

RESTRICTED USE PESTICIDE

For retail sale to and use only by Certified Applicators or persons under their direct supervision, and only for those uses covered by the Certified Applicator's Certification.

AMVAC METAM

A SOIL FUMIGANT SOLUTION FOR POTTING and PLANTING SOILS and FOR SMALL AREAS - TO CONTROL SOIL-BORNE PESTS THAT ATTACK ORNAMENTALS, FOOD AND FIBER CROPS.

MAY BE APPLIED BY SPRINKLER CAN, LIQUID FERTILIZER HOSE-END SPRAYER or HOSE PROPORTIONER, SOIL INJECTION OR ROTARY TILLER

Controls Weeds such as Annual Bluegrass, Bermudagrass, Chickweed, Dandelion, Ragweed, Henbit, Lambequarter, Amaranthus sp., Watergrass, Johnson Grass, Nutgrass, Wild Morning-glory and Purslane.

Nematodