

66222-240

7/17/2012

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON D C 20460

JUL 17 2012

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Ms Brooke Hedrick
Makhteshim Agan of North America, Inc
3120 Highwoods Blvd , #100
Raleigh, NC 27604

Subject Label Amended to Avoid Copyright Issues and Update Company Address

MANA Diflubenzuron 80WG

EPA Reg No 66222-240

Your submission date June 5, 2012

Dear Ms Hedrick

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act as amended is acceptable. A stamped copy is enclosed for your records. Submit one copy of your final printed labeling before you release the product for shipment. If there are questions call Dan Daniel at 703 305-5409 or electronically at daniel.dani@epa.gov

Sincerely,

A handwritten signature in black ink, appearing to read "John Hebert".

John Hebert
Product Manger (07)
Insecticide/Rodenticide Branch
Registration Division (7504P)

2018

Restricted Use Pesticide

Due to toxicity to aquatic invertebrate animals For retail sale to and use only by Certified Applicators or persons under their direct supervision and only for those uses covered by the Certified Applicator s certification

MANA Diflubenzuron 80 WG

INSECT GROWTH REGULATOR

For use on oranges grapefruit tangerines pummelos/pomelos and their hybrids

(Water dispersible granule)

(Water soluble package 10 x 3 125 oz pouches per bag)

(See precautions for water soluble package)

ACTIVE INGREDIENT

Diflubenzuron N-[[[4 Chlorophenyl]amino]carbonyl] 2,6-difluorobenzamide

% BY WT

80 0%

OTHER INGREDIENTS

20 0%

TOTAL

100 0%

ACCEPTED

JUL 17 2012

KEEP OUT OF REACH OF CHILDREN

CAUTION

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under

Manufactured for

Makhteshim Agan of North America Inc (MANA)

3120 Highwood Blvd Suite 100

Raleigh NC 27610

EPA Reg No 66222-240

EPA Reg No 66222 240

EPA Est No XXXXXXXXXX

Net Contents Gallons

FIRST AID	
IF IN EYES	<ul style="list-style-type: none"> • 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 immediately for treatment advice
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none"> • Take off contaminated clothing • Rinse skin immediately with plenty of soap and water for 15 to 20 minutes • Call a poison control center or doctor for treatment advice
Have the product container or label with you when calling a poison control center or doctor or going for treatment You may contact Prosar at 1 877-250-9291 for emergency medical treatment information	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION Harmful if absorbed through the skin Causes moderate eye irritation Avoid contact with eyes skin or clothing

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear

- Long-sleeved shirt and long pants
- Chemical resistant gloves such as barrier laminate or butyl nitrile neoprene rubber or viton
- Shoes plus socks

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

USER SAFETY REQUIREMENTS

Wash hands before eating drinking chewing gum using tobacco or using the toilet

ENGINEERING CONTROLS

When handlers use closed systems (including water soluble bags) 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 PPE requirements may be reduced or modified as specified in the WPS (Water soluble packets when used correctly qualify as a closed loading system under the WPS. Handlers handling this product while it is enclosed in intact water soluble packets may elect to wear reduced PPE of long sleeved shirt, long pants, and socks.)

IMPORTANT When reduced PPE is worn because a closed system is being used, handlers must be provided with all PPE specified above for applicators and other handlers, and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

USER SAFETY RECOMMENDATIONS

Users should

- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- 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

This pesticide is toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift or runoff from treated areas may be hazardous to aquatic invertebrate organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters. This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination or water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

DIRECTIONS FOR USE

RESTRICTED USE PESTICIDE

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.

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 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water is:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant footwear and chemical-gloves (such as Nitrile, Butyl, Neoprene, Barrier Laminate or Viton)
- Shoes plus socks

INSTRUCTIONS AND INFORMATION

Restriction Do not apply this product through any type of irrigation system

Precautions for water soluble package

- Do not sell individual water soluble packages
- Do not handle inner package with wet hands or gloves
- Do not allow packages to become wet prior to adding to the spray tank
- Handle outer container carefully to avoid breakage of inner water soluble packages
- Always reseal outer container in a manner that protects remaining water soluble packages from moisture
- Do not remove the water soluble packages from the container except for immediate use
- Use the entire contents of a water soluble package do not break open to use partial contents of water soluble package
- Water soluble package must be completely dissolved before adding products containing boron to spray mixtures If adding Micromite 80WGS to spray solutions already containing boron the water soluble packages must be pre-dissolved in water in a separate container and then added to the spray solution
- Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures

