

File



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

APR - 6 1994

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

Nancy Huebl
SANDOZ AGRO INC.
1300 East Touhy Avenue
Des Plaines, IL 60018

Subject: Label Amendment Submission of 09/20/93 in Response to PR Notice 93-7
EPA Reg. No. 55947-48
THIOLUX DRY FLOWABLE MICRONISED SULFUR

Dear Registrant:

The labeling cited above and submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is accepted subject to the comments reflected on the enclosed sheet. A copy of your proposed labeling stamped "ACCEPTED WITH COMMENTS" is enclosed.

WHAT THIS ACCEPTANCE MEANS:

Based on your certification, the Agency has accepted the labeling changes that are necessary to comply with the Worker Protection Standard (WPS) labeling requirements of 40 CFR part 156, subpart K, described in PR Notices 93-7 and 93-11. Any other labeling changes submitted in connection with this amendment application but not directly related to compliance with the WPS have not been reviewed or accepted by the Agency. If you wish to make such changes, you must submit a separate amendment application proposing them. If your product is currently suspended, the acceptance of this labeling amendment does not affect the suspension in any way.

WHAT YOU NEED TO DO NEXT:

By the next label printing make all the specified changes to your labeling. Send to EPA one (1) copy of the final printed labeling:

- BEFORE selling or distributing any product bearing the final printed labeling
- AND
- WITHIN one year from date of this acceptance.



Recycled/Recyclable
Printed with Soy/Canola Ink on paper that
contains at least 50% recycled fiber

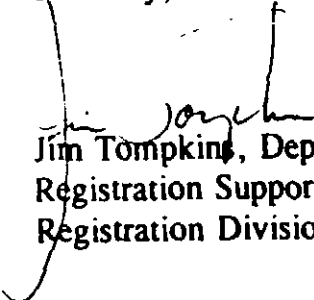
Submit the final printed labeling via the U.S. Postal Service to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs (7505C)
U.S. Environmental Protection Agency
401 M Street, SW
Washington, D.C. 20460-0001

Hand or courier deliveries of final printed labeling may be made to:

Document Processing Desk (FIN-LABEL)
Office of Pesticide Programs
Room 266A, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202

Sincerely,


Jim Tompkins, Deputy Chief
Registration Support Branch
Registration Division (7505W)

Attachment

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division

Nancy Huebl
SANDOZ AGRO INC
1300 EAST TOUHY AVE
DES PLAINES IL 60018

Comment for: EPA Reg Nr.55947-48
THIOLUX DRY FLOWABLE MICRONISED SULFUR

The following specific comments pertain to your WPS
labeling submission concerning the product
cited above:

Remove the statement "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." from its current position within
the Agricultural Use Box and place it above the Agricultural
Use Box.

THIOLUX

DRY FLOWABLE MICRONIZED SULFUR

ACTIVE INGREDIENT: By Wt.
Sulfur: 80%
INERT INGREDIENTS: 20%
TOTAL: 100%

KEEP OUT OF REACH OF CHILDREN
CAUTION
SEE PRECAUTIONARY STATEMENTS
AVOID BREATHING SPRAY MIST

STATEMENT OF PRACTICAL TREATMENT

If on skin: Wash with soap and plenty of water. Get medical attention.

If in eyes: Flush eyes with plenty of water for at least fifteen minutes and get medical attention.

If inhaled: Remove victim to fresh air.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if inhaled or absorbed through skin. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling. ~~Remove contaminated clothing and wash before reuse.~~

ACCEPTED
with COMMENTS
In EPA Letter Dated

APR 6 1994

Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.

55947-48

Personal Protective Equipment:

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

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.

Engineering controls statements:

When handlers use closed systems, 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.

BEST AVAILABLE COPY

User Safety Recommendations:

Users should:

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

For terrestrial uses, 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 apply when weather conditions favor drift from treated areas. Do not contaminate water by cleaning of equipment and when disposing of equipment washwaters.

PHYSICAL AND CHEMICAL HAZARDS

Sulfur dust suspended in air ignites easily. Keep away from heat, sparks, and flame. Do not smoke while applying this product.

RE-ENTRY STATEMENT

~~Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information. Do not enter into treated area until at least 24 hours after the completion of application to the area unless wearing the protective clothing listed below. During early reentry into treated areas (less than 24 hours after the completion of application) to perform hand labor tasks, wear long pants (or coveralls), long sleeved shirt, shoes, socks, chemical/water resistant gloves, goggles or a face shield. Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information, "Area treated with THIOLUX® on (date). Do not enter without appropriate protective clothing for 24 hours." Pesticide Handlers: During mixing, loading and application of this product, wear long pants (or coveralls), long sleeved shirt, shoes, socks, chemical/water resistant gloves, goggles, or face shield.~~

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DIRECTIONS FOR USE

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

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 interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

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.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 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
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

Pour needed amount into spray tank under agitation. If necessary, add a few drops of oil to avoid foaming.

