

1 of 6  
PM 51

7001-284

**METAM (SOIL FUMIGANT)**

ACTIVE INGREDIENTS	BY WT.
Sodium Methyldithiocarbamate (Anhydrous).....	32.7%
INERT INGREDIENTS: .....	67.3%
	<b>TOTAL 100.0%</b>

3.18 lbs. Sodium methyldithiocarbamate per gallon

EPA Reg. No. 7001-284

EPA Est. No.

**KEEP OUT OF REACH OF CHILDREN**

**CAUTION**

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**KEEP OUT OF REACH OF CHILDREN.** 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 on clothing. In case of contact, immediately remove contaminated clothing or shoes and flush with plenty of water and apply soothing lotion. For eyes, flush with water at least 15 minutes and get medical attention. Wash and dry clothing and shoes before reuse. Do not store near food or feed. Keep children and pets out of treated areas. Wear a mask or respirator of a type approved by the U. S. Bureau of Mines for protection when applying in enclosed areas.

**ACCEPTED**

**FEB 2 1987**

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 7001-284

**ENVIRONMENTAL HAZARDS**

This product is toxic to fish. Keep out of lakes, streams, or ponds. Do not apply where runoff is likely to occur. Do not contaminate water by cleaning of equipment or disposal of wastes. Keep off of desirable lawns and plants. Do not use in greenhouse where plants are present.

**STORAGE AND DISPOSAL**

Keep container tightly sealed during storage. Do not store near feed or food products. Do not store below 60° F. Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Triple rinse (or equivalent) drums or bulk storage tanks. Offer drums for recycling or reconditioning, puncture and dispose of in a sanitary landfill or by other procedures approved by State and local authorities.

**BEST AVAILABLE COPY**

## CULTIVATION AND PLANTING AFTER APPLICATION

On well drained soils of light to medium texture which are not excessively cold or wet 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 the application of METAM, a minimum interval of 30 days should be observed. 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 soil, cultural practices should be such that untreated soils are not mixed with treated soils.

## PRODUCT INFORMATION

METAM 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. METAM 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 sp. (pigweed, careless weed), watergrass, Johnsongrass, nutgrass, wild morning glory and purslane) nematodes, symphylids, (garden centipede) and soil-borne disease (Rhizoctonia, Pythium, Phytophthora, Verticillium, Sclerotinia, oak root fungus and club root of crucifers).

## DIRECTIONS FOR USE

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

Before applying METAM, rip, plow or cultivate to increase water infiltration rates and penetration depths. Pre-irrigate the soil if necessary to a depth of two feet one week before application. Soil moisture level should be approximately 50% of field capacity during the application. Do not use on muck, heavy clay or soils high in organic matter (greater than 10%). Soil samples should be taken to determine the location and degree of nematodes and soil insects in the soil profile. Consult with state nematologist, entomologist and plant pathologist to determine if crop rotation is more feasible than fumigation. Note: METAM will only control nematodes that are in the fumigated zone at the time of treatment.

## USES, RATES AND APPLICATION METHODS

A week before treatment, cultivate area to be treated to loosen soil and to break up clods; then sprinkle or flood irrigate to moisten loosened soil. Immediately before application cultivate lightly to break up soil crust. Apply METAM according to methods and rates outlined below. Use promptly after mixing with water. Do not allow solution to stand overnight. METAM must be sealed into the soil by sprinkling immediately after applica-

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tion. Wet soil to a depth of 3 to 5 inches. Keep soil surface wet for 2 to 3 days after application then let dry out. Activity of fumigant is increased by spreading a cover, such as plastic, paper or fabric tarp over treated area. Weight down around edges to prevent wind from lifting. To prevent loss from evaporation, do not apply when air temperature is over 80° F or when low humidity or wind would cause METAM to evaporate before it can be drenched into the soil with water. If fumes become unpleasant during treatment, apply more water to seal METAM into soil. Soil temperatures must be in the 40° F to 90° F range at a 3-inch depth. Rinse all equipment with water after use.

FIELD APPLICATION - WHERE ENTIRE AREA IS BEING TREATED

SOIL INJECTION: Space thin injection shanks 5 in. apart and inject METAM 4 in. 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, 40 to 100 gal. METAM per acre is recommended.

