



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

May 13, 2025

Nandita Chowdhury
Global Regulatory Manager
Clarke Mosquito Control Products, Inc.
675 Sidwell Ct
St. Charles, Illinois 60174

Subject: PRIA Label and CSF Amendment – Label rate revisions, update CSFs
Product Name: DUET HD Dual-Action Adulticide
EPA Registration Number: 8329-105
Application Date: March 25, 2021, July 29, 2024
Case Number: 473671, 482674, 624082

Dear Nandita Chowdhury:

The amended label and Confidential Statement(s) of Formula (CSFs) referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, are acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the Prallethrin and Sumithrin Final and/or Interim Decisions, and has concluded that your submission is acceptable.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the 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 12 months from the date of this letter. After 12 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.

Please note that the record for this product currently contains the following CSF(s):

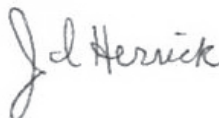
- Basic CSF dated 07/29/2024
- Alternate CSF 1 dated 07/29/2024
- Alternate CSF 2 dated 07/29/2024

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 FIFRA 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) 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 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.

Your release for shipment of the product 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.

If you have any questions, please contact Rebecca Lasko at 202-565-2469 or at lasko.rebecca@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "J. Herrick".

Jacquelyn Herrick, Product Manager 03
Invertebrate & Vertebrate Branch 1
Registration Division (7505T)
Office of Pesticide Programs

Duet® HD Dual-Action Adulticide

d-PHENOTHRIN (SUMITHRIN®) & PRALLETHRIN	GROUP	3A	INSECTICIDE
---	-------	----	-------------

[For Aerial Application]

[A Dual-Action Adulticide containing Prallethrin which provides Quick Knockdown, and Synergized Sumithrin® which provides effective kill of Adult MOSQUITOES, GNATS, BITING AND NON-BITING MIDGES, and BLACK FLIES in Outdoor Residential and Recreational Areas.]

[A Dual-Action Adulticide providing quick knockdown and kill of Adult MOSQUITOES, GNATS, BITING AND NON-BITING MIDGES, and BLACK FLIES in Outdoor Residential and Recreational Areas.]

Note to Reviewer: The following bracketed statements are optional and will be included on the final label based on applicability to commercial packaging and label design:

[Peel back book here and reseal after opening.]

[See First Aid Statement inside of booklet.]

[See First Aid Statement in booklet.]

[See additional Precautionary Statements and Directions for Use in booklet.]

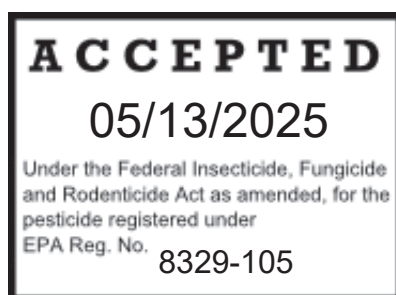
[Refer to inside of label booklet for Precautionary Statements and Directions for Use including Storage and Disposal.]

[Refer to inside of label booklet for First Aid, Precautionary Statements and Directions for Use including Storage and Disposal.]

[See label booklet for additional Precautionary Statements, Directions for Use, and Storage and Disposal.]

[See other panel(s) for additional Precautionary Statements and First Aid.]

[See other panel(s) for additional Precautionary Statements, First Aid, Directions for Use including Storage and Disposal.]



Active Ingredients:

Prallethrin: (RS)-2-methyl-4-oxo-3-(2-propynyl) cyclopent-2-enyl-(1RS)-cis, trans-chrysanthemate	1.00%
Sumithrin®: 3-Phenoxybenzyl-(1RS, 3RS, 1RS, 3SR) -2,2-dimethyl-3-(2-methylprop-1-enyl) Cyclopropanecarboxylate	5.00%
*Piperonyl Butoxide	5.00%
Other Ingredients	<u>89.00%</u>
	100.00%

Contains 0.094 pounds of Prallethrin/Gallon, 0.471 pounds of Sumithrin®/Gallon and 0.471 pounds of [Piperonyl Butoxide] [PBO]/Gallon.

* (butylcarbityl) (6-propylpiperonyl) ether and related compounds

U.S. Patent No. 10,980,235 and 12,052,992

KEEP OUT OF REACH OF CHILDREN

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Personal Protective Equipment (PPE): Mixers, loaders, applicators, and other handlers must wear long-sleeved shirt, long pants, shoes and socks. See engineering controls for additional requirements.

User Safety Requirements: 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. 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 wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet. Users should remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Users should remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change clothing.

Engineering Controls: Pilots must use an enclosed cockpit that meets the requirements listed in Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240 (d)(6)]. Human flagging is prohibited. Flagging to support aerial applications is limited to use of the Global Positioning System (GPS) or mechanical flaggers.

