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10182-150
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Mr. J. R. Solga
ICI Americas Inc.
Wilmington, DE 19897

JUL 11 1988

Dear Mr. Solga:

Subject: Vapam soil fumigant solution for all crops
EPA Registration No. 10182-150
Your Submission Dated April 5, 1988

The labeling referred to above, in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. A stamped copy of the label is enclosed for your records.

In your next printing the label must be revised to include the new statement "Do not contaminate water when disposing of equipment washwaters" under the Environmental Hazard Statement section.

Sincerely yours,

Lois A. Rossi
Product Manager (21)
Fungicide-Herbicide Branch
Registration Division (TS-767C)

BEST AVAILABLE COPY

Vapam

Soil Fungicidal Solution For All Crops

ACTIVE INGREDIENT
Sodium methylphosphorothioate (antithiazol)
INERT INGREDIENTS

32.7%
67.3%

Contains 1.9 lbs. active ingredient per gallon

FOR BULK AND MINI-BULK CONTAINERS

Keep Out of Reach of Children WARNING Statement of Practical Treatment

FIRST AID

Immediately start the procedure given below and CONTACT A POISON CENTER, A PHYSICIAN, OR THE NEAREST HOSPITAL. Describe the type and extent of exposure, the victim's symptoms, and follow the advice given.

For skin contact, flush affected areas with large amounts of running water for 15 minutes and get medical attention. Remove and clean contaminated clothing and shoes.

For eye contact, immediately flush eyes with large amounts of running water for 15 minutes. Hold the eyelids apart during the flushing to ensure washing of the entire surface of the eye and lids with water. Get medical attention immediately.

If inhaled, remove to fresh air. If breathing is difficult, oxygen may be given with a physician's advice. If not breathing, clear victim's airway. Start mouth-to-mouth artificial respiration and get medical attention if possible. Immediately give several glasses of water but do not induce vomiting. If vomiting occurs give fluids again. Have a physician determine if condition of patient will permit induction of vomiting or evacuation of stomach. Do not give anything by mouth to an unconscious or convulsing person.

FOR 24 HOUR EMERGENCY MEDICAL ASSISTANCE, CALL ICI AMERICAS MEDICAL AID AGENCY INFORMATION CENTER (800) 327-8633 OR CHEMTREC (800) 424-9300.

For other product information contact your local ICI Americas Distributor or see Material Safety Data Sheet.

Precautionary Statements Hazards to Humans and Domestic Animals WARNING Keep Out of Reach of Children

Harmful if inhaled. Irritates. Irritating to eyes, nose, throat and skin. Avoid breathing vapor or spray mist. Do not get in eyes, on skin or clothing. Causes skin irritation. Prolonged contact may cause severe skin irritation. May be fatal if absorbed through skin. In case of contact, immediately remove contaminated clothing. Wash and dry clothing before reuse. Where adequate ventilation is not available, use NIOSH approved full-face particulate respirator to reduce air exposure. Where respiratory protection under the use conditions necessitates a higher level of protection, use a full-face positive-pressure air supplied respirator.

ENVIRONMENTAL HAZARDS

This product is toxic to fish and aquatic life. Do not apply where runoff is likely to occur. Do not contaminate water by cleaning of equipment or disposal of waste. Apply this product only as specified on the label.

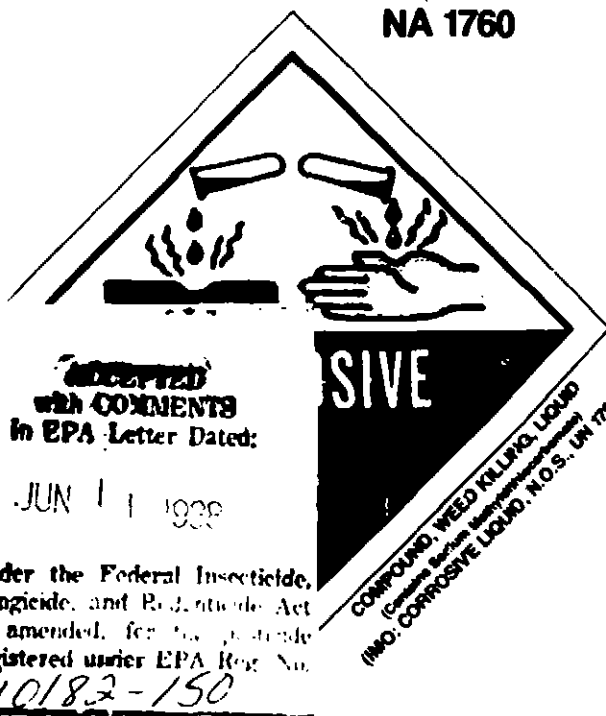
PRODUCT INFORMATION

VAPAM is a water soluble fungicide which is properly prepared and applied, is converted into a gaseous fungicide. After sufficient interval of time the gas dissolves leaving the soil ready for planting. VAPAM is recommended for the control of the following soilborne plant diseases: damping-off, root rot, and crown rot. VAPAM is also recommended for the control of the following soilborne plant diseases: damping-off, root rot, and crown rot. VAPAM is also recommended for the control of the following soilborne plant diseases: damping-off, root rot, and crown rot. VAPAM is also recommended for the control of the following soilborne plant diseases: damping-off, root rot, and crown rot.

USE PRECAUTIONS

Keep children and pets out of treated area until dry. Keep off treated areas and plants. Do not apply within 3 feet of a crop line of desirable plants, shrubs or trees. Do not use in confined areas without adequate ventilation. Oil, grease, lime, or other materials may cause undesirable results. Do not use in greenhouses where desirable plants are grown. Keep container tightly closed when not in use. Do not store near food or feed.

NET GALLONS



Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 10182-150

DIRECTIONS FOR USE

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

Before applying VAPAM, always cultivate thoroughly area to be treated, breaking up clods and loosening soil deeply and thoroughly. A week before treatment, remove soil after cultivation to the desired depth, sprays or flood irrigate. This step is essential for all methods of use. Immediately before application, cultivate lightly if the soil has crusted.

To prevent loss from evaporation, use only at times when air temperature is moderate and there is little wind movement. Soil temperature must be in the range of 40°-80°F at 3 inch depth. For other conditions, see section "Cultivation & Planting After Application". Do not apply to the soil surface in the presence of rain, when air temperature is over 80°F or when the humidity is high, as this would result in loss of VAPAM before it can be washed into the soil with additional water. If times become unfavorable during treatment, apply more water to wash the fungus into the soil where they should be confined to achieve maximum fungicidal benefit.

The activity of VAPAM is increased by the use of a tarp plastic, paper or fabric spread loosely over the treated area and secured to prevent removal by wind. Keep covered for a minimum period of 48 hours. Seven days after treatment, cultivate area to depth of 2 inches to aerate the soil. To avoid crop injury, do not plant earlier than 21 days after application when tilling method is used.

USE PROMPTLY AFTER MIXING WITH WATER. DO NOT ALLOW SOLUTION TO STAND. Flush all equipment with water after each day's use. Detachable valves and clean carefully.

USE PRECAUTIONS FOR IRRIGATION SYSTEMS

A. Apply the product only in high germination, including cover crop, late and early, and low soil (high soil) trawler, sold out of hand move food (barn), furrow, border irrigation systems. Do not apply the product through any other type of irrigation system.

B. Crop injury, loss of effectiveness or major pesticide resistance may crop can result from nonuniform distribution of treated water.

C. If you have questions about calibration, you should contact your Extension Service specialist, equipment manufacturer or other experts.

D. Do not connect an irrigation system (including greenhouse system) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.

E. A person knowledgeable of the irrigation 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.

USE PRECAUTIONS FOR FLOOD (BASIN, FURROW AND BORDER) IRRIGATION

1. Systems using a gravity flow pesticide dispensing system must meter the pesticide into the soil at the head of the field and down stream of a hydraulic discontinuity such as a crop structure or weir. Do to decrease potential for water source contamination from backflow of water flow steps.

2. Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

a. The system must contain a functional back check valve, vacuum relief valve, and low pressure drain, appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

b. The pesticide injection pipeline must contain a functional automatic, quick-closing check valve to prevent the flow of backflow back toward the injection pump.

c. 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 backflow from being withdrawn from the supply tank when the injection system is either automatically or manually shut down.

d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

e. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure drops to the point where pesticide distribution is adversely affected.

f. 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.

g. Do not apply when wind speed favors drift beyond the treated area.

h. Do not apply when wind speed favors drift beyond the treated area.

i. Do not apply when wind speed favors drift beyond the treated area.

j. Do not apply when wind speed favors drift beyond the treated area.

k. Do not apply when wind speed favors drift beyond the treated area.

l. Do not apply when wind speed favors drift beyond the treated area.

m. Do not apply when wind speed favors drift beyond the treated area.

n. Do not apply when wind speed favors drift beyond the treated area.

o. Do not apply when wind speed favors drift beyond the treated area.

p. Do not apply when wind speed favors drift beyond the treated area.

5. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure drops 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. Application of more than recommended quantities of irrigation water may result in decreased product performance by removing the chemical from the zone of effectiveness.

8. Do not apply when wind speed favors drift beyond the treated area.

CULTIVATION AND PLANTING AFTER APPLICATION

On well-tended soils of high to medium fertility which are not cultivated or on cold following application, planting may take place 14 to 21 days after treatment. If soils are heavy or especially high in organic matter or remain wet and/or cold (below 60°F) following application of VAPAM, an extended interval should be observed. Where drainage is greater than 100 gal per acre, wait at least 60 days. On heavy, wet soils, light surface cultivation to break up crusting and promote drying of the soil should be done 5 to 7 days after application. This cultivation may be necessary to avoid reworking treated soils, and final practices should be such that untreated soils are not mixed with treated soils.