Resistance Management MANA Diflubenzuron 80 WG is an insect growth regulator which is effective on a wide variety of insect pests IRAC (Insecticide Resistance Action Committee) classifies diflubenzuron (active in MANA Diflubenzuron 80 WG) as a Group 15 Insecticide which includes inhibitors of chitin biosynthesis When used as directed MANA Diflubenzuron 80 WG provides control of a number of important insect pests Because of its mode of action which results in disruption of the molting process of immature insects the action of MANA Diflubenzuron 80 WG is slow and several days may elapse before the full effect is seen MANA Diflubenzuron 80 WG should be part of an IPM program that follows good management practices that include

- Scouting regularly and use MANA Diflubenzuron 80 WG against early immature stages for best results
- Always follow the label rate and timing directions
- Use chemical alternatives such as oil and preserve beneficial arthropods as part of an IPM program
- Maintain good coverage of all leaf surfaces with adequate water volume
- Alternate treatments to classes of insecticides with different modes of action

Mixing MANA Diflubenzuron 80 WG is compatible with many commonly used citrus pesticides crop oils and nutritional sprays However because of the large number of possible tank mixes pre-test to assure that there is physical and non-phytotoxic compatibility of any proposed mixtures with MANA Diflubenzuron 80 WG

Consult local agricultural authorities such as county and university extension specialists on current recommendations and refer to the Florida Citrus Pest Management Guide

SPRAY DRIFT LABELING

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 is responsible for considering all of 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 applications using dry formulations

The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor

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)

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 air stream produces larger droplets than other orientations and is the recommended practice. Significant deflection from the 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 $\frac{3}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height

Do not make applications at a height greater than 10 feet above 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 downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for the 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 speed of 2 to 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. Every applicator should be familiar with local wind patterns and how they affect 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 hot and dry.

Temperature Inversions

Do not make applications 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. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover, light to no wind. 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 upwards and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

Only apply the pesticide when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

APPLICATION BUFFER ZONES

Ground Application Do not apply within 25 feet of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes, or estuaries. **In Florida**, do not apply within 100 feet of estuarine/marine bodies of water. Spray last three rows windward of surface water using nozzles on one side only, with spray directed away from surface water. Turn off or adjust nozzles to prevent spray going over tops of trees. Shut off nozzles on the side away from the grove when spraying the outside row. Shut off nozzles when turning at ends of rows and passing tree gaps in rows.

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Aerial Application Do not apply within 150 feet of bodies of water such as lakes reservoirs rivers permanent streams natural ponds marshes or estuaries **In Florida**, do not apply within 1000 feet of estuarine/marine bodies of water

ORANGES, GRAPEFRUIT TANGERINE PUMMELOS / POMELOS and their hybrids

Application Apply in sufficient water to ensure thorough coverage For ground application apply in 50 to 1 000 gallons per acre For air application apply in 5 to 20 gallons per acre

Spray Oil The addition of a spray oil such as FC435 66 enhances coverage and may enhance control of Asian citrus psyllid citrus leafminer citrus peelminer citrus root weevil complex katydids and grasshoppers

