



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

December 18, 2020

Luz G Chan  
Registration Manager  
Drexel Chemical Company  
P.O. Box 13327  
Memphis, TN 38113-0327

Subject: Registration Review Label Mitigation for Maleic Hydrazide  
Product Name: Drexel Leven-38  
EPA Registration Number: 19713-105  
Application Dates: 11/03/2016  
Decision Numbers: 523895

Dear Ms. Chan:

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 Maleic Hydrazide 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.

Page 2 of 2  
EPA Reg. No. 19713-105  
Decision No. 523895

If you have any questions about this letter, please contact Quinn Gavin by phone at 202-347-0325, 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. 19713-105



**Drexel**

**Leven-38**  
Tobacco Sucker Control Agent

**ACTIVE INGREDIENTS:**

n-Decanol..... 38.3%  
Potassium salt of 6-hydroxy-3-(2H)-pyridazinone\*..... 11.1%

**OTHER INGREDIENTS:**..... 50.6%

**TOTAL:** ..... 100.0%

This product contains 4.0 pounds of active ingredients per gallon.

\*Equivalent to 0.66 pound of Maleic hydrazide per gallon.

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

See **FIRST AID** Below

**SHAKE WELL BEFORE USING**  
(Optional: Recirculate Contents Before Use)

EPA Reg. No. 19713-105  
EPA Est. No. 19713-GA-2

Net Content: \_\_\_\_\_ Gals. ( \_\_\_\_\_ L)

**FIRST AID**

**IF SWALLOWED:**

- 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.

**IF IN EYES:**

- Hold eye open and rinse slowly and gently with water for 15 to 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.

**IF ON SKIN OR CLOTHING:**

- Take off contaminated clothing.
- Rinse skin immediately with plenty of water for 15 to 20 minutes.
- Call a poison control center or doctor for treatment advice.

**IF INHALED:**

- Move person to fresh air.
- If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.
- Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact CHEMTREC at 800-424-9300 for emergency medical information.

105SP-0218\*

## PRECAUTIONARY STATEMENTS

### Hazards to Humans and Domestic Animals

**CAUTION:** Harmful if swallowed. Causes moderate eye irritation. Harmful if absorbed through skin. Avoid contact with eyes, skin, or clothing. Wash thoroughly with soap and water after handling.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

**Mixers, loaders, applicators and other handlers must wear:**

- Long-sleeved shirt and long pants,
- Shoes plus socks, and
- Chemical-resistant gloves made of any waterproof material such as barrier laminate, butyl rubber, nitrile rubber, polyvinyl chloride or viton.

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

## USER SAFETY RECOMMENDATIONS

**Users should:**

- 1) Wash hands before eating, drinking, chewing gum, using Tobacco or using the toilet.
- 2) Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 3) 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 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 or rinsate.

## SURFACE WATER ADVISORY

Under some conditions, maleic hydrazide may have a significant potential for runoff into surface water (primarily via dissolution in runoff water) for several days post-application. Conditions favoring runoff include poorly drained soils or wet soils with readily visible slopes, frequently flooded areas, areas where an intense or sustained rainfall is forecast to occur within 48 hours, areas overlying extremely shallow groundwater and areas overlying tiles drainage systems that flow to surface water.

## PHYSICAL OR CHEMICAL HAZARDS

Keep away from heat or open flames.

## PRODUCT INFORMATION

**LEVEN-38** is a contact and systemic sucker control agent whereby one application will control small suckers on contact within one hour after application and works systemically in the Tobacco plant to control cell division and the formation of new suckers. This product is formulated exclusively for the control of Tobacco suckers and sucker buds. This product can be applied by conventional spray equipment. Use a coarse spray wetting the upper one-half of the Tobacco plant allowing the solution to run down the stalk of each plant. Use 20 to 35 pounds of pressure. Plants that are leaning must be straightened in order that the solution flows down the stalk evenly contacting each sucker and sucker bud.

## 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 through any type of irrigation system. 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.

### **AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard (WPS), 40 CFR Part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, 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 (REI). The requirements in this box only apply to uses of this product that are covered by the WPS.

Do not enter or allow worker entry into treated areas during the REI of 24 hours.

PPE required for early entry to treated areas that is permitted under the WPS and that involves contact with anything that has been treated, including plants, soil or water is: Coveralls, chemical-resistant gloves made of any waterproof material, and shoes plus socks.

**Note:** Be sure that all spray equipment has been carefully cleaned prior to using. Do not contaminate water by cleaning of equipment or disposal of wastes.