ENVIRONMENTAL HAZARDS

This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply to or allow drift onto blooming crops or weeds when bees are foraging the treatment area, except when applications are made to prevent or control a threat to public and/or animal health determined by a state, tribal or local health or vector control agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

This pesticide is highly toxic to aquatic organisms. Runoff from treated areas or deposition of spray droplets into a body of water may be hazardous to aquatic organisms.

Before making the first application in a season, it is advisable to consult with the state or tribal agency with primary responsibility for pesticide regulation to determine if other regulatory requirements exist.

PHYSICAL OR CHEMICAL HAZARDS

Do not use or store near heat or open flame.

DIRECTIONS FOR USE

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

Adult mosquito control applications should be limited to trained personnel.

For use only by federal, state, tribal, or local government officials responsible for public health or vector control, or by persons certified in the appropriate category or otherwise authorized by the state or tribal lead pesticide regulatory agency to perform adult mosquito control applications, or by persons under their supervision, or as allowed by state regulations for persons treating private property.

Do not apply over bodies of water (lakes, rivers, permanent streams, natural ponds, commercial fish ponds, swamps, marshes or estuaries) except when necessary to target areas where adult mosquitoes are present, and weather conditions will facilitate movement of applied material beyond the body of water to minimize incidental deposition into the water body. Do not contaminate bodies of water when disposing of equipment rinsate or wash waters.

Do not treat a site with more than 0.0036 lb of each a.i., Sumithrin and piperonyl butoxide [PBO] and 0.00072 lbs. prallethrin per acre in a single application or in any 24-hour period. Do not exceed 0.1 lb. of Sumithrin or piperonyl butoxide [PBO] or 0.02 lb. prallethrin per acre in any site in one year. More frequent applications may be made to prevent or control a threat to public and/or animal health determined by a state, tribal, or local health or vector control

agency on the basis of documented evidence of disease causing agents in vector mosquitoes or the occurrence of mosquito-borne disease in animal or human populations, or if specifically approved by the state or tribe during a natural disaster recovery effort.

Insecticide Resistance Management (IRM) Recommendations

For resistance management, Duet® HD Dual-Action Adulticide contains Group 3A insecticides. Any insect population may contain individuals naturally resistant to Duet® HD Dual-Action Adulticide and other Group 3A insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same area. Appropriate resistance-management strategies should be followed.

To delay insecticide resistance, take the following steps:

- Rotate the use of Duet® HD Dual-Action Adulticide or other Group 3A insecticides with other labeled effective mosquito adulticides that have a different mode of action.
- Adopt an integrated pest management program for insecticide use that includes surveillance, uses historical information related to pesticide use, record keeping, and which considers biological and other chemical control practices.
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, contact your local university specialist or Clarke representative.
- Contact your local extension specialist, technical advisor, and/or Clarke representative for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problem in your area.
- For further information or to report suspected resistance, contact your local Clarke representative by calling 1-800-323-5727.

IN FLORIDA: Aerial applications of this product require trained personnel to perform industry accepted assays to monitor resistance formation in targeted mosquitoes.

MANDATORY SPRAY DRIFT MANAGEMENT

Ultra Low Volume Applications

- Apply when ground wind speeds are equal to or greater than 1 mph.
- All types of applications should be conducted when temperatures at ground level are at or above 50°F.

[Note to reviewer: If Ground ULV Directions for Use are omitted from marketplace label, spray drift management for ground applications shall also be omitted]

[For Ground Applications:

- Create an optimum swath when possible. An optimum swath width can be achieved when Duet® HD Dual-Action Adulticide is applied from a truck that is being driven perpendicular to the wind direction. Direct the spray head of equipment to ensure even distribution of the spray cloud throughout the area.
- FOR BEST RESULTS treat when mosquitoes or other labeled insects are most active and weather conditions are conducive to keeping the spray cloud in the air column close to the ground.
- An inversion of air temperatures and a light breeze is preferable. Application during the cooler hours of the night or early morning is recommended.]

For Aerial Applications:

- Do not apply by fixed wing aircraft at a nozzle height less than 100 feet (30.5 m) above ground or canopy, or by helicopter at a height less than 75 feet (22.9 m) above the ground or canopy, unless specifically approved by the state or tribe based on public health needs.

USE RESTRICTIONS

IN CALIFORNIA: This product is to be applied by County Health Department, State Department of Health Services, Mosquito and Vector Control or Mosquito Abatement District personnel only.

When rotating products with other insecticides containing piperonyl butoxide, do not exceed 2 lbs PBO per acre per year.

Not for use in outdoor residential misting systems. Not for use in metered release systems. Do not dilute this product. Do not use this product in thermal fogging equipment.

USE INFORMATION

Duet® HD Dual-Action Adulticide is approved for application as an Ultra Low Volume (ULV) non-thermal aerosol (cold fog) in mosquito adulticiding programs involving outdoor residential and recreational areas where adult mosquitoes are present in annoying numbers, and in vegetation surrounding parks, woodlands, swamps, marshes, overgrown areas and golf courses.