PEST	DOSAGE		COMMENTS
	LB A/A	OZ/A	
Asian citrus psyllid (<i>Diaphornia citri</i>) Citrus rust mite (Phyllocoptura oleivora) Lepidopterous miners a Citrus leafminer (<i>Phyllocnistis citrella</i>) b Citrus peelminer (<i>Marmara</i> spp) Citrus root weevil complex including a West Indian sugar cane rootstock borer weevil (<i>Diaprepes abbreviatus</i>) b Southern blue green citrus root weevil (<i>Pachnaeus litus</i>) c Blue green citrus weevil (<i>P opalus</i>) d Fuller rose beetle (<i>Asynonychus godmani</i>) e Little leaf notcher (<i>Artipus flondanus</i>) Katydid Grasshoppers	0.31	6.25 (2 water soluble pouches)	<p>Asian citrus psyllid Apply when psyllids are first observed on immature citrus leaf flushes MANA Diflubenzuron 80 WG has activity only on immature psyllids and will not control adult psyllids Control may be enhanced by use of a split application where 3 125 oz/acre (1 water soluble pouch) is applied early to early feather leaf flush when oviposition is seen leaf distortion is evident or oviposition is expected Make the second application of MANA Diflubenzuron 80 WG at 3 125 oz/acre as needed to protect new growth flushes</p> <p>Citrus rust mite MANA Diflubenzuron 80 WG is active on eggs and nymphal stages but not adults that have passed all molting stages The full effect of MANA Diflubenzuron 80 WG may not be evident for 3 to 10 days after application</p> <p>Citrus leafminer Apply MANA Diflubenzuron 80 WG when oviposition begins on new growth flushes Adults are not killed by MANA Diflubenzuron 80 WG and only eggs larval and pupal stages are effected Control may be enhanced by use of a split application where 3 125 oz/acre (1 water soluble pouch) is applied early when leaf flush is present and the oldest leaf is about one quarter expanded when citrus leafminer oviposition is seen or leaf mining is evident Make the second application of MANA Diflubenzuron 80 WG at 3 125 oz/acre as needed to protect new growth flushes</p> <p>Citrus peelminer Apply MANA Diflubenzuron 80 WG when oviposition begins on peel surface Peelminer eggs laid on protected/treated fruit do not develop Since fruit is rapidly expanding protection from MANA Diflubenzuron 80 WG may only last a few weeks</p> <p>Citrus root weevil complex Apply MANA Diflubenzuron 80 WG to a newly expanded flush on citrus and/or when adult weevils are present Addition of a spray oil enhances penetration of MANA Diflubenzuron 80 WG into adult weevils and eggs Oil may also deter weevil egg masses from attaching to leaf surfaces MANA Diflubenzuron 80 WG will not kill adult weevils but it does result in reduction of reproduction potential of weevils and prevents eggs from hatching The grubs from eggs laid on treated leaves are reduced in number</p> <p>Katydid/grasshoppers Apply MANA Diflubenzuron 80 WG when adults are first observed It has activity on eggs and nymphs and helps reduce populations by preventing eggs from hatching and nymphs from molting Addition of a spray oil will enhance penetration of MANA Diflubenzuron 80 WG into all life stages of Katydid and grasshoppers and improve activity on each life stage Performance is dependent on thorough spray coverage and timing application when adults are first observed</p>
<ul style="list-style-type: none"> Do not apply more than 18.75 ounces (0.93 lb ai) of MANA Diflubenzuron 80 WG per acre per year Do not apply more than 6.25 ounces per acre in any 90 day period Do not repeat sprays closer than 90 days from the last application when using the full rate application (6.25 ounces per acre) When using 			

½ rate split applications (3 125 + 3 125 ounces per acre) repeat sprays no closer than 90 days after the second application of 3 125 ounces per acre
 Do not apply within 21 days of harvest
 • Do not graze livestock in treated groves or harvest cover crops for animal feed

STORAGE AND DISPOSAL

Do not contaminate water food or feed by storage or disposal
PESTICIDE STORAGE Store in a dry location
PESTICIDE DISPOSAL Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility
CONTAINER HANDLING
Nonrefillable Container Do not reuse or refill this container Completely empty bag into application equipment Then dispose of empty bag in a sanitary landfill or by incineration or if allowed by State and local authorities by burning If burned stay out of smoke Offer for recycling if available

LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use conditions 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 Makhteshim Agan of North America Inc All such risks shall be assumed by the user or buyer
DISCLAIMER OF WARRANTIES To the extent consistent with applicable law Makhteshim Agan of North America Inc 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 Makhteshim Agan of North America Inc is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein To the extent consistent with applicable law Makhteshim Agan of North America Inc disclaims any liability whatsoever for special incidental or consequential damages resulting from the use or handling of this product
LIMITATIONS OF LIABILITY To the extent consistent with applicable law the exclusive remedy of the user or buyer for any and all losses injuries or damages resulting from the use or handling of this product whether in contract warranty tort negligence strict liability or otherwise shall not exceed the purchase price paid or at Makhteshim Agan of North America Inc s election the replacement of product

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