

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

April 28, 2023

Amy Plato Roberts Director of Regulatory Affairs Danstar Ferment AG/Lallemand Plant Care PO Box 990 Hailey, Idaho 83333

 Subject: Non-PRIA (Pesticide Registration Improvement Act) Labeling Amendment – To Add the Correct IRAC Code and Remove a Direction for Use Statement
Product Name: LALGUARD® M52 OD
EPA Registration Number: 64137-33
EPA Receipt Date: 04/10/2023
Action Case Number: 00446979

Dear Ms. Roberts:

The amended labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable.

This approval does not affect any terms or conditions that were previously imposed on this registration. You continue to be subject to existing terms or conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release this product for shipment with the new labeling. In accordance with 40 CFR § 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR § 152.3.

Should you wish to add/retain a reference to your company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the U.S. Environmental Protection Agency (EPA). If the website is false or misleading, the product will be considered to be misbranded and sale or distribution of the product is unlawful under FIFRA section 12(a)(1)(E). 40 CFR § 156.10(a)(5) lists 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 EPA find or if it is brought to our attention that a website contains statements or claims substantially differing from statements or claims made in connection with obtaining a FIFRA section 3 registration, the website will be referred to EPA's Office of Enforcement and Compliance Assurance.

Your release for shipment of this product constitutes acceptance of these terms. If these terms are not complied with, this registration will be subject to cancellation in accordance with FIFRA section 6.

Page 2 of 2 EPA Reg. No. 64137-33 Action Case No. 00446979

If you have any questions, please contact Monica Thapa by phone at (202) 566-1543 or via email at thapa.monica@epa.gov.

Sincerely,



Cody Kendrick, Senior Regulatory Advisor Microbial Pesticides Branch Biopesticides and Pollution Prevention Division (7511M) Office of Pesticide Programs

Enclosure

[Text in brackets is optional] (Note: The following information will be presented as a booklet on the front of the product container. Page 1 and 2 are the primary display panel of the booklet.)

LALGUARD® M52 OD

Sublabel A:Greenhouse, Nursery, Turf Grass and Agricultural UseSublabel B:Residential/Home & Garden Use

EPA Registration Number: 64137-33 EPA Establishment Number: XXXXX-XX-XXX

[Made in] [USA][Canada][Brazil][Germany]

Manufactured for: Danstar Ferment AG / LALLEMAND PLANT CARE Poststrasse 30 Zug CH-6300 Switzerland

Marketed and distributed by: Lallemand Specialties Inc. / LALLEMAND PLANT CARE 6120 West Douglas Avenue Milwaukee, WI 53218 United States

[LALLEMAND LOGO]



Sublabel A: Greenhouse, Nursery, Turf Grass and Agricultural Use

(Front Panel)

Metarhizium brunneum (formerly known as Metarhizium anisopliae)	GROUP	UNF	INSECTICIDE
Strain F52			

LALGUARD® M52 OD

- Bioinsecticide

ACTIVE INGREDIENT: Metarhizium brunneum (formerly known as Metarhizium anisopliae)	
Strain F52*	11.0%
OTHER INGREDIENTS**	89.0%
Total	100.0%
* O su tains a mainime una af 0.0 v 40° O alamu Eamain a Lluita (/OELL)]/mal. af maa du at	

* Contains a minimum of 2.0 x 10⁹ Colony Forming Units [(CFU)]/mL of product

** Contains petroleum distillates

KEEP OUT OF REACH OF CHILDREN CAUTION

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Causes moderate eye irritation. Harmful if inhaled, absorbed through skin, or swallowed. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

[REFER TO DIRECTIONS OF USE WITHIN THIS BOOKLET]