SPECIAL INSTRUCTIONS: When treating cotton, do not harvest until the cotton is allowed to mature and dry thoroughly after using VAPAM. During cold and/or wet weather, frequent shallow cultivations may aid the escape of VAPAM from the soil. If in doubt, transplant a seedling plant and examine for injury before planting crop.

USES, APPLICATION METHODS & RATES FOR SMALL OR PESTS IN BROADCAST, PLANT BEDS, LARVAE AND OTHER LIMITED AREAS

BROADCAST CAN METHOD: Place 1 qt. VAPAM (1 1/2 pt. of very heavy soils) or for deep-rooted weeds in a spraying can. Fill with water and granulate uniformly over 50 sq. ft. of well-tended soil. Sprinkle immediately with water until soil is soaked or tarp for 48 hours.

HOSE PROPORTIONER METHOD: Add 1 qt. VAPAM to 3 qt. of water in a bucket or other container and apply using a hose proportioner to an area of 100 sq. ft. Sprinkle with water until soil is soaked or tarp for 48 hours.

SOIL INJECTION: Space injection shanks 5 in. apart and inject VAPAM 4 in. into well-prepared soil. Follow immediately with a roller to smooth and compact the soil surface. Light watering or a tarp after rolling helps prevent gas escape. For broadcast, a dosage of 75 to 100 gal per acre (1 1/2 qt. of 2 qt. per 100 sq. ft.) is recommended.

ROTARY TILLER: Spray or sprinkle diluted VAPAM immediately in front of tiller. Use 1 qt. of VAPAM in 2 1/2 gal. water per each 100 sq. ft. Follow immediately with a roller to smooth and compact the soil surface. Light watering or a tarp after rolling helps prevent gas escape.

FIELD APPLICATION - WHERE ENTIRE AREA IS BEING TREATED:

SOIL INJECTION: Space the injection shanks 5 in. apart and inject diluted VAPAM 4 in. into well-prepared soil. Follow immediately with a roller to smooth and compact the soil surface. Light watering or a tarp after rolling helps prevent gas escape. For broadcast, a dosage of 75 to 100 gal per acre is recommended.

SPRINKLER SYSTEM: Use only those sprayer systems which give large water droplets to prevent excessive loss. Use 75 to 100 gal. VAPAM per acre. For broadcast, use a dosage of 1 qt. of VAPAM in 2 1/2 gal. water per 100 sq. ft. in front of the sprayer system. Do not apply to the soil surface until the water has dried.

CHECK OR FLOOD IRRIGATION: Meter VAPAM at a steady rate into water during irrigation. Use 50 to 100 gal. VAPAM per acre, depending upon the kind of crop and depth of water, in 3 to 18 inches of water per acre.

FIELD APPLICATION TO BEES OR TOWNS:

SOIL INJECTION: VAPAM may be injected into pre-formed plant beds following the directions given above under soil injection. If a water treated band is desired, space 2 or more shanks at intervals of 3 in. to cover the desired treating width. Roll immediately.

SOIL COVERED METHODS (Broadcast methods): VAPAM may be sprayed or dropped onto the soil immediately ahead of bed-forming equipment. Cover the VAPAM with soil to a depth of 3 to 6 inches. The soil should be rolled and compacted immediately. The recommended rate of VAPAM is 50 to 100 gal per acre, approximately equivalent to 1 to 2 qt. per 100 sq. ft. of 12-inch row.

TREATMENT OF TREE REPLANT SITES: After removing stumps, a shallow basin over the planting site. Add VAPAM to the stream of water while filling the basin. Use 1 qt. VAPAM per 100 sq. ft. in surface of soil. For broadcast, use a basin of water 20 to 25 ft. deep. Increase dosage to 2 qt. of VAPAM per 100 sq. ft. in sufficient water to penetrate to the depth of root system. If water is turned to the planting site, add VAPAM to the water and mix before filling basin.

TREATMENT OF POTTING SOIL

1. Spread soil in a smooth layer 4 inches thick on concrete or on pre-treated soil.

2. Sprinkle VAPAM at rate of 1 qt. in 5 gallons of water per 100 sq. ft. of surface area.

3. Layers can be treated one at a time if another.

4. Sprinkle soil layer with sufficient additional water to seal the surface or cover with tarp (plastic, kraft paper, etc.).

B. CEMENT MIXER

1. Add VAPAM to soil mix at rate of 1 qt. of VAPAM per 2 cu. ft. of soil in cement mixer. Mix thoroughly.

2. After soil is treated, spread the soil on the surface to seal in pot or cover with tarp (plastic, kraft paper, etc.).



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ICI AMERICAS INC.

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