



PM 22 9779-337 page 177

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

WASHINGTON, D.C. 20460

DEC 2 1996

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Steve Rogosheske
Riverside/Terra Corporation
600 Fourth Street
P.O. Box 6000
Sioux City, Iowa 51102-6000

Subject: Terranil™ S
EPA Registration Number 9779-337
Your label and Basic CSF amendments dated
September 19, 1996

Dear Mr. Rogosheske,

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

The subject amended Confidential Statement of Formula (CSF), submitted in connection with registration under FIFRA, is not acceptable, for the following reasons:

1. The EPA Registration Number for the second ingredient must be present in Block 12.
2. The third ingredient has more than one different Brand Name and supplier that is presented on consecutive lines and joined by one or more "OR"s. Blocks 13.a. and 13.b. for each of these iterations of the third ingredient are filled out but this information may occur only once for the ingredient in an "or" situation. Therefore, delete the contents of blocks 13.a. and 13.b. for all but the first iteration of this ingredient.

A copy of the subject label stamped "ACCEPTED" is attached, for your files. If you have any questions about this letter, please contact John Bazuin at (703)305-7381.

Sincerely yours,

for Philip V. Errico
Acting Product Manager (22)
Fungicide-Herbicide Branch
Registration Division (7505C)

Attachment: A copy of the subject label stamped "ACCEPTED"

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R[®]

TERRANIL™ S

AGRICULTURAL FUNGICIDE/MITICIDE

ACTIVE INGREDIENTS

Chlorothalonil (tetrachloroisophthalonitrile)	19.15%
Sulphur	27.25%
INERT INGREDIENTS	<u>53.60%</u>
Total	100.00%

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RECD EPA/OPP/DPD1

Contains ~~2.29~~ 2.08 pounds chlorothalonil per gallon.

KEEP OUT OF REACH OF CHILDREN

WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail).

STATEMENT OF PRACTICAL TREATMENT

- IF SWALLOWED:** Call physician or poison control center. Drink one or two glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.
- IF INHALED:** Remove victim to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.
- IF ON SKIN:** Wash thoroughly with soap and water. Get medical attention.
- IF IN EYES:** Call a physician. Hold eyelids open and flush with a steady gentle stream of water for 15 minutes.

PRECAUTIONARY STATEMENTS

WARNING

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

May be fatal if inhaled. Causes substantial but temporary eye irritation. Harmful if swallowed or absorbed through skin. Do not breathe dust or spray mist. Do not get in eyes. Avoid contact with skin or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear long-sleeved shirt and long pants, waterproof gloves, shoes plus socks, protective eyewear and a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).

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

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.

See side panel for additional PRECAUTIONARY STATEMENTS.

**ACCEPTED
with COMMENTS
In EPA Letter Dated**

DEC 2 1996

**Under the Federal Insecticide,
Fungicide, and Rodenticide Act
as amended, for the pesticide
registered under EPA Reg. No.
9779-337**

EPA REG. No. 9779-337

EPA Est. No. 9779-

Manufactured For
RIVERSIDE/TERRA CORPORATION
P. O. Box 6000, Sioux City, Iowa 51102-6000
Riverside Serves Agriculture. Agriculture Serves Everyone.

NET CONTENTS
GALLONS

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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

This product is toxic to fish, aquatic invertebrates, and marine/estuarine organisms. Runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. 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. Apply only to areas specified on label. Do not contaminate water when disposing of equipment washwaters.

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 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 48 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 and protective eyewear.

STORAGE AND DISPOSAL

DO NOT CONTAMINATE WATER, FOOD, OR FEED BY STORAGE AND DISPOSAL

STORAGE

Store in a cool place. Protect from excessive heat. If frozen, may generally be restored after thawing and thorough mixing.

DISPOSAL

Pesticide Disposal: Pesticide wastes are toxic. Improper disposal of excess pesticide, pesticide spray, or rinsate is a violation of Federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Do not reuse empty container. Triple rinse or equivalent. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

GENERAL INFORMATION

TERRANIL S is an excellent fungicide when used according to label directions for control of a broad spectrum of plant diseases. TERRANIL S can be used effectively in dilute or concentrate sprays. Thorough, uniform coverage is essential for disease control. Do not combine TERRANIL S in the spray tank with pesticides, surfactants or fertilizers, unless your prior use has shown the combination physically compatible, effective and noninjurious under your conditions of use. Do not use on greenhouse grown crops. **DO NOT USE WITHIN FOUR (4) WEEKS OF AN OIL SPRAYING.**

The sulfur in TERRANIL S may cause injury to plants if used improperly or under unfavorable weather conditions. During periods of high temperature sulphur may burn foliage. Do not make TERRANIL S applications at such times.

