurs.	1/3 to 2/3 fl oz*	2/3 to 1 1/3 fl oz*
	Fourth application: 7-14 days later, or when regrowth occurs.	1/3 to 2/3 fl oz*	2/3 to 1 1/3 fl oz*

* 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 about the size of a matchhead (about 1/8-1/4" in diameter). Make the first application when 50% of the plants have one or more matchhead squares.

CONVERSION CHART

RATE OF MEPIQUAT CHLORIDE LIQUID CONCENTRATE	ACRES TREATED PER			EQUIVALENT RATE OF MEPIQUAT CHLORIDE 4.2 OR PIX [•]
	PINT	QUART	GALLON	
1/3 fl. oz.	48	96	384	1/8 pint/ac
2/3 fl. oz.	24	48	192	1/4 pint/ac
1 1/3 fl. oz.	12	24	96	1/2 pint/ac
2 2/3 fl. oz.	6	12	48	1 pint/ac

[•] PIX is a trademark of BASF AG

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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.