	FIRST AID	
IF IN EYES:	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.	
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.	
IF ON SKIN OR	Take off contaminated clothing. Rinse skin immediately with plenty of water for	
CLOTHING:	15 – 20 minutes. Call a poison control center or doctor for treatment advice.	
IF SWALLOWED:	F SWALLOWED: Immediately call a poison control center or doctor. Do not induce vomiting unless	
	told to do so by a poison control center or doctor. Do not give any liquid to the	
	person. Do not give anything by mouth to an unconscious person.	
HOTLINE NUMBER		
Have the product container or label with you when calling a poison control center or doctor or going for		
treatment For omore	treatment. For emergency information on this pesticide product (including health concerns, medical	

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information on this pesticide product (including health concerns, medical emergencies, or pesticide incidents) call the National Pesticide Information Center at 1-800-858-7378 8:00AM – 12:00PM Pacific Time (PT), Mon-Fri. During other times call the poison control center at 1-800-222-1222.

NOTE TO PHYSICIAN

Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

Batch No.: see printing on bag

Expiration Date: see printing on bag

Net Contents: [1 gallon] [1 quart] [1.06 quarts] [1 pint] [½ pint] [XX L]

Manufactured for:

EPA Establishment Number: XXXXX-XX-XXX

LALGUARD M52 OD (EPA Reg No. 64137-33) Master Label – version (3) April 10, 2023 Label amendment FAST TRACK to correct IRAC Code and update a direction for use Page 2 of 17 Danstar Ferment AG / LALLEMAND PLANT CARE Poststrasse 30 Zug CH-6300 Switzerland

EPA Registration Number: 64137-33 [Made in] [USA][Canada][Brazil][Germany]

Marketed and distributed by: Lallemand Specialties Inc. / LALLEMAND PLANT CARE 6120 West Douglas Avenue Milwaukee, WI 53218 United States

[LALLEMAND LOGO] [Peel back for instructions. PRESS TO RESEAL]

(End Front Panel)

PERSONAL PROTECTIVE EQUIPMENT

Mixers/loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Barrier laminate, nitrile rubber, neoprene rubber, or viton gloves
- Shoes and socks
- Protective eyewear

Wear a minimum of a NIOSH-approved particulate filtering facepiece respirator with any R, or P filter; <u>OR</u> a NIOSH-approved elastomeric particulate respirator with any, R, or P filter; <u>OR</u> a NIOSH-approved powered air- purifying respirator with an HE filter. Repeated exposures to high concentrations of microbial proteins can cause allergic sensitization.

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. Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

USER SAFETY RECOMMENDATIONS

Users should:

- Remove clothing/PPE 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

For Terrestrial Uses: This product is toxic to aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. Do not contaminate water when disposing of equipment wash water or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Avoid drift or run off into storm drains, drainage ditches, or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to maximize the chances that wind, or rain will not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

PHYSICAL OR CHEMICAL HAZARDS

For spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300, day or night.

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 State or Tribal 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 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 4 hours.

EXCEPTION: If the product is soil incorporated or soil injected, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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

- Coveralls
- Barrier laminate, nitrile rubber, neoprene rubber, or viton gloves
- Shoes plus socks
- Protective eyewear
- NIOSH-approved particulate filtering facepiece respirator with any R, or P filter; <u>OR</u> a NIOSH-approved elastomeric particulate respirator with any, R, or P filter; <u>OR</u> a NIOSH-approved powered air- purifying respirator with an HE filter.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Keep unprotected persons out of treated areas until sprays have dried.

GENERAL

LALGUARD M52 OD is composed of spores of the insect pathogenic fungus *Metarhizium brunneum* (formerly known as *Metarhizium anisopliae*). Once the product is sprayed onto foliage or drenched into the soil, insects that come into contact with the fungus will become infected. The spores of *Metarhizium brunneum* (formerly known as *Metarhizium anisopliae*) attach to the surface of the insect, germinate and begin to grow. It will penetrate the exoskeleton of the insect and grow inside the insect, causing the insect to die. Under moderate temperatures, it usually takes 3 to 7 days, once the insect is exposed, for death to occur. At very cold or hot temperatures, death may occur more slowly. The fungal spores will be more persistent when incorporated in the soil, especially in potting media, than when applied to foliage.