Note: Sulphur will cause severe fruit and leaf injury to sulphur sensitive crops. Do not apply or allow to drift to apricots, d'Anjou and Comice pears, cranberries, cucurbits (cucumbers, cantaloupes, melons, squash), filberts, spinach, tung trees, walnuts or other sensitive plants.

MIXING:

Slowly invert container several times to assure uniform mixture. The required amount of TERRANIL S should be added slowly into the spray tank during filling. With concentrate sprays, premix the required amount of TERRANIL S in a clean container and add to the spray tank as it is being filled. Keep agitator running when filling spray tank and during spray operations. Do not allow mixture to stand. Failure to maintain agitation will cause the sulphur in TERRANIL S to settle and may necessitate manual stirring to redisperse. Sulphur is highly corrosive to equipment; therefore, spray equipment should be cleaned thoroughly after each day's spraying.

Dosage rates on this label indicate pints of TERRANIL S per acre unless otherwise stated. Under conditions favoring disease development, the high rate specified and shortest application interval should be used. Applications should be made in sufficient water to obtain adequate coverage of foliage. Gallonage to be used will vary with crop and amount of plant growth. Spray volume usually will range from 20 to 150 gallons (approximately 80 to 600 liters) per acre for dilute sprays and 5 to 10 gallons (approximately 20 to 40 liters) per acre for concentrate ground sprays and aircraft applications. Both ground and aircraft methods of application are recommended unless specific directions for ground application only are given for a crop. Application through sprinkler irrigation systems is not recommended unless specific directions are given for a crop. See application and calibration instructions below.

APPLICATION AND CALIBRATION TECHNIQUES FOR SPRINKLER IRRIGATION

Apply this product only through the following types of irrigation systems. Do not apply this product through any other type of irrigation system. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Experiment Station specialists, equipment manufacturers, or other experts. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

- A. Center Pivot, Traveler, Big Gun, Motorized Lateral Move, End Tow, and Side (Wheel) Roll Irrigation Equipment: Operate system and injection equipment at normal pressures recommended by the manufacturer of injection equipment used. Fill tank of injection equipment with water. Operate system for one complete circle for center pivot or one complete run for the other recommended equipment, measuring time required, amount of water injected, and acreage contained in circle or run. Mix recommended amount of TERRANIL S for acreage to be covered into same amount of water used during calibration and inject into system continuously for one revolution or run, but continue to operate irrigation system until TERRANIL S has been cleared from last sprinkler head. Spray mixture in the chemical supply tank must be agitated at all times, otherwise settling and uneven application may occur.
- B. Solid Set and Hand Move Irrigation Equipment: Determine acreage covered by sprinkler. Fill tank of injection equipment with water and adjust flow to use contents over a thirty to forty-five minute period. Mix desired amount of TERRANIL S for acreage to be covered into quantity of water used during calibration and operate entire system at normal pressures recommended by the manufacturer of injection equipment used for amount of time established during calibration. Provide constant mechanical agitation in the mix tank to insure that TERRANIL S will remain in suspension during the injection cycle. TERRANIL S can be injected at the beginning or end of the irrigation cycle or as a separate application. Stop injection equipment after treatment is completed and continue to operate irrigation system until TERRANIL S is cleared from last sprinkler head.

SAFETY DEVICES

(1) The systems designated above must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. (2) All pesticide injection pipelines must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. (3) The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. (4) The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. (5) The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. (6) Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. (7) Do not apply when wind speed favors drift beyond the area intended for treatment.

SYSTEMS CONNECTED TO PUBLIC WATER SOURCES

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

For additional instructions on safety precautions, refer to statements (2), (3), (4), (6), and (7) in the section on SAFETY DEVICES.

