

STATEMENT OF PRACTICAL TREATMENT**FIRST AID**

Immediately start the procedures given below and contact a Poison Control Center, a physician, or the nearest hospital. Report the type and extent of exposure, describe the victim's symptoms, and follow the advice given.

IF ON SKIN: Immediately flush skin with large amounts of running water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately.

IF IN EYES: Immediately flush eyes with large amounts of running water for at least 15 minutes. Hold eyelids apart 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 not breathing, clear the victim's airway and start mouth-to-mouth artificial respiration. If breathing is difficult, give oxygen, preferably with a physician's advice. Get medical attention immediately.

IF SWALLOWED: Immediately give several glasses of water but do not induce vomiting. If vomiting does occur, 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-M-E-D (327-8633)**

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

PRECAUTIONARY STATEMENTS**HAZARDS TO HUMANS AND DOMESTIC ANIMALS****DANGER**

CORROSIVE: CAUSES SKIN DAMAGE. MAY BE FATAL IF ABSORBED THROUGH THE SKIN. Do not get on skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Harmful if swallowed. Harmful if inhaled. Irritating to eyes, nose, and throat. Avoid breathing vapor or spray mist. Irritating to eyes. Do not get in eyes.

PERSONAL PROTECTIVE EQUIPMENT**(1) Handlers Performing Direct-Contact Tasks.**

Direct-contact tasks include:

- Mixing, loading, or fumigant transfer with or without dry-disconnect fittings.
- Equipment calibration or adjustment.
- Equipment cleanup and repair.
- Product sampling.
- Application or soil-sealing outside an enclosed cab
- Any activity less than 6 feet from an unshielded pressurized hose containing this product.
- Spill cleanup.
- Removal of tarp or plastic film.
- Rinsate disposal.
- Cleanup of small spills
- Preparing containers for aeration.
- Any other handling task not otherwise listed in (2), (3), or (4) below.

Applicators and other handlers performing direct-contact activities must wear:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, or when mixing, loading, or transferring without dry-disconnect fittings
- Face-sealing goggles, unless full-face respirator is worn
- A respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

(2) Handlers in Enclosed Cabs. Applicators and other handlers in enclosed cabs must wear:

- Coveralls
- Shoes and socks

Plus: If pungent, rotten-egg odor of this product can be detected inside the enclosed cab, the handlers in the cab must wear:

- Face-sealing goggles, unless full-face respirator is worn
- A respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

In addition: The PPE specified in (1) for direct-contact activities must be immediately available in the enclosed cab and must be worn if the handler leaves the enclosed cab to perform any direct-contact activity.

The enclosed cab must meet the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides, 40 CFR 170.240(d)(5).

(3) Handlers in Treated Area While Entry is Restricted. While entry is restricted (see "Entry Restrictions" in the Agricultural Use Requirements box elsewhere in this labeling), only the following handling tasks may be performed in a treated area:

- Assessing/adjusting the soil seal
- Assessing pest control, application technique, or application efficacy
- Sampling air or soil for this product

All other tasks are prohibited until the entry restriction is over.

Handlers performing the above tasks must wear:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Chemical-resistant footwear and socks

Plus: Handlers must wear if pungent, rotten egg odor of this product can be detected.

- Face-sealing goggles (unless full-face respirator is worn) and
- A respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

USER SAFETY REQUIREMENTS**1. Respirator Requirements:** When a respirator is required for use with this product, the following criteria must be met:

- a. Cartridges or canisters must be replaced daily or when odor or irritation from this product becomes apparent, whichever is sooner.
- b. Respirators must be fit-tested and fit-checked using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134).

2. Dispose of Contaminated Clothing: Discard clothing and other absorbent materials that have been drenched or heavily contaminated with liquid from this product. Do not reuse them.**3. Clean and Maintain PPE:** 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. Wash PPE after each day's use.**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. 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 contaminate water when disposing of equipment washwaters. Do not apply where runoff is likely to occur. Apply this product only as specified on the label.

Lot No. _____

Date of Manufacture _____

REST AVAILABLE COPY

USE PRECAUTIONS

Do not use around dwellings. Keep off desirable lawns and plants. Do not apply within 3 feet of the drip line of desirable plants, shrubs or trees. Do not use where fumes may enter nearby buildings. Do not use in greenhouses or any other enclosed structure or confined area. Keep container tightly closed when not in use. Do not store near feed or food.

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.

CALIFORNIA ONLY: Applications must be in compliance with Technical Information Bulletin--California "Metam Sodium--Guidelines for all Application Methods for Metam Sodium in California." This information bulletin may be obtained from your local pesticide dealer or a metam-sodium registrant. See attached booklet for Complete Directions for Use.

STORAGE AND DISPOSAL

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

STORAGE: Store in a cool, dry place. Keep container closed when not in use. Do Not Store Below 0 F. Product crystallizes at low temperatures. Warm or store at higher temperatures and mix thoroughly to dissolve crystals and assure uniformity before use.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, 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 Hazardous Waste Control Agency or the Hazardous Waste Response Unit at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Triple rinse (or equivalent). Then offer for recycling or incineration, if permitted by state and local authorities, or burn if buried. Stay out of smoke.

IMPORTANT: Read the entire Directions for Use and the Conditions of Sale and Warranty before using this product.

CONDITIONS OF SALE AND LIMITED WARRANTY:

The performance of this product are believed to be reliable and should be used in accordance with the label. It is impossible to eliminate all risks inherent in the use of this product. Crop injury, ineffectiveness or other damage may result because of such factors as timing and method of application, weather and crop conditions, mixture with other chemicals, and other conditions and their interactive factors in the use of this product. The Seller and Buyer and User agree to hold each other harmless from all such factors.

The Seller warrants that the product conforms to the description on the label and that the product is as represented on the label, subject to the conditions of sale and use. The Seller's liability does not extend to the use of this product under conditions or in situations not intended by the Seller. The Seller assumes no liability for any damage or injury resulting from the use of this product. THE WARRANTY HEREIN IS LIMITED TO THE PRODUCT AS SHOWN ON THE LABEL AND DOES NOT INCLUDE THE USER'S APPLICATION OF THE PRODUCT.

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Contents: 55 gal (208 L)

1793077

UN 1760



Corrosive liquid, n.o.s. (containing metam-sodium)

Made in USA

ZENECA Ag Products

ZENECA Inc.
Wilmington, Delaware 19897

BEST AVAILABLE COPY

USES FOR USE

Use this product in accordance with the label directions. Do not use this product on lawns, golf courses, or other areas where it may be applied to the soil.

Medium—Guidelines for all uses for Metam Sodium in soil.

USE REQUIREMENTS.

Use this product only on soil. Do not use on plants, animals, or humans. Do not use in areas where it may be applied to the soil.

INSTRUCTIONS:

Apply this product to the soil in accordance with the label directions. Do not use on plants, animals, or humans.

PRECAUTIONS:

Do not use this product in areas where it may be applied to the soil. Do not use on plants, animals, or humans.

DURING THE TREATMENT:

Do not use this product in areas where it may be applied to the soil. Do not use on plants, animals, or humans.

PRODUCT INFORMATION

VAPAM is a water soluble liquid. When applied to properly prepared soil, the liquid is converted into a gaseous fumigant. After sufficient interval of time, the gas dissipates, leaving the soil ready for planting. VAPAM is recommended for the control of the following soil-borne pests that attack ornamental, food and fiber crops: Weeds and germinating weed seeds (annual bluegrass, bermudagrass, chickweed, dandelion, ragweed, henbit, lambsquarters, Amaranthus spp., pigweed, careless weed, watergrass, wild sorgrass, foxtail, sedge, wild morning glory, and purslane); nematodes; symphylans (garden centipede); and soilborne diseases (Rhizoctonia, Phythium, Phytophthora, Verticillium, Sclerotinia, black root rot, and clubroot of crucifers).

