

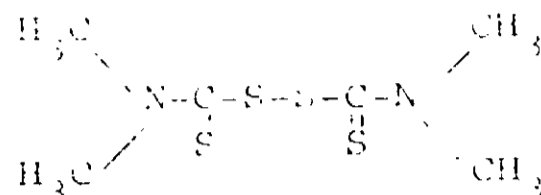
TECHNICAL DATA SHEET

April 7, 1971
ED: VTM-95-1f

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THIAMIDE EM-91
Insecticide and Fungicide
Active Ingredient: Thiamethoxam

CHEMICAL COMPOSITION: 95% thiamide (tetramethylthiuram disulfide) 5%

STRUCTURAL FORMULA:



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MOLECULAR FORMULA: C₆H₁₂N₂S₄

MOLECULAR WEIGHT: 240.44

ASSAY: 95% thiamide (tetramethylthiuram disulfide)

PHYSICAL FORM: Powder

COLOR: White to cream

SPECIFIC GRAVITY: 1.42 (approx.)

BULKING VALUE: Approx. 20 lbs. per cubic foot

STABILITY: May be stored indefinitely in closed containers. Keep dry.

SOLUBILITY: Practically insoluble in water, dilute caustic and gasoline. Soluble in benzene, carbon disulfide, chloroform, methyl 2-pyrrolidone.

COMPATIBILITY: Compatible with common insecticides and acaricides, such as BHC, DDT, diazinon, dieldrin, EPN, heptachlor, malathion and parathion, and with fungicides and nematicides, such as calcium chloride, captan, VC-13 and zinc.

VOLATILITY: Not volatile

TOXICOLOGY: Acute Oral LD₅₀ (Mice) = 3,000 mg/kg.
Rat LD₅₀ = 1,500 mg/kg.
Rat LD₅₀ = 1,000 mg/kg.

R-A-V-391

R. T. VANDERBILT COMPANY, Inc., 230 PARK AVENUE, NEW YORK, N. Y. 10017

CATTLE:

Keep out of reach of Children.

Use only for treatment of Disease
Do not use for control of parasites or
control of insects or mites. Do not use
for control of ticks. Do not use for
control of lice. Do not use for
control of ear mites. Do not use for
control of eye mites.

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Do not use for control of ticks. Keep out
of lakes, streams and ponds. Do not apply
when weather conditions favor drift or
spray from areas treated. Containers
should be disposed of by burning. (Keep
out of smoke).

Directions For Use As A Spray

All Recommendations Based on 100 Gallons of Spray Except as Noted

APPLES:

Scab - 1 1/8 to 1 1/3 pounds in pre-bloom, calyx, and early cover
sprays; 3/4 to 1 1/8 pounds later cover sprays.

Rust - Use all recommendations through first cover and include a
pre-bloom spray of 1/2 pound.

Fiber Degradation - Use all recommendations as long as one or more of
the following diseases may appear - Apple Blotch, Bitter Rot, Black Pox,
Black Rot (fruit and foliage), Botrytis, Brodiaea Spot, Brodiaea Spot,
Fly Speck, and Sooty Blotch.

BANANAS:

Black Rot and Stem End Rot - Caused respectively by *Thielaviopsis*
andromedea and *Thielaviopsis paradoxa* - post-harvest application to
crowns and fruit following removal of stems, 1 1/3 pounds and apply 5
gallons per 10 trays (4 lbs. each). Also as a pre-harvest application to
stem and crowns, use all water.

CHERRY: Early Blight (C. rosopora), Late Blight (Sclerotia) and Damping-Off:

Plant Beds - 8-10 pound. Apply 15 to 25 gallons/1200 sq. ft. at 3-day
intervals.

Field - Limited to Florida only. 1 1/3 pounds at 3- to 7-day intervals
depending on severity of conditions. Do not apply more than 200 gallons
per acre. No applications later than 7 days before harvest. Remove
fruit by straining, draining and washing.

PEACHES:

Brown Rot - 1 1/2 to 1 1/3, each at 3- to 4-day intervals during
bloom, at start of fall and two weeks later. Apply again one month before
harvest or when rot is apparent on green fruit and at 7-day intervals.
No applications later than 7 days before harvest.

STRAWBERRIES:

Gray Mold (Botrytis) - 1 1/3 to 1 1/4 pounds using up to 200 gallons
acre. Begin at early blossom stage. Repeat at 7-day intervals as
necessary. Remove residues by washing if applications are made within
3 days of picking.

TOMATOES:

Botrytis Gray Mold and Rhizoctonia Fruit Rot - 1 pound when plants are
set in the field and at 3- to 5-day intervals. If late blight, gray leaf
spot or other foliage diseases are present, use combination of 3/4 pound
with 1 1/2 pounds of either maneb or zinab wettable powder.

ORNAMENTAL GRASSES AND ORNAMENTAL TURF:

Large Brown Patch and Dollar Spot - 2 1/2 oz./10 gallons/1000 sq. ft.
as a preventive, applied at 7-day intervals throughout the warm season.
3 1/2 oz./10 gallons/1000 sq. ft. as a curative, beginning when disease is
first noticed.

Copper Spot - 2 to 3 oz./5 to 10 gallons/1000 sq. ft. in late spring
and repeated at 7- to 10-day intervals. As curative use 3 1/4 oz./5 to 10
gallons/1000 sq. ft. beginning when disease is first noticed.