MODE OF ACTION AND APPLICATION TIMING: Application frequency will depend on the environment to which LALGUARD M52 OD is applied and the target insects' life cycle. Persistence of LALGUARD M52 OD will generally be higher when incorporated into soil and higher in foliar applications in greenhouses than outdoor foliar applications.

LALGUARD M52 OD may be used for foliar applications to control insects with a high reproductive potential. It is best to begin applying LALGUARD M52 OD at early stages of population development. Repeat applications at 5 to 10 day intervals, matching application interval to insect and population. High insect populations of whiteflies may require 2 to 5 day intervals. Applications to leaf litter and turf may be done on a 4 to 6 week interval with an expected residual efficacy of a few months.

Applications of drenches to potting media may be done as appropriate to standard pest management practices and the product may remain efficacious for up to one year. When possible, application to soil should be done in advance of a target insect's life stage that will be passing through the first six inches of soil, with an expected residual efficacy of a few months. Although the penetration of LALGUARD M52 OD into soil will vary greatly with soil type and level of irrigation, it is best to target populations as close to the

surface as possible or time application of LALGUARD M52 OD with a soil incorporation event.

PRE-HARVEST INTERVAL: Pre-harvest interval for LALGUARD M52 OD is zero (0) days. LALGUARD M52 OD may be applied up to the day of harvest.

SITES FOR USE

TERRESTRIAL NON-FOOD CROPS: LALGUARD M52 OD can be used on the crops listed in Table 1 (greenhouse, nursery and outdoor sites including urban and suburban turf).

FOOD CROPS: LALGUARD M52 OD can be used on the crops listed in Table 1 (including greenhouse, nursery and outdoor agricultural sites).

APPLICATION INTRUCTIONS

MIXING INSTRUCTIONS: Shake well before using. LALGUARD M52 OD may be applied using handheld, ground and/or aerial spray equipment. LALGUARD M52 OD contains emulsifiers and mixes readily in water. Fill spray tank with half of the desired amount of water and start agitation. Slowly add desired amount of LALGUARD M52 OD to spray tank. Add remaining desired amount of water. Triple rinse empty LALGUARD M52 OD container with water and add rinse water to spray tank. Continue agitation throughout spraying. Once open, use entire contents of bottle within 24 hours after mixing.

PLANT SAFETY: LALGUARD M52 OD has been determined to be efficacious for the uses described on this label but has not been tested on all varieties of listed plant species for safety. Test LALGUARD M52 OD on a small number of plants to check for potential damage before applying to a large number of plants. Do not apply on poinsettias after bract formation.

FOLIAR APPLICATION, HIGH VOLUME: Apply LALGUARD M52 OD at a rate of 8 – 32fl oz (½ pint to 1 quart) per 100 gallons of water in high volume sprays (0.5 to 2.5 teaspoons of LALGUARD M52 OD per gallon of water). Mix well by external mixing, in-tank mixing, or pump circulation to form emulsion. [Do not apply at pressures above [200] [400] [600] PSI.] **Spray to wet all foliage, but avoid runoff**.

FOLIAR APPLICATION, LOW VOLUME: Apply 8 - 64 fl oz ($\frac{1}{2}$ pint to 2 quarts) of LALGUARD M52 OD to one (1) acre. Follow spray equipment manufacturer's instructions for final spray volume to obtain adequate coverage. [Do not apply at pressures above [200] [400] [600] PSI.] Do not apply through a thermal pulse fogger.

DRENCH: [Add from 40 to 80 fluid ounces of LALGUARD M52 OD to 100 gallons of drench] solution.[4 to 8 fluid ounces of LALGUARD M52 OD to 10 gallons of drench solution.] **For pots:** drench application should be thoroughly watered-in without causing water to come out of the bottom of the pots – depending on the soil type and moisture, this will be around 8 ounces of mixed product per gallon pot. **For soil applications:** drench application should be thoroughly watered-in without causing water to move laterally – this will vary by soil type and moisture holding capacity at time of application. Applications should be targeted to move LALGUARD M52 OD into the top 2 inches of soil.