APPLICATION DIRECTIONS

Before applying VAPAM, always cultivate thoroughly. Area to be treated, breaking up or leveling and soil, should be prepared and thoroughly mixed. A week before treatment, the soil should be cultivated to the desired depth, sprinke or food irrigate. See section POTATOES, PACIFIC NORTHWEST AND NORTH CENTRAL STATES—FALL APPLICATION, where notes stipulate cover crops exist for specific application directions immediately before application. Cultivate again if the soil is too crusty.

To prevent loss from evaporation, apply VAPAM when air temperature is moderate and there is little wind movement. Soil temperature must be from 40-90 F in the treated zone. To avoid injury to plants, the depth of treatment with VAPAM varies with the application. For example, landfills are sealed by cultivation & planting. After Application, VAPAM is applied to the soil surface, as in the spray application. When air temperature is over 90 F or when low humidity or high winds would cause loss of VAPAM before it can be drawn into the soil, with irrigation water. Apply enough water to seal the fumigant into the soil, where they should be able to achieve maximum fumigant benefit.

Where rates ranges from VAPAM are given, use the higher rate if pests are serious, deep plowing is not present, high humidity, and there is a high probability of pest problems.

The activity of VAPAM is increased by the use of a fine particle water, or fine spray, and by the use of the fumigant in a soil which is moist. Do not keep covered for a long period of time. Do not use water that is contaminated with oil, grease, or other materials. Do not use water that is contaminated with oil, grease, or other materials.

APPLICATION IN TANKMIX WITH LIQUID FERTILIZER:

VAPAM may be injected in a mixture with liquid fertilizers. Since the composition of liquid fertilizers varies considerably, the physical compatibility of each fertilizer-VAPAM tankmix should be checked by using the following procedure:

Mix a small quantity of VAPAM and liquid fertilizer in a glass container. VAPAM and fertilizer should be mixed in the same ratio as they will be applied to the field (i.e., 1:40 gallons of VAPAM and 40 gallons of liquid fertilizer are to be applied per acre, then VAPAM and fertilizer should be mixed in the jar in a 40:40 or 1:1 ratio). Agitate the liquids to attain a complete mixture. If a uniform mix cannot be made, the mixture should not be used. If the mixture remains uniform for 30 minutes, the combination may be used. Should the mixture separate after 30 minutes, but readily remix uniformly with agitation, the mixture can be used if adequate agitation is maintained in the tank.

DO NOT PLACE CAPS ON JARS INCOMPATIBLE MIXES MAY EVOLVE HYDROGEN SULFIDE GAS

USE PROMPTLY AFTER MIXING WITH WATER OR FERTILIZER. DO NOT ALLOW SOLUTION TO STAND. Flush an equipment with water after each days use. Clean assembly valves and clean carefully.

USE PRECAUTIONS FOR IRRIGATION SYSTEMS

- A. Apply this product only through sprinkler, including center pivot, lateral, wheel and row side (wheel row), traveler, solid set, or hand move (flood, basin, furrow, border, or strip/truck) irrigation systems. Do not apply this product through any other type of irrigation system.
- B. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.
- C. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
- D. 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.

E. A person knowledgeable of the irrigation system and responsible for its operation, under the supervision of the applicator, shall shut the system down and make any adjustments should the need arise.

Posting of areas to be chemigated is required: 1) any part of a treated area is within 100 feet of sensitive areas such as residences, schools, camps, businesses, day care centers, hospitals, patient clinics, nursing homes, day care centers, such as schools, parks, playgrounds, day care facilities, and day care centers, and 2) any chemigated area is open to the public, such as courses or retail greenhouses.

Posting must conform to the following requirements: Treated areas shall be posted with an usual points of entry and exit, and an approach from the treated area shall be posted. There are no usual points of entry and exit posted in the vicinity of the treated area. A yellow caution tape should be placed around the treated area. The posted area shall be face away from the treated area. The signs shall be posted in the vicinity of the treated area. Signs must be posted on all points of entry and exit from the treated area. Signs must be placed in the vicinity of the treated area. Signs must be placed in the vicinity of the treated area.