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

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. Must be stored under dry conditions.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Disposal: 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.

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USE PRECAUTIONS

Some crops are susceptible to injury from sulfur under certain climatic conditions. The user is advised not to use on any crop unless local use has proven sulfur to be safe in that locality. Sulfur may burn foliage or cause fruit injury when temperatures are excessively high. Do not apply at such times. Do not apply to or allow spray drift on sulfur sensitive plants such as apricots, cranberries, spinach. Apply only to dormant Anjou pears. Do not use within two (2) weeks of an oil treatment, except for dormant sprays on pears and apples. For citrus, do not apply within 21 days of an oil application. Follow all other label directions or precautions as indicated. When growing crops for processing consult processor before applying sulfur.

NUTRIENT USE

THIOLUX applications will provide sulfur for the plants' nutrient requirements and should be considered in the total plant nutrient applications. THIOLUX can be used as a micronutrient supplement by either foliar or soil application. THIOLUX is recommended on the following crops: Alfalfa, almonds, avocados, apples, barley, all beans, broccoli, cabbage, cauliflower, carrots, citrus, corn, grapes, lawns, melons, nectarines, pears, peaches, peppers, plums, prunes, potatoes, peanuts, sorghum, soybeans, sugar beets, strawberries, tomatoes, turnips, walnuts, watermelons, wheat and most other crops. Consult your State Agricultural Experimental Station or Extension Specialist for advice in selecting treatments to best fit local conditions.

LIMITATION OF WARRANTY AND LIMITATION OF LIABILITY

NOTICE: Read this Limitation of Warranty and Limitation of Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

It is impossible to eliminate all risks inherently 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 Sandoz or seller. All such risks shall be assumed by buyer or user.

Sandoz warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, under normal use conditions, subject to the risks described above. **SANDOZ MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.**

In no event shall Sandoz or seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OR SANDOZ OR SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SANDOZ OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

Sandoz and the seller offer this product, and buyer and user accept it, subject to the foregoing limitations of warranty and limitation of liability, which may not be modified by any oral or written agreement.

NET WEIGHT
50 POUNDS
MADE IN FRANCE

SANDOZ
AGRO, INC.
DES PLAINES, IL 60018

EPA Est. No. 36841-FR-01
EPA Reg. No. 55947-48
8700150-20-07-AA

THIOLUX® is a registered
trademark of Sandoz Ltd.
SANDOZ AGRO, INC. 1992

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DIRECTIONS FOR DILUTION

Dilute Application: Ground Application - Apply specified rate in 20 to 60 gallons of water per acre.

Orchard Application: Apply specified rate in 100 to 800 gallons of water per acre.

Concentrate Application: Ground Application - Apply specified rate in not less than 5 gallons of water per acre.

Orchard Application: Apply specified rate in 20 to 100 gallons of water per acre. Special concentrate equipment is necessary for these uses.

Air Application: Apply specified rate in 3 to 20 gallons of water per acre. Orchard rates should not be applied in less than 10 gallons of water per acre.

Use lower recommended rates when using concentrate equipment. Use higher rates when using dilute applications.