### **MIXING INSTRUCTIONS**

**Make sure the contents of this product are shaken and mixed well before measuring.**

The diluted emulsion is most easily prepared by adding the required amount of this product into the spray tank one-half filled with water using mild agitation. Then add sufficient water to the spray tank to total the required minimum solution.

### **USE PRECAUTIONS**

- In order to minimize the possibility of injury to Tobacco plants, do not mix this product with other chemicals including insecticides, fungicides or herbicides or apply this product to plants that have recently been treated with such chemicals.
- Closely hand-suckered or Tobacco treated with this product will not ripen as rapidly as poorly suckered Tobacco. Also, under some conditions, tips treated with this product have a tendency to turn yellow prematurely. This is not harmful and does not mean that your Tobacco is ripe. Do not harvest Tobacco treated with this product by using time and color of the leaves as your only guide to ripeness. Use other characteristics indicative of ripeness including (a) fading of color from midrib, and (b) change in apparent leaf texture.

### **APPLICATION RESTRICTIONS**

- Do not allow drift to nearby crops.
- Do not apply on Burley tobacco during peak temperatures or under conditions that favor the spread of hollow stalk or stem rot diseases.
- Do not make more than one application per year on Tobacco. However, a single repeat application of this product may be made if rain occurs within 6 hours of application. Maximum application rate of maleic hydrazide must not exceed 6.1 pounds per acre per year.
- Do not use on Tobacco plants grown for seed production.
- Allow at least 7 days after application of this product before harvest of Tobacco.
- Do not use contact fatty alcohols, maleic hydrazide or any products unless they are EPA registered and labeled for Tobacco sucker control.

### **APPLICATION INSTRUCTIONS**

**Make sure the contents of this product are shaken well before using.** If allowed to stand during the use, mix again before applying since the diluted emulsion may separate on standing.

Usage according to outlined directions has resulted in excellent sucker control. Application not in compliance with directions may lead to crop injury or insufficient sucker control.

Should washoff from rainfall occurs within 6 hours of application to Tobacco, a single repeat application of this product or any other maleic hydrazide containing products may be made.

### **BURLEY, DARK, FLUE-CURED, MARYLAND, AND CIGAR TOBACCO**

Top Tobacco plants to be treated at 10 to 25% flower stage (one or more flower tubes per seed head), remove all suckers one-half inch or greater in length. Spray the plants promptly within 24 hours following topping. Mix 3 gallons of this product in sufficient water totaling a minimum of 50 gallons water. In order to obtain best results, it is important that the product always be added to water. Spray this product emulsion uniformly within 24 hours after topping using a minimum of 50 gallons spray solution.

Apply this product during morning hours immediately after morning dew dries and throughout the day but avoiding late afternoon or night applications. Avoid spraying during heat stress or bright noon day sun with temperatures exceeding 90°F because injury to top tender leaves may result.

Do not apply this product when wind velocity is high enough to turn or tip top leaves because injury may result from the application to the underside of the Tobacco leaf. Do not apply during rain or when leaves are wet from rainfall, dew or irrigation. The contact agent in the formulation is effective within one hour following application; however, the systemic agent in the formulation requires a minimum of 6 hours for maximum absorption and effectiveness throughout the entire plant. Rainfall in less than that period of time may reduce effectiveness. If applied during drought, the contact portion of the formulation continues to function normally, however the systemic sucker control action may be reduced due to diminished absorption capabilities under drought conditions.

## **METHODS OF APPLICATION**

### **Hand Application**

This product may also be applied with hand-held equipment or backpack sprayer. Apply a coarse spray directed downward at the top of the stalk from 6 to 8 inches above the top leaves. Low tank pressure is required. Do not use more than 20 pounds per square inch (psi).

### **Powered Spray Equipment**

**Broadcast Application:** When applying as a broadcast spray or straight boom application, use one nozzle directed over the center of the row and one nozzle directed over the center of the row- middle (TG-3, TG-5 full cone tips or equivalent) spraying one or more rows at a time, wetting upper one-third or one-half of each plant. Maintain a coarse spray using 25 to 35 psi boom pressure. By using TG-3 spray tips, spraying at 25 to 35 psi pressure and operating at a speed of 1.5 to 3 mph, apply in a minimum of 50 gallons of diluted emulsion per acre of Tobacco. By using TG-5 spray tips, spraying at 25 to 35 psi pressure and operating at a speed of 3 to 5 mph, apply in approximately 50 to 60 gallons of diluted emulsion per acre of Tobacco. Apply the diluted product to Tobacco as a coarse spray from a height of 12 to 16 inches above the top of the stalk.