FOLIAGE AND ROOT PLANT DIP: To prepare dip solution, thoroughly mix ½ to 1 fluid ounce of LALGUARD M52 OD per gallon of water. Please note that dip solution must be used within 24 hours after mixing. When treating plants by the dip method, thoroughly wet all plant surfaces to be treated. Allow treated plant foliage to dry prior to potting and watering.

APPLICATION TO TURF: Apply 2 to 3 fluid ounces of LALGUARD M52 OD to 1000 square feet in residential and institutional lawns and landscape perimeters. Applications for blacklegged ticks are to be focused on the border of manicured lawns and paths creating a minimum of a 9 foot border. Applications for more mobile ticks such as lonestar tick are to be applied on a wider area and include the entire lawn. Apply using a minimum of 4 gallons of water per 1000 square feet. Make initial applications in the spring before ticks become active and continue at 4- to 8-week intervals throughout their active season.

TANK MIX COMPATIBILITY: LALGUARD M52 OD contains a fungal active. Do not mix LALGUARD M52 OD with fungicides. LALGUARD M52 OD is physically and biologically compatible with a wide range of pesticides and spray adjuvants. If adjuvants are required when applying LALGUARD M52 OD in

combination with other pesticides, contact your dealer or Lallemand Plant Care representative for specific recommendations.

Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

CONTROLLING PESTICIDE DRIFT: Do not allow spray to drift from the application site and contact people, nontarget crops, aquatic and wetland areas, or animals.

For ground boom applications, apply with nozzle height no more than 4 feet above the ground or crop canopy and when wind speed is 10 mph or less at the application site as measured by an anemometer. Use a fine or medium spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles.

For orchard/vineyard airblast applications, do not direct spray above trees/vines and turn off outward pointing nozzles at row ends and outer rows. Apply only when wind speed is 3 -10 mph at the application site as measured by an anemometer outside of the orchard/vineyard on the upwind side.

For aerial applications, the boom width must not exceed 75% of the wingspan or 90% of the rotary blade. Use upwind swath displacement and apply only when wind speed is 3 -- 10 mph as measured by an anemometer. Use medium or coarser spray according to ASAE 572 definition for standard nozzles or VMD for spinning atomizer nozzles. If application includes a no-spray zone, do not release spray at a height greater than 10 feet above the ground or the crop canopy.

The applicator also must use all other measures necessary to control drift.

SPRAY DRIFT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

IMPORTANCE OF DROPLET SIZE

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

• Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

• Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.

• Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

Controlling Droplet Size – Aircraft

• Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT - Aircraft

Higher release heights increase the potential for spray drift. When applying aerially to crops, do not release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or 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. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS. Applicators need to be familiar with local wind patterns and terrain that could affect spray drift

CROP	PEST	APPLICATION	RATE
Cucurbits	thrips,	Drench	[40-80 fl. oz./100 gal.] [4-8 fl.
	whiteflies, mites		oz. / 10gal]
		Foliar	8 – 64 fl.oz. [0.5 pt 2
			qt]/acre low volume or
			8-32 fl. oz. [0.5 pt 1 qt]/ 100
			gal. high volume,spray to wet but avoid runoff.
Onions	thrips	Drench	[40-80 fl. oz./100 gal.] [4-8 fl.
Onions	umps	Diench	oz. / 10gal]
		Foliar	8 – 64 fl.oz. [0.5 pt 2
			qt]/acre low volume or
			8-32 fl. oz. [0.5 pt 1 qt]/ 100
			gal. high volume,spray to wet
			but avoid runoff.
Celery, lettuce, spinach	thrips,	Drench	[40-80 fl. oz./100 gal.] [4-8 fl.
	whiteflies, mites,		oz. / 10gal]
	aphids, psyllids	Foliar	8 – 64 fl.oz. [0.5 pt 2
			qt]/acre low volume or
			8-32 fl. oz. [0.5 pt 1 qt]/ 100
			gal. high volume,spray to wet
Peppers, tomatoes	thrips,	Drench	but avoid runoff. [40-80 fl. oz./100 gal.] [4-8 fl.
Peppers, tomatoes	whiteflies, mites,	Diench	oz. / 10gal]
	aphids, psyllids	Foliar	8 – 64 fl.oz. [0.5 pt 2
			gt]/acre low volume or
			8-32 fl. oz. [0.5 pt 1 qt]/ 100
			gal. high volume,spray to wet
			but avoid runoff.
Grape, strawberry, cranberry, raspberry,	thrips,	Drench	[40-80 fl. oz./100 gal.][4-8 fl.
blackberry, blueberry	whiteflies, mites,		oz. / 10gal]
	weevils, aphids,	Foliar	8 – 64 fl.oz. [0.5 pt 2
Please note: For cranberry applications,	psyllids		qt]/acre low volume or
do not apply to flooded fields.			8-32 fl. oz. [0.5 pt 1 qt]/ 100
			gal. high volume,spray to wet
			but avoid runoff.

TABLE 1: CROPS ON WHICH LALGUARD M52 OD MAY BE USED:

		Drench	[40-80 fl. oz./100 gal.] [4-8 fl. oz. / 10gal] [4-8 fl. oz. / 10gal]
Potatoes	psylids	Foliar	8 – 64 fl.oz. [0.5 pt 2 qt]/acre low volume or 8-32 fl. oz. [0.5 pt 1 qt]/ 100 gal. high volume,spray to wet but avoid runoff.
Ornamental plants and grasses including, but not limited to: shrubs,	thrips, weevils, mites, whiteflies	Drench	[40-80 fl. oz./100 gal.] [4-8 fl. oz. / 10gal]
vines, trees, lawn, bedding plants, poinsettia		Foliar	8 – 32 fl. oz. [0.5 pt1 qt.]/100 gallons, spray to wet but avoid runoff.
Turf: institutional, residential lawns (urban and suburban)	ticks	Drench	[40-80 fl. oz./100 gal.] [4-8 fl. oz. / 10gal]
		Foliar	2 to 3 fl. oz./ 1000 ft ²

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE

Store LALGUARD M52 OD in its original container below 68°F (20°C) in a dry, locked place, out of the reach of children and out of direct sunlight. Do not use or store near heat or open flame. Use product by the expiration date noted on the label.

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 disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING

Nonrefillable container. Do not reuse or refill this container. Triple 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 ½ 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. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

NOTICE TO USER

Lallemand Specialties Inc. / LALLEMAND PLANT CARE warrants only that this product conforms to the product description on this label and is reasonably fit for the purposes set forth in the Directions for Use when used in accordance with them. However, ineffectiveness or other unintended consequences may result because of such factors as the use, storage or handling of the product contrary to the label instructions, all of which are beyond the control of Lallemand Specialties Inc. / LALLEMAND PLANT CARE. To the extent consistent with applicable law, Lallemand Specialties Inc. / LALLEMAND PLANT CARE shall not be liable for indirect or consequential damages resulting from the use, storage or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LALLEMAND SPECIALTIES INC. / LALLEMAND PLANT CARE MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

Metarhizium brunneum (formerly known as *Metarhizium anisopliae*) Strain F52

LALGUARD® M52 OD

- Bioinsecticide

ACTIVE INGREDIENT: Metarhizium brunneum (formerly known as Metarhizium anisopliae)	
Strain F52*	11.0%
OTHER INGREDIENTS**	89.0%
Total	100.0%
* Contains a minimum of 2.0 x 10 ⁹ Colony Forming Units [(CFU)]/mL of product	

** Contains petroleum distillates

KEEP OUT OF REACH OF CHILDREN CAUTION

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Causes moderate eye irritation. Harmful if inhaled, absorbed through skin, or swallowed. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

[REFER TO DIRECTIONS OF USE WITHIN THE BOOKLET]

See booklet for the directions for use, application instructions and warranty.

	FIRST AID	
IF IN EYES:	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.	
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.	
IF ON SKIN OR	Take off contaminated clothing. Rinse skin immediately with plenty of water for	
CLOTHING:	15 – 20 minutes. Call a poison control center or doctor for treatment advice.	
IF SWALLOWED:	Immediately call a poison control center or doctor. Do not induce vomiting unless	
	told to do so by a poison control center or doctor. Do not give any liquid to the	
	person. Do not give anything by mouth to an unconscious person.	
	HOTLINE NUMBER	

Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information on this pesticide product (including health concerns, medical emergencies, or pesticide incidents) call the National Pesticide Information Center at 1-800-858-7378 8:00AM - 12:00PM Pacific Time (PT), Mon-Fri. During other times call the poison control center at 1-800-222-1222.

NOTE TO PHYSICIAN

Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

Batch No.: see printing on bag Expiration Date: see printing on bag Net Contents: [1 gallon] [1 quart] [1.06 quarts] [1 pint] [1/2 pint] [XX L]

Manufactured for: Danstar Ferment AG / LALLEMAND PLANT CARE EPA Establishment Number: XXXXX-XX-XXX

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Poststrasse 30 Zug CH-6300 Switzerland

Marketed and distributed by: Lallemand Specialties Inc. / LALLEMAND PLANT CARE 6120 West Douglas Avenue Milwaukee, WI 53218 United States

[LALLEMAND LOGO]

PERSONAL PROTECTIVE EQUIPMENT

Mixers/loaders, applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Barrier laminate, nitrile rubber, neoprene rubber, or viton gloves
- Shoes and socks
- Protective eyewear

Wear a minimum of a NIOSH-approved particulate filtering facepiece respirator with any R, or P filter; <u>OR</u> a NIOSH-approved elastomeric particulate respirator with any, R, or P filter; <u>OR</u> a NIOSH-approved powered air- purifying respirator with an HE filter. Repeated exposures to high concentrations of microbial proteins can cause allergic sensitization.

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Users should:

- Remove clothing/PPE 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

For Terrestrial Uses: This product is toxic to aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. Do not contaminate water when disposing of equipment wash water or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Avoid drift or run off into storm drains, drainage ditches, or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to maximize the chances that wind, or rain will not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

PHYSICAL OR CHEMICAL HAZARDS

For spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300, day or night.

STORAGE AND DISPOSAL

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

Store LALGUARD M52 OD in its original container below 68°F (20°C) in a dry, locked place, out of the reach of children and out of direct sunlight. Do not use or store near heat or open flame. Use product by the expiration date noted on the label.

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 disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

CONTAINER HANDLING

Nonrefillable container. Do not reuse or refill this container. Triple 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 ½ 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. Then offer for recycling, if available, or puncture and dispose of in a sanitary landfill or by incineration. Do not burn, unless allowed by state and local ordinances. If burned, stay out of smoke.

Sublabel B: Residential/Home & Garden Use

(Front Panel)

LALGUARD® M52 OD

- Bioinsecticide

ACTIVE INGREDIENT: Metarhizium brunneum (formerly known as Metarhizium anisopliae)	
Strain F52*	11.0%
OTHER INGREDIENTS**	89.0%
Total	100.0%

* Contains a minimum of 2.0 x 10⁹ Colony Forming Units [(CFU)]/mL of product

** Contains petroleum distillates

KEEP OUT OF REACH OF CHILDREN CAUTION

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Causes moderate eye irritation. Harmful if inhaled, absorbed through skin, or swallowed. Avoid contact with skin, eyes, or clothing. Avoid breathing spray mist. Wash thoroughly with soap and water after handling, and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

[REFER TO DIRECTIONS OF USE WITHIN THIS BOOKLET]

FIRST AID		
IF IN EYES:	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.	
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.	
IF ON SKIN OR CLOTHING:	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.	
IF SWALLOWED:	Immediately call a poison control center or doctor. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.	
	HOTLINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. For emergency information on this pesticide product (including health concerns, medical emergencies, or pesticide incidents) call the National Pesticide Information Center at 1-800-858-7378 8:00AM – 12:00PM Pacific Time (PT), Mon-Fri. During other times call the poison control center at 1-800-222-1222.		
	NOTE TO PHYSICIAN	
Contains petroleum distillate. Vomiting may cause aspiration pneumonia.		
Detab No Loss printing		

Batch No.: see printing on bag **Expiration Date:** see printing on bag Net Contents: [1 gallon] [1 quart] [1.06 quarts] [1 pint] [½ pint] [XX L]

Manufactured for: Danstar Ferment AG / LALLEMAND PLANT CARE Poststrasse 30 Zug CH-6300 Switzerland EPA Establishment Number: XXXXX-XX-XXX

EPA Registration Number: 64137-33 [Made in] [USA][Canada][Brazil][Germany]

LALGUARD M52 OD (EPA Reg No. 64137-33) Master Label – version (3) April 10, 2023 Label amendment FAST TRACK to correct IRAC Code and update a direction for use Page 12 of 17 Marketed and distributed by: Lallemand Specialties Inc. / LALLEMAND PLANT CARE 6120 West Douglas Avenue Milwaukee, WI 53218 United States

[LALLEMAND LOGO]

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE 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.
- Discard clothing and other absorbent material that have been drenched or heavily contaminated with the product's concentrate. Do not reuse them.

ENVIRONMENTAL HAZARDS

For Terrestrial Uses: This product is toxic to aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean highwater mark. Do not contaminate water when disposing of equipment wash water or rinsate. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Avoid drift or run off into storm drains, drainage ditches, or surface waters. Applying this product in calm weather when rain is not predicted for the next 24 hours will help to maximize the chances that wind, or rain will not blow or wash pesticide off the treatment area. Rinsing application equipment over the treated area will help avoid run off to water bodies or drainage systems.

PHYSICAL OR CHEMICAL HAZARDS

For spill, leak, fire, exposure, or accident, call CHEMTREC at 1-800-424-9300, day or night.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. For any requirements specific to your State or Tribe, consult the State or Tribal agency responsible for pesticide regulation. Do not apply this product in a way that will contact adults, children, or pets, either directly or through drift.

GENERAL

LALGUARD M52 OD is composed of spores of the insect pathogenic fungus *Metarhizium brunneum* (formerly known as *Metarhizium anisopliae*). Once the product is sprayed onto foliage or drenched into the soil, insects that come into contact with the fungus will become infected. The spores of *Metarhizium brunneum* (formerly known as *Metarhizium anisopliae*) attach to the surface of the insect, germinate and begin to grow. It will penetrate the exoskeleton of the insect and grow inside the insect, causing the insect to die. Under moderate temperatures, it usually takes 3 to 7 days, once the insect is exposed, for death to occur. At very cold or hot temperatures, death may occur more slowly. The fungal spores will be more persistent when incorporated in the soil, especially in potting media, than when applied to foliage.

APPLICATION TIMING:

It is best to begin applying LALGUARD M52 OD at early stages of population development. Applications to turf may be done on a 4 to 6 week interval with an expected residual efficacy of a few months.

SITES FOR USE

LALGUARD M52 OD can be used on turf, including institutional and residential lawns (urban and suburban).