SPRINKLER SYSTEM: Using an injector pump or gravity metering device apply 50-100 gallons METAM per acre in a minimum of one acre inch of water. For the control of pests deeper in the soil profile (greater than 18") increase the amount of METAM and water proportionally. See directions for use.

CHECK OR FLOOD IRRIGATION: Meter METAM at a steady rate into water during irrigation. Use 50 to 100 gal. METAM per acre, depending upon the kind of pest and depth desired in 8 to 18 inches of water per acre.

FIELD APPLICATION TO BEDS OR ROWS

SOIL INJECTION: METAM may be injected into pre-formed plant beds following the directions given above under soil injection. If a wider treated band is desired, space 2 or more shanks at intervals of 5 in. to cover the desired treating width. Roll immediately.

SOIL COVERING METHODS: (bed-over methods) METAM may be sprayed or dripped onto the soil immediately ahead of bed-shaping equipment. Cover the METAM with soil to a depth of 3 to 6 inches. The soil should be rolled and compacted immediately. The recommended rate of METAM is 50 to 100 gal. per acre, approximately equivalent to 1 to 2 pints per 100 ft. of 12 inch row.

TREATMENT OF THREE REPLANT SITES: After removing dead or diseased tree and as much of the root system as possible, make a shallow basin over the planting site. Add METAM to the stream of water while filling the basin. Use 1 qt. METAM per 100 sq. ft. in sufficient water (depending on soil type) to penetrate at least 6 ft. For control of oak root fungus, use a basin at least 20 x 20 ft. square. Increase dosage to

2 qt. METAM per 100 sq. ft. in sufficient water to penetrate to the depth of root system. If water is tanked to the planting site, add METAM to the water and mix before filling basin.

FOR SHALLOW PESTS IN SEED BEDS, PLANT BEDS, LAWNS AND OTHER LIMITED AREAS

SOIL INJECTION: Space injection shanks 5 in. apart and inject METAM 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 seedbeds a dosage of 75 to 100 gal. per acre (1½ pt. to 2 pt. per 100 sq. ft.) is recommended.

DRIP IRRIGATION: METAM may be injected into drip irrigation systems prior to planting. The rate must be calculated in accordance with the size of the band treated. Apply 50 gallons per broadcast acre in one acre inch of water (27,000 gal). The resulting concentration is 700 ppm on a weight basis. (Example: if the emitters irrigate 10% of each acre then use 5 gallons METAM in 2,700 gallons water). Inject continuously, do not slug treat.

SEED TREATMENT: A suitable fungicide should be used to treat all crop seeds being planted into fumigated soil.

TREATMENT OF POTTING SOIL.

A. SPRINKLER METHOD:

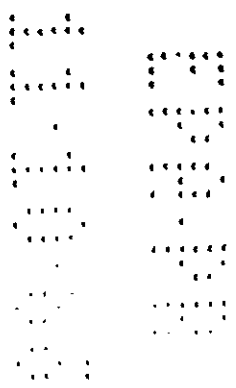
- 1. Spread soil in a smooth layer 4 inches high on concrete or on pre-treated soil.
- 2. Sprinkle METAM at rate of 1 pint in 5 gallons of water per 100 sq. ft. of surface area.
- 3. Layers can be treated one on top of another.
- 4. Sprinkle top layer with sufficient additional water to seal the surface, or cover with tarp (plastic, kraft paper, etc.).

B. CEMENT MIXER:

- 1. Add METAM to soil mix at rate of 1 fl. oz. METAM per 2 cu. ft. of surface area.
- 2. After soil is treated and piled, sprinkle water over entire surface to seal in gas. Or, cover with tarp (plastic, kraft paper, etc.).

C. SHREADER:

- 1. Dilute METAM in sufficient water to obtain even distribution. As soil is ejected from shreader, spray uniformly on soil stream at rate of 1 fl. oz. METAM per 2 cu. ft. of soil.
- 2. After all soil is treated and piled, apply light water seal to entire surface or cover with tarp.



USE PRECAUTIONS

All METAM uses described on this label are intended for soil preparation purposes only. All plant foliage and established plants growing on the treatment site will be damaged or destroyed.