**Directed Application (3 Nozzles):** When applying as a directed spray, use three nozzles per row (TG-3, TG-5 full cone tips or equivalent) spraying one or more rows at a time, wetting upper one-third or one-half of each plant. Direct one TG-5 nozzle downward over the center of the row and TG-3 nozzles (9 inches on each side) directed at or slightly above the top of the stalk. Keep boom pressure at 20 to 25 psi and never to exceed 30 psi. By using TG-3, TG-5 spray tips, spraying at 20 to 25 psi pressure and operating at a speed of 2.5 to 3 mph, apply a minimum of 50 gallons of diluted emulsion per acre of Tobacco. Apply the diluted product to Tobacco as a coarse spray from a height of 12 to 16 inches above the top of the stalk.

### **Note:**

If allowed to stand for extended periods of time, the diluted emulsion may separate. Always remember to mix well immediately before using and maintain agitation during application. Equip all sprayers with a pressure regulator and a pressure gauge.

## **ADDITIONAL TREATMENT PROGRAMS**

### **Tank Mixture with Products Containing Flumetralin including Drexalin™ Plus**

DREXALIN PLUS is a product containing flumetralin as the active ingredient. Other products containing flumetralin approved for use on Tobacco by EPA can also be tank-mixed with this product. Follow precautions and label restrictions on those product labels and the label of this product. Follow the label, and all label restrictions when applying tank-mixtures.

### **Flue Cured Tobacco**

Remove all suckers over one-half inch in length. Spray the plants within 24 hours and before Tobacco suckers reach one inch in length. Following two applications of a contact fatty alcohol sucker control agent including Sucker-Plucker®, and 5 to 7 days after the second contact fatty alcohol application, apply 3 gallons of this product plus 2 quarts of Drexalin Plus in sufficient water totaling a minimum of 50 gallons of water per acre.

### **Burley, Dark, Maryland, and Cigar Tobacco**

Remove all suckers over one-half inch in length. Spray the plants within 24 hours after topping and before suckers reach one inch in length. At the early button stage and 5 to 7 days after application of a contact fatty alcohol sucker control agent including Sucker-Plucker, apply 3 gallons of this product plus 2 quarts of Drexalin Plus in sufficient water totaling a minimum of 50 gallons per acre.

For compressed air shoulder sprayers, use 23 fluid ounces of this product and 3.75 fluid ounces of Drexalin Plus per 3 gallons of water. Agitate the emulsion well before spraying. Apply at a rate of 3 gallons of diluted emulsion per 667 plants, carefully shaking and agitating the solution from time to time during spraying.

## STORAGE AND DISPOSAL

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

**STORAGE:** Storage should be under lock and key in a ventilated room and secure from access by unauthorized persons and children. Storage should be in a cool, dry area away from any heat or ignition source. Do not stack containers over 2 pallets high. Move containers by handles or cases. Do not move containers from one area to another unless they are securely sealed. Keep containers tightly sealed when not in use. Keep away from any puncture source. Avoid storage near water supplies, food, feed and fertilizer to avoid contamination. Avoid contamination with oxidizing materials. Store in original containers only. If the contents are leaking or material is spilled, follow these steps:

1. Contain spill. Absorb with a material including sawdust, clay granules or dirt.
2. Collect and place in suitable containers for disposal.
3. Wash area with soap and water to remove remaining pesticide.
4. Follow washing with clean water rinse.
5. Place a leaking container in plastic tub and transfer contents, as soon as possible, to an empty, original container.
6. Do not allow runoff to enter sewer or contaminate water supplies.
7. Dispose of waste as indicated below.

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

### CONTAINER HANDLING:

**Nonrefillable Container (rigid material; less than 5 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container 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 one-fourth 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. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Nonrefillable Container (rigid material; 5 gallons up to < 250 gallons):** Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Clean container promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container one-fourth full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Dispose of empty container in a sanitary landfill or by incineration, or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Refillable Container ( $\geq$  250 Gals. & Bulk):** Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning 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 clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.



## **WARRANTY—CONDITIONS OF SALE**

OUR DIRECTIONS FOR USE of this product are believed adequate and reliable. Follow directions 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 the Manufacturer or Seller. All such risks shall be assumed by the user or Buyer.

To the extent consistent with applicable law, Manufacturer or Seller makes no other warranties, expressed or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. To the extent consistent with applicable law, in no case shall the Manufacturer or 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.

Manufactured By:



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