USE PRECAUTIONS FOR SPRINKLER IRRIGATION

- 1 The system 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 The pesticide injection pipeline 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 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 area intended for treatment.

USE PRECAUTIONS FOR DRIP (TRICKLE) IRRIGATION

- 1 The system 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 The pesticide injection pipeline 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.

CULTIVATION AND PLANTING AFTER APPLICATION

On well-drained soils of light to medium texture which are not excessively wet or 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 dosages are greater than 100 gal/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 repeated as necessary. To avoid reinfesting treated soils, cultural practices should be such that untreated soils are not mixed with treated soils.

SPECIAL INSTRUCTIONS. When treating heavier field soils or soils containing high clay or organic matter, it is especially important that the soil be allowed to aerate 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

FIELD APPLICATION—WHERE ENTIRE AREA IS BEING TREATED:

SOIL INJECTION: Using injectors, spread 5 inches apart or using injector blades, inject VAPAM 4 inches deep into well-prepared soil. Follow immediately with a roller to smooth and compact surface. Light watering or a tarp after rolling helps prevent gas escape. For field use, 50 to 100 gal VAPAM per acre is recommended.

SPRINKLER SYSTEM: Use only those sprinkler systems which give large water droplets to prevent excess loss. Use 75 to 100 gal VAPAM per acre. For control of shallow pests (top 1 ft or less of soil), run sprinklers 5 to 10 min. In next 10 to 20 min, inject into the sprinkler system all VAPAM needed for the area covered. On very light soils, keep surface moist by sprinkling for 2 or 3 days. For control of pests deeper than 18 inches in the soil, divide

VAPAM into 3 or more equal parts and apply at intervals during the sprinkling period.

CHECK OR FLOOD IRRIGATION: Meter VAPAM at a steady rate into water during irrigation. Use 10 to 15 gal VAPAM per acre depending upon the kind of crop and depth desired, in 3 to 18 inches of water per acre.

ROTARY TILLER: Spray or sprinkle diluted VAPAM immediately in front of tiler. Use 1 gal VAPAM in 20 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 will prevent gas escape.

FIELD APPLICATION TO BEDS OR ROWS:

SOIL INJECTION: VAPAM applied at 10 to 15 gallons per treated acre (10 to 20 inches deep) may be injected into prepared beds or rows in the directions given above. For wider treated bands, use injector blades or injectors at 10 to 15 inches deep, in 5 to 10 inch intervals of 5 inches to 10 inches between rows with 30" immediately.

If VAPAM is injected through plastic mulch, use through plastic mulch to form the soil surface, and to form the soil surface, and to plant a subsequent crop, the soil should not be used for any other purpose after VAPAM has been applied.

Drip irrigation VAPAM must be applied through a drip irrigation system to which VAPAM is added to the area being treated.

Meter 25 to 50 gallons VAPAM per acre through the drip system during the entire irrigation period. **APPLICATION MUST BE CAREFUL.** **DO NOT OVERDOSE.** THIS IS VERY IMPORTANT. OVERAPPLICATION WILL NOT BE SATISFACTORY. **DO NOT USE WATER IS APPLIED.** An adequate amount of VAPAM must be present at the time of seed germination in order to be effective. Instructions for use are as follows:

1. Ground must be in seed bed condition. The largest particle of clump must be less than 1/2 inch diameter.
2. Beds must be shaped and smoothed.
3. Soil moisture must be adequate at the time of the top 2-3" at time of VAPAM application.

TANKMIX WITH TILLAM® 6E HERBICIDE (TOMATOES ONLY):

A tank mix of VAPAM and Tillam 6E herbicide may be used to provide the additional benefit of weed control. The mixture must be applied to the soil between the furrows and between the plants, not through a spray blade. Use a boom sprayer or a wheel driven through soil set sprinkler system. Maintain constant agitation of the mixture during application and spraying period.

