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ICI Agricultural Products
Concord Pike and New Murphy Road
Wilmington, Delaware 19897

Subject: Amended Labeling and Dermal Sensitization Study
Vapam Soil Fumigant Solution
EPA Registration No. 10182-229
Your Submission Dated December 17, 1990

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable with the following comments:

1. The appropriate signal word is WARNING.
2. The precautionary statements should read as follows:

May be fatal if absorbed through skin. Causes skin and eye irritation. Harmful if swallowed or inhaled. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not get in eyes, on skin, or on clothing. Wear protective clothing and rubber gloves, and avoid breathing spray mist. Wash thoroughly with soap and water after handling and before eating or smoking. Remove contaminated clothing and wash before reuse.

3. The statements of practical treatment should read as follows:

IF ON SKIN: Wash with plenty of soap and water. Get medical attention.

IF SWALLOWED: Call a physician or poison control centers. Drink promptly a large quantity of milk, egg whites, gelatin solution, or if these are not available drink large quantities of water. Induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person. Avoid alcohol. Get medical attention.

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IF INHALED: Remove victim to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. Get medical attention.

IF IN EYES: Flush with plenty of water. Call a physician if irritation persists.

4. Under the Environmental Hazards Section, change the statement "Do not apply directly to water or wetlands" to "Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark."

The Dermal Sensitization Study is found to be acceptable and graded core guideline. VAPAM is considered a dermal sensitizer.

A stamped copy of the label is enclosed for your records. Please submit five (5) copies of your final printed label.

Sincerely yours,

SL

Susan T. Lewis
Product Manager (21)
Fungicide-Herbicide Branch
Registration Division (H7505C)

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VAPAM Garden Soils
RS-060189

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

VAPAM

10182-229 Soil Fumigant Solution
For Fumigating Garden Soils Before Planting

ACTIVE INGREDIENT:	Sodium methyldithiocarbamate (Anhydrous)	32.7%
INERT INGREDIENTS:	67.3%
* Contains 3.18 lbs. active ingredient per gallon		100.0%

Keep Out of Reach of Children
WARNING
STATEMENT OF PRACTICAL TREATMENT

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FIRST AID

Immediately start the procedures 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 rinsing 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 Swallowed, 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 1-800-F-A-S-T-H-E-D (327-8633).

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident Call CHEMTREC 1-800-424-9300.

This product is sold only for uses stated on its label. No express or implied license is granted to use or sell this product under any patent in any country except as specified: Country: U.S.A.

EPA Reg. No. 10182-229
EPA Est. No.

Cal. Reg. No. 1

Made in U.S.A. by
(Roundel) Agricultural Products
ICI Americas Inc.
Wilmington, DE 19897

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

WARNING

Harmful if inhaled or swallowed. 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 pesticide canister respirators to reduce exposure. Where exposure potential 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. Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of waste. Apply this product only as specified on the label.

PRODUCT INFORMATION

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VAPAM is an easy-to-use water solution of highly effective soil fumigant. It can be used prior to planting a lawn or when preparing a new flower bed or vegetable garden, as an aid in the control of weeds, certain nematodes which attack plants, and common soil-inhabiting plant disease fungi.

When properly applied, VAPAM releases a gaseous fumigant to the soil. This gas later dissipates, leaving the soil ready for planting.

USE PRECAUTIONS

KEEP OFF DESIRABLE LAWNS AND PLANTS. VAPAM may severely injury any plants that it comes in contact with. Therefore, you should read these use precautions carefully. Do not apply within 3 feet of the drip line of plants, shrubs or trees. Do not use in confined areas without adequate ventilation. Do not use in greenhouses where growing plants are present or where fumes may enter nearby houses containing growing plants. After mixing with water, do not allow solution to stand overnight. If fumes from partially treated and water sealed areas become unpleasant, sprinkle more water over treated area. Rinse all equipment with water after each day's use. Keep children and pets out of treated areas until dry. Do not smoke near food or feed. Keep container tightly closed when not in use. Do not store below 0°F.

DIRECTIONS FOR USE

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

For treating seed beds, plant beds, renovating lawns, establishing new lawns, fumigating potting soil.

Before Applying VAPAM

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A week before applying VAPAM, cultivate the area to be treated, breaking up clods and loosening the soil deeply and thoroughly. Keep soil moist and bring area to final grade and seedbed condition. This step is essential to good results.

APPLICATION METHODS AND RATES

SPRINKLING CAN: Place 1 pint VAPAM (1-1/2 pints on very heavy soils or for deep-rooted weeds) in a sprinkling can, fill with water, stir, and sprinkle uniformly over 50 square feet of well-prepared soil. Sprinkle immediately with water until soil is sealed and no odor of VAPAM can be detected.