Damping-Off - 2 1/4 lbs./25 gallons/1000 sq. ft. applied in early
spring, and repeated as necessary.

Melting-Out (Helminthosporium Leaf Spot) - 2 1/4 to 3 1/2 oz./5 to 10
gallons/1000 sq. ft., repeating at 7- to 10-day intervals during 45 to
80°F. weather and again in fall.

Snow Mold (Typhula) - 4 1/2 to 6 oz./5 to 10 gallons/1000 sq. ft. in
late fall before snowfall and second application of 2 1/4 oz./1000 sq. ft.
during spring thaw.

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Vancide^{*}

TM-95

95% Thiram Wettable Powder

ACCEPTED

FEB 22 1971

UNDER THE FEDERAL INSECTICIDE
FUNGICIDE AND RODENTICIDE ACT
FOR ECONOMIC POISON REGISTER-
ED UNDER NO. 1965-52 SUBJECT
TO ATTACHED COMMENTS.

PATENT APPLIED FOR

AGRICULTURAL FUNGICIDE

ACTIVE INGREDIENTS:

THIRAM (TETRAMETHYLTHIURAM DISULFIDE)

95%

INERT INGREDIENTS:

5%

100%

CAUTION: KEEP OUT OF REACH OF CHILDREN.
SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONS.

MAY CAUSE SKIN IRRITATION. DO NOT INHALE DUST. DO NOT GET IN EYES OR ON SKIN.
WASH THOROUGHLY AFTER HANDLING.

HARMFUL IF SWALLOWED.

NET WEIGHT 30 LBS.

U.S.D.A. REG. NO. 1965-52

DIRECTIONS FOR USE AS A SPRAY

All Recommendations Based on 100 Gallons of Spray Except as Noted

APPLES:

Scab— $1\frac{1}{8}$ to $1\frac{1}{3}$ pounds in pre-bloom, calyx, and early cover sprays; $\frac{3}{4}$ to $1\frac{1}{8}$ pounds later cover sprays.

Rust—Use scab recommendations through first cover and include a special bloom spray of $\frac{5}{8}$ pound.

Other Diseases—Use scab recommendations as long as one or more of the following diseases may appear—Apple Blotch, Bitter Rot, Black Pox, Black Rot (fruit and foliage), Botryosphaeria Spot, Brooks Spot, Fly Speck and Sooty Blotch.

BANANAS:

Black Rot and Stem End Rot caused respectively by *Thielaviopsis endoconidiophora* and *Thielaviopsis paradoxa*—post-harvest application to crowns and fruit following removal of stems, use 0.16% in water at a rate of 5 gallons per 100 trays (40 lbs. each). Also as a brush application to cut stems and crowns, use a 2% paste.

CELERY: Early Blight (*Cercospora*), Late Blight (*Septoria*) and Damping-Off.

Plant Beds—0.8 pound. Apply 15 to 25 gallons/1200 sq. ft. at 3-day intervals.

Field—Limited to Florida only. 1.1 pounds at 3- to 7-day intervals depending on severity of conditions. Do not apply more than 200 gallons per acre. No applications later than 7 days before harvest. Remove residues by stripping, trimming and washing.

PEACHES:

Brown Rot— $1\frac{1}{8}$ to $1\frac{1}{3}$ pounds at 3- to 4-day intervals during bloom, at petal-fall and two weeks later. Apply again one month before harvest or when rot is apparent on green fruit and at 7-day intervals. No applications later than 7 days before harvest.

STRAWBERRIES:

Gray Mold (*Botrytis*)— $1\frac{1}{3}$ to $1\frac{2}{3}$ pounds using up to 200 gallons/acre. Begin at early blossom stage. Repeat at 10-day intervals as necessary. Remove residues by washing if applications are made within 3 days of picking.

TOMATOES:

Botrytis Gray Mold and Rhizoctonia Fruit Rot—1 pound when plants are set in the field and at 3- to 5-day intervals. If late blight, gray leaf spot or other foliage diseases are present, use combination of $\frac{3}{4}$ pound with $1\frac{1}{2}$ pounds of either maneb or zineb wettable powder.

ORNAMENTAL GRASSES AND ORNAMENTAL TURF:

Large Brown Patch and Dollar Spot— $2\frac{1}{2}$ oz./10 gallons/1000 sq. ft. as a preventive, applied at 7-day intervals throughout the warm season. $3\frac{1}{2}$ oz./10 gallons/1000 sq. ft. as a curative, beginning when disease is first noticed.

Copper Spot—2-3 oz./5-10 gallons/1000 sq. ft. in late spring and repeated at 7- to 10-day intervals. As curative use $3\frac{1}{4}$ oz./5-10 gallons/1000 sq. ft. beginning when disease is first noticed.

Damping-Off— $2\frac{1}{4}$ lbs./25 gallons or as a dust/1000 sq. ft. applied in early spring, and repeated as necessary.

Melting-Out (*Helminthosporium Leaf Spot*)— $2\frac{1}{4}$ - $3\frac{1}{2}$ oz./5-10 gallons/1000 sq. ft., repeating at 7- to 10-day intervals during 45-80°F. weather and again in fall.

Snow Mold (*Typhula*)— $4\frac{1}{2}$ -6 oz./5-10 gallons/1000 sq. ft. in late fall before snow-fall and second application of $2\frac{1}{4}$ oz./1000 sq. ft. during spring thaw.