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Beans (Snap)	Rust	4 to 8 pints	Use in sufficient water to obtain adequate coverage. Begin applications during early bloom stage or when disease first threatens and repeat at weekly intervals as necessary to maintain control. Do not apply within 7 days of harvest. Do not graze treated areas or feed treated plant parts to livestock.
	Botrytis Blight (gray mold) Powdery mildew Red Spider mites	8 pints	
Cabbage, Cauliflower, Broccoli, Brussels sprouts	Alternaria leaf spot, Downy mildew	4½ pints	Use in sufficient water to obtain adequate coverage. Begin applications after transplants are set in field, or shortly after emergence of field-seeded crop, or when conditions favor disease development. Repeat at 7 to 10 day intervals or as necessary to maintain control. Do not apply within 7 days of harvest to Chinese cabbage or Chinese broccoli.
	Ring spot (California only)	5½ pints	For field seeded Brussels sprouts, begin applications at time of early sprout development or when conditions favor disease development. Repeat at 7 to 10 day intervals or as necessary to maintain control.
	Powdery mildew Red Spider mites	5½ pints	Apply in 8 gallons of water by air. Apply at first sign of infection and repeat at 3 week intervals.
Peanut	Cercospora (early) leaf spot, Cercosporidium (late) leaf spot	3 to 4½ pints	Apply in sufficient water for coverage when leaf wetness first occurs or 30 to 40 days after planting. Repeat at 10 to 14 day intervals. When conditions favor late leaf spot or when rust or web blotch occur, apply 4½ pints per acre at 10 day intervals for the remainder of the season. Do not apply within 14 days of harvest. Do not allow livestock to graze in treated areas. Do not feed hay or threshings from treated fields to livestock. TERRANIL S may be applied through sprinkler irrigation equipment. Use 4½ pints per acre in solid set, portable wheel move, center pivot or traveling gun sprinkler irrigation equipment. See calibration directions preceding this section.
	Rust, Web blotch	4½ pints	
Potato	Early blight, Late blight, Botrytis vine rot (Botrytis spp.)	3 to 4½ pints	Use in sufficient water to obtain adequate coverage. Begin applications when plants are 6 to 8 inches high or when disease threatens and continue at 7 to 10 day intervals or as needed to maintain disease control. Under severe disease conditions, use 4½ pints per acre on a 7 day schedule. TERRANIL S may be applied through sprinkler irrigation equipment (solid set, portable wheel move or center pivot systems only). Do not exceed a 10 day interval between applications when using this technique. See calibration directions preceding this section.
	Dryland culture only: Early blight, Late blight	2½ to 4½ pints	
	Powdery mildew	4½ pints	

CROP	DISEASES	RATE PER ACRE	APPLICATION DIRECTIONS
Tomato	FOLIAGE: (apply every 7 to 10 days): Early blight, Late blight, Gray leaf spot, Gray leaf mold, Septoria leaf spot	4½ to 5½ pint	Apply in sufficient water to obtain adequate coverage. Begin applications when dew or rain occur and disease threatens. Use the highest rate and shortest interval specified when disease conditions are severe. TERRANIL S may be applied through sprinkler irrigation equipment (solid set or portable wheel move systems only). See calibration directions preceding this section.
	FRUIT: (apply every 7 to 14 days beginning at fruit set): Anthracnose, Alternaria fruit rot (black mold), Rhizoctonia fruit rot, Botrytis gray mold, Late blight fruit rot, tomato russet mite.	5 to 8½ pints	

TREE AND ORCHARD CROPS

SPRAY VOLUME (Gallons Per Acre)

Tree and Orchard Crops	Crop	Dilute	Concentrate
Apply TERRANIL S in sufficient water and with proper calibration to obtain uniform coverage of tree canopy. Application with ground equipment is preferable to aerial application because ground applications generally give better coverage of the tree canopy. If application with ground equipment is not feasible, TERRANIL S may be applied with aircraft using at least 20 gallons per acre. When concentrate sprays are used or when treating non-bearing or immature trees, the lower rate of TERRANIL S listed may be used. Do not allow livestock to graze in treated areas. The following spray volumes are recommended as gallons of spray per acre:	Peach, Nectarine, Apricot, Tart Cherry, Plum, Prune	300	20 to 150
	Sweet Cherry	400	20 to 200

797

		TERRANIL S RATE PER		
CROP	DISEASES	ACRE	100 GAL*	APPLICATION DIRECTIONS
Peach, Nectarine, Apricot, Cherry, Plum, Prune	Leaf curl, Coryneum blight (shothole)	9 to 12 pints	3 to 4 pints	For best control of both diseases apply at leaf fall in late autumn, using sufficient water and proper sprayer calibration to obtain uniform coverage. When conditions favor high disease levels, use the high rate of application and apply once or twice more in mid to late winter before budswell. If the leaf fall application is not practical, application of TERRANIL S for control of leaf curl may be made at anytime prior to budswell the following spring. Where Coryneum blight (shothole) occurs, also apply at budbreak to protect newly emerging leaves and at shuck-split to prevent fruit infections.
Peach, Nectarine, Apricot, Cherry, Plum, Prune (continued)	Brown rot blossom blight Powdery mildew on peaches Scab on peaches, nectarines	9 to 16 pints	3 to 4 pints	Use 12 to 16 pints per acre on trees taller than 20 ft. and 9 to 12 pints per acre on smaller trees. Make one application at popcorn (pink, red, or early white bud) and a second application at full bloom. If weather conditions favor disease development, make an additional application at petal fall.
	Cherry leaf spot; peach, nectarine, apricot scab	9 to 12 pints	3 to 4 pints	In addition to the bloom applications listed above, make one application at shuck-split and before harvest. If additional disease control is needed before harvest, use another registered fungicide. For control of cherry leaf spot after harvest, make one application to foliage within 7 days after fruit is removed. In orchards with a history of high leaf spot incidence, make a second application 10-14 days later.

*Volumetric rates to be used only with full dilute spray volume specified on this label for tree and orchard crops.

NOTICE: Seller warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to Seller, and Buyer assumes the risk of any such use.

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