Crop	Pest	Lbs. per Acre
ALFALFA, COTTON Apply as needed	Atlantic mite, Red spider mite	3-5
ALMONDS, CHERRIES, NECTARINES, PEACHES, PLUMS, PRUNES Apply at bloom or early petal fall. Repeat as necessary, usually 10 to 14 days after a period of wet weather. For brown rot of fruit, apply when fruit starts to ripen.	Brown rot blossom blight, Cherry leafspot, Powdery mildew, Scab, Leafspot, Silver mite, Flat mite, Red spider mite	10-30
APPLES, PEARS Apply at pre-bloom and petal fall. Apply with cover sprays throughout the season. Dormant applications with oil may be made to apples and pears. Apply only to dormant Anjou pears.	Powdery mildew, Scab, Blister mite, Red spider mite	10-30
ASPARAGUS Use after cutting stops. Irrigate and cultivate before applying the sulfur. Repeat at 7 to 10 day intervals throughout the season.	Rust	10-30
AVOCADOS Apply as needed	Brown mite	10-30
BARLEY, CORN, OATS, RYE, SORGHUM, SOYBEANS, WHEAT Apply when disease first appears and repeat as necessary or with the regularly scheduled insect program.	Suppression - Red spider mite, Two-spotted mite, Grass banks mite, Pacific mite Control - Atlantic mite (small grain only), Powdery mildew (soybeans only)	6 For Soybeans 7.5-12.5
BEANS, PEAS, POTATOES, RUTABAGAS, TURNIPS Start in early leaf stage. Repeat application every 10 to 14 days with or without pesticides immediately after a rain.	Powdery mildew, Rust, Red spider mite	3-10
BROCCOLI, BRUSSEL SPROUTS, CABBAGE, CAULIFLOWER, COLLARDS, KALE, PEPPERS Start in early leaf stage. Repeat application every 10 to 14 days with or without pesticides immediately after a rain.	Powdery mildew, Rust, Red spider mite	3-5
BLACKBERRIES, BOYSENBERRIES, GOOSEBERRIES, LOGANBERRIES Begin when new shoots are 6 inches long and before blossoms open or when disease first appears. Repeat at 7 to 10 day intervals or as necessary.	Powdery mildew	6-15
BLUEBERRIES, CURRANTS, DEWBERRIES, HUCKLEBERRIES Begin when new shoots are six inches long and before blossoms open or when disease first appears. Repeat at 7 to 10 day intervals or as necessary.	Powdery mildew	5-10
CARROTS, GARLIC, ONIONS Apply when the disease first appears and repeat as needed.	Petrobia mite and Powdery mildew	3-10
CITRUS Apply in any spray - NOT CONTAINING OIL - or following oil by 21 days.	Flat mite, silver mite, Rust mite, Bud mite, Red spider mite, Six spotted mite, Thrips, Yuma spider mite	6-20
CUCURBITS Apply when the disease first appears and repeat as necessary. Application intervals throughout the growing season 10 to 14 days.	Control - Powdery mildew	4-6
GRAPES Apply in late dormant or with cutworm spray, early shoot period and through season on 14 day schedule or with pesticides.	Powdery mildew, Bud mite, Blister mite, Red spider mite	6
WALNUTS Repeat as necessary. Apply with mite sprays during season to increase the effectiveness. CAUTION: Certain varieties of walnuts are sensitive to sulfur sprays under certain conditions. Do not apply unless the varieties are known to be tolerant of sulfur.	Pacific mite, Almond mite, Two-spotted mite, Red spider mite.	10-20
MANGOES Begin before bloom. Repeat in bloom, after fruit set and 3 weeks later or as necessary.	Powdery mildew	10-30
PEANUTS Start in early leaf stage. Repeat applications as necessary, usually 10 to 24 days.	Rust, Red spider mite, Leaf spot	3-5

PEPPERMINT, SPEARMINT	Powdery mildew	4-6
Apply when mint is 5-6' tall or when disease appears. Repeat twice, at 30 day intervals. Do not apply within 30 days of harvest.		
RASPBERRIES	Powdery mildew	6-15
Spray each week starting at first bloom color. Continue until all fruit is set, then repeat as weather requires.		
STRAWBERRIES	Powdery mildew, Red spider mite	5-10
Start in early leaf stage, repeat application with or without pesticides. For Powdery mildew, begin at first signs of disease and repeat as necessary. Do not use on sulfur sensitive varieties.		
SUGAR BEETS	Powdery mildew, Red spider mite	5-10
Apply at 10 to 30 day intervals with or without other pesticides as soon as the first symptoms appear.		
TABLE BEETS	Powdery mildew, Red spider mite	3-5
Apply at 10 to 30 day intervals with or without other pesticides as soon as the first symptoms appear.		
TOMATOES	Russet mite, Powdery mildew	3-10
Begin as soon as first symptoms appear. Thorough coverage is required.		
Ornamentals	Pest	Lbs. per Acre
		By ground 3-10
		By air 3-20
Apply in aqueous spray ensuring complete plant coverage. Begin when disease first appears and repeat at 5 to 10 day intervals.		
ASTERS, CARNATIONS	Control - powdery mildew	
CALENDULA, CHERRY LAURELS,	Control - Leaf spot and Powdery mildew	
CHRYSANTHEMUMS, HOLLYHOCK, SMILAX		
CLEMATIS, COLUMBINE, IVY (ENGLISH),	Control - Leaf spot	
LAUREL, PETUNIA, SAGE		
COSMOS, CREPE MYRTLE, DAHLIA, DELPHINIUM,	Control - Powdery mildew	
GLADIOLUS, LIGUSTRUM, SUNFLOWERS,		
SWEET PEAS, VIOLETS, ZINNIAS		
ROSES	Control - Powdery mildew and Black spot	