Do not operate irrigation systems without safety valves or other devices to prevent back syphoning of METAM into water sources. Irrigation water treated with METAM should be maintained on the treated area until the water is absorbed by the soil. The tank containing METAM must be connected to discharge side of irrigation pump. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not apply when weather conditions favor drift from the target area. The application should be continuously supervised. (Check California cleanout statement) - Flush out lines.

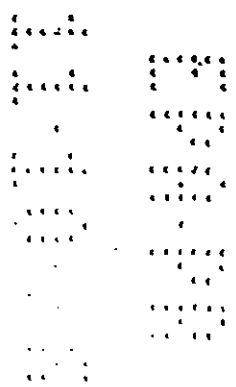
Keep children and pets out of the treated area. Keep METAM off desirable lawns and plants. Do not apply within 3 feet of the drip line of desirable plants, shrubs or trees. Do not use in confined areas without adequate ventilation OR where fumes may enter nearby dwellings. Do not use in greenhouses where desirable plants are present. Keep container tightly closed when not in use. Do not store near feed or food.

PREVENTION OF ROOT GRAFT TRANSMISSION OF DUTCH ELM AND OAK WILT DISEASE

Immediately after a tree is diagnosed as having Dutch Elm or Oak Wilt Disease, isolate the diseased tree from healthy trees with the METAM treatment. If a diseased tree is less than 20 feet from a healthy tree or has advanced wilt symptoms, it may be necessary to treat at two sites - one between the diseased and the first healthy appearing tree and one between the first and second healthy appearing trees. This measure is advisable because the casual fungus may have already passed from the diseased to the first healthy appearing tree before METAM was applied.

Use METAM diluted one part to three parts water for Dutch Elm disease and dilute one part to ten parts of water for Oak Wilt disease. Drill holes approximately 3/4 to 1 in. in diameter, 15 in. deep, 6 to 9 in. apart. Fill each hole with diluted METAM to within 2 in. of the soil surface.

Make the line of treatment sufficiently long to kill all roots of the two adjacent trees that are likely to be root-grafted. Apply the chemical slowly and carefully to avoid overflowing the drilled holes. This will reduce grass kill. Tamp each hole closed with the heel. Allow at least two weeks after treatment before removing the diseased tree.



TOBACCO PLANT BEDS: Fall applications are recommended wherever possible. Read and follow DIRECTIONS FOR USE carefully. Treatment in the South should generally be made before November 30.

- A. TARP METHOD: Prepare the bed 5 to 7 days before application to insure best conditions for weed seed germination and fumigant action of METAM. The bed should be free of clods, level and in good tilth. Apply 1 to 1 1/4 gal. of METAM in a minimum of 40 gal. of water per 100 sq. yds. Apply uniformly over the entire bed. Cover the bed immediately with a plastic cover. Keep covered no less than one day, but no more than two days. The cover need not be tented, but should be secured to prevent wind from uncovering the treated area. Seven days after date of METAM application, loosen the treated soil to a depth of 2 in. Do not seed tobacco earlier than 21 days after METAM application.
- B. DRENCH METHOD: Apply 2 1/4 gal. METAM in 150 to 200 gal. of water per 100 sq. yds. Application may be made with sprinklers, sprayers with nozzles or any suitable equipment. Follow directions given above for seed bed treatment.

SYMPHYLID CONTROL: Soil should be in good seed bed condition to a depth of 8 to 10 inches. Maintain adequate moisture during spring season. Treat during July-August when symphylids are in the upper soil surface. Apply 20 gal. METAM per acre using blade or chisel injector. Inject below level of symphylid concentration, usually 6 to 8 inches. Pack soil immediately after application.

NET CONTENTS

GALLONS

DISCLAIMER OF WARRANTIES: Seller warrants that the chemical composition of this product conforms to the chemical description given on this label. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES AND REPRESENTATIONS, EXPRESSED, IMPLIED, OR STATUTORY, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE. Timing, rate and method of application, weather and crop conditions. mixtures with chemicals not specifically recommended on this label or an accompanying written recommendation are beyond the control of seller. Buyer assumes all risks of use, storage and handling of this material not in strict accordance with directions given herewith. Buyer further agrees in the event of damages arising from the use of this product to accept a replacement of the product or a refund of the purchase price of the product at buyer's option, as full discharge of seller's liability. No one is authorized to make any other warranty, guarantee or directions concerning this product, and no such warranties, guarantees or directions shall be valid or binding upon seller.