HOSE-END SPRAYERS (lawn or fertilizer type): Fill container with 1 pint of VAPAM and spray uniformly on 50 square feet of well-prepared soil. Continue to spray with water until VAPAM odor cannot be detected.

AFTER APPLYING VAPAM

VAPAM should be sealed into the soil by sprinkling after application, wetting the soil to a depth of 3-5 inches. Sprinkle lightly so water does not puddle. Keep soil surface wet for 2-3 days after application - then let dry out.

The use of a plastic tarp or other covering over the treated area greatly improves the action of VAPAM. When using a cover, do not wait until the entire area is treated to begin covering but cover each 100 square feet area as it is treated, immediately. Weight the tarp around edges to prevent wind from lifting. Keep covered for two days and then remove. Seven days after applying VAPAM, rake the treated area. Do not rake deeper than 2 inches. If weather is warm and dry, plant after 2 weeks. If weather is cold and wet, rake the soil frequently and do not plant for 4 weeks.

FUMIGATING POTTING SOIL

TREAT YOUR SOIL IN WHEELBARROW OR GARBAGE CAN:

Put a 4-inch layer of soil mix in the container and sprinkle surface evenly, following the table below. Add another 4-inch later and repeat sprinkling. Repeat until container is full. Cover with plastic or container lid for 48 hours.

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AMOUNT OF VAPAM TO USE FOR EACH 4 INCHES OF SOIL

<u>Diameter of Can</u>	<u>Teaspoons of VAPAM</u>	<u>Water</u>
10"	1/2 tsp.	4 ozs. (1/4 pint)
12"	3/4 tsp.	6 ozs.
15"	1-1/4 tsp.	10 ozs.
20"	2-1/4 tsp.	18 ozs.

Mix the VAPAM with the water then sprinkle the soil. For larger areas of potting soil, use VAPAM at a rate of 1 teaspoonful in 8 ozs. (1/2 pint) of water per square foot. After 5-7 days the treated soil should be shredded or turned or mixed to aerate and help release any VAPAM still in the soil.

The treated soil mixture should then be left for 14 more days before it is put into storage sheds or bins.

NOTE: It is very important that the VAPAM treated soil is thoroughly aerated and dry before being used.

IMPORTANT INFORMATION

If the soils have remained wet or cold (below 40°F at 3" level) do not plant for 4 weeks or longer and aerate soils again to speed release of gases.

No crop should be planted until all odor has left the soil. As an added precaution, 10 days after application, plant a few radish seeds which should germinate in about 5 days. If plants are normal, the treated area is safe to plant.

DO:

1. Read the label and follow all manufacturer's directions.
2. Use only when ground temperature 3 inches deep is over 40°F and less than 90°F. In the colder parts of the country, the soil is usually warm enough when the spring flowering shrubs such as forsythia are blooming.
3. VAPAM can be irritating to the skin. We recommend using rubber gloves and rubber boots when applying VAPAM.
4. If VAPAM is splashed on body, wash immediately, apply soothing ointment, and remove contaminated clothing.
5. Clean equipment by rinsing thoroughly in running water.

DO NOT:

1. Do not use VAPAM unless you are prepared to follow all directions completely.
2. Do not apply in greenhouses where desirable plants are growing or in greenhouses connected to other areas where such plants are growing. Fumes from treated soil can injure growing plants.
3. Do not apply indoors.

STORAGE AND DISPOSAL

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

Storage: Do Not Store Below 0°F. Product crystallizes at lower temperatures. Warm or store at higher temperatures and mix to redissolve crystals and assure uniformity before use.

Pesticide Disposal: Securely wrap original container in several layers of newspaper and discard in trash.

Container Disposal: Do not reuse container. Rinse thoroughly before discarding in trash.

NOTICE TO BUYER AND USER

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in accordance with directions under normal conditions of use. This warranty does not extend to the use of this product contrary to label instructions, or under abnormal use conditions, or under conditions not reasonably foreseeable to Seller, and Buyer and User assume the risk of any such use. SELLER DISCLAIMS ALL OTHER WARRANTIES EXPRESSED OR IMPLIED INCLUDING ANY WARRANTY OF FITNESS OR MERCHANTABILITY. SELLER SHALL NOT BE LIABLE FOR CONSEQUENTIAL, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT AND SELLER'S SOLE LIABILITY AND BUYER'S AND USER'S EXCLUSIVE REMEDY SHALL BE LIMITED TO THE REFUND OF THE PURCHASE PRICE.

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