Site	PEST	APPLICATION	RATE
Turf: institutional, residential lawns (urban and suburban)	ticks	drench	40-80 fl. oz./100 gal. [4- 8 fl. oz. / 10gal]
		foliar	2 to 3 fl. oz./ 1000 ft ²

APPLICATION INTRUCTIONS

MIXING INSTRUCTIONS: Shake well before using. LALGUARD M52 OD may be applied using handheld and ground spray equipment. LALGUARD M52 OD contains emulsifiers and mixes readily in water. Fill spray tank with half of the desired amount of water and start agitation. Slowly add desired amount of LALGUARD M52 OD to spray tank. Add remaining desired amount of water. Triple rinse empty LALGUARD M52 OD container with water and add rinse water to spray tank. Continue agitation throughout spraying. Use entire contents of bottle once opened and do not mix for more than 24 hours.

PLANT SAFETY: LALGUARD M52 OD has been determined to be efficacious for the uses described on this label but has not been tested on all varieties for safety. Test LALGUARD M52 OD on a small area to check for potential damage before applying to a larger.

APPLICATION TO TURF: Apply 2 to 3 fluid ounces of LALGUARD M52 OD to 1000 square feet in residential and institutional lawns and landscape perimeters. Applications for blacklegged ticks are to be focused on the border of manicured lawns and paths creating a minimum of a 9 foot border. Applications for more mobile ticks such as lonestar tick are to be applied on a wider area and include the entire lawn. Apply using a minimum of 4 gallons of water per 1000 square feet. Make initial applications in the spring before ticks become active and continue at 4- to 8-week intervals throughout their active season.

DRENCH: [Add from 40 to 80 fluid ounces of LALGUARD M52 OD to 100 gallons of drench solution] [Add from 4 to 8 fluid ounces of LALGUARD M52 OD to 100 gallons of drench solution.]. Drench application should be thoroughly watered-in without causing water to move laterally – this will vary by soil type and moisture holding capacity at time of application. Applications should be targeted to move LALGUARD M52 OD into the top 2 inches of soil.

TANK MIX COMPATIBILITY: LALGUARD M52 OD contains a fungal active. Do not mix LALGUARD M52 OD with fungicides. LALGUARD M52 OD is physically and biologically compatible with a wide range of pesticides and spray adjuvants. If adjuvants are required when applying LALGUARD M52 OD in combination with other pesticides, contact your dealer or Lallemand Plant Care representative for specific recommendations.

Observe the most restrictive of the labeling limitations and precautions of all products used in mixtures.

CONTROLLING PESTICIDE DRIFT: Do not allow spray to drift from the application site and contact people, nontarget crops, aquatic and wetland areas, or animals. **SPRAY DRIFT**

Boom-less Ground Applications:

• Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

Handheld Technology Applications:

• Take precautions to minimize spray drift.

STORAGE AND DISPOSAL

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PESTICIDE STORAGE

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PESTICIDE DISPOSAL AND CONTAINER HANDLING

Nonrefillable container. Do not reuse or refill container.

If empty: Place container in trash or offer for recycling, if available. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain.

NOTICE TO USER

Lallemand Specialties Inc. / LALLEMAND PLANT CARE warrants only that this product conforms to the product description on this label and is reasonably fit for the purposes set forth in the Directions for Use when used in accordance with them. However, ineffectiveness or other unintended consequences may result because of such factors as the use, storage or handling of the product contrary to the label instructions, all of which are beyond the control of Lallemand Specialties Inc. / LALLEMAND PLANT CARE. To the extent consistent with applicable law, Lallemand Specialties Inc. / LALLEMAND PLANT CARE shall not be liable for indirect or consequential damages resulting from the use, storage or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, LALLEMAND SPECIALTIES INC. / LALLEMAND PLANT CARE MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.

(Note: The following information will be affixed to the unit package)

LALGUARD® M52 OD

- Bioinsecticide

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OTHER INGREDIENTS**	<u>89.0%</u>
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	poison control center or doctor for further treatment advice.		
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CLOTHING:	15 – 20 minutes. Call a poison control center or doctor for treatment advice.		
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PESTICIDE STORAGE

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