Duet® HD Dual-Action Adulticide may be applied over crops or to areas favoring drift over crops, including row, tree, fruit, citrus, pasture and other areas where agricultural enterprises take place.

SPRAY DROPLET SIZE DETERMINATION

[Note to reviewer: If Ground ULV Directions for Use are omitted from marketplace label, spray droplet size determination for ground-based application shall also be omitted]

[Ground-based, wide area mosquito abatement application: Spray equipment must be adjusted so that the volume median diameter (VMD) is less than 30 microns ($Dv\ 0.5 < 30\ \mu m$) and that 90% of the spray is contained in droplets smaller than 50 microns ($Dv\ 0.9 < 50\ \mu m$). Directions from the equipment manufacturer or vendor, pesticide registrant or a test facility using a laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.]

Aerial Equipment, wide area mosquito abatement application: Spray equipment must be adjusted so that the volume median diameter produced is less than 60 microns ($Dv\ 0.5 < 60\ \mu m$) and that 90% of the spray is contained in droplets smaller than 115 microns ($Dv\ 0.9 < 115\ \mu m$). The effects of flight speed and, for non-rotary atomizers, nozzle angle on the droplet size spectrum must be considered. Directions from the equipment manufacturer or vendor, pesticide registrant, or a test facility using a wind tunnel and laser-based measurement instrument must be used to adjust equipment to produce acceptable droplet size spectra. Application equipment must be tested at least annually to confirm that pressure at the nozzle and nozzle flow rate(s) are properly calibrated.

[GROUND ULV APPLICATION]

[To control Mosquitoes and other listed insects, apply Duet® HD Dual-Action Adulticide at a flow rate of 2.0 to 5.9 fluid ounces per minute at an average vehicle speed of 10 MPH using a swath width of 300 feet for acreage calculations. Do not apply with hand held equipment. . Under normal residential conditions a flow rate of 3.6 fluid ounces per minute is recommended. If a different vehicle speed is used, adjust rate accordingly. These rates are equivalent to 0.00024 to 0.00072 pounds of Prallethrin and 0.0012 to 0.0036 pounds of Sumithrin® and Piperonyl Butoxide per acre. Vary flow rate according to vegetation density and mosquito population. Use higher flow rate in heavy vegetation or when populations are high.]

[Use the [following table][table below][table on the following panel] to calculate application rates:]

Pounds a.i./Acre			Duet® HD Dual-Action Adulticide Fl. Oz./Acre	Application Rates (Fl.oz./Minute) at vehicle speeds of:			
Prallethrin	Sumithrin®	PBO		5 MPH	10 MPH	15MPH	20MPH
0.00072	0.0036	0.0036	0.98	3.0	5.9	8.9	11.9
0.00044	0.0022	0.0022	0.60	1.8	3.6	5.4	7.2
0.00036	0.0018	0.0018	0.49	1.5	3.0	4.4	5.9
0.00024	0.0012	0.0012	0.33	1.0	2.0	3.0	4.0

AERIAL APPLICATION

Duet® HD Dual-Action Adulticide may be applied at rates of 0.33 to 0.98 fluid ounces of Duet® HD Dual-Action Adulticide per acre by fixed wing or rotary aircraft equipped with suitable ULV application equipment. Appropriate spray systems include rotary atomizers, flat fan, high pressure, and high pressure impaction nozzles characterized and oriented to achieve the droplet characteristics specified in this label.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in a cool, dry place. Keep container closed.

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:

[For Nonrefillable containers of 5 gallons or less] [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 $\frac{1}{4}$ full with mineral oil and recap. Shake for 10 seconds. Pour rinsate into application equipment or a rinse 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. Offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.]

[For Nonrefillable containers over 5 gallons:] [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 the application equipment or a mix tank. Fill the container $\frac{1}{4}$ full with mineral oil. 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. Offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.]

[For Refillable Containers] [Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. 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 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into rinsate collection system. Repeat this rinsing procedure two more times. Offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.]

FOR MORE INFORMATION CALL: 1-800-323-5727

IN CASE OF MEDICAL EMERGENCY, CALL THE INTERNATIONAL POISON CONTROL CENTER 1-800-214-7753

IN CASE OF TRANSPORTATION EMERGENCY, CALL INFO-TRAC 1-800-535-5053

[NOTICE: To the extent consistent with applicable law, [seller] [Clarke Mosquito Control Products, 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. To the extent consistent with applicable law, Buyer assumes all risk of use/handling of this material when use and/or handling is contrary to label instructions.]

Manufactured [By] [For]
CLARKE MOSQUITO CONTROL PRODUCTS, INC.
159 N. GARDEN AVENUE
ROSELLE, ILLINOIS 60172

EPA Reg. No.: 8329-105

EPA Est. No.:

NET CONTENTS: _____

LOT NO.: _____

[DATE OF MANUFACTURE:]

[Sumithrin® - Trademark of Sumitomo Company Ltd.]

[Duet® - Registered Trademark of Clarke Mosquito Control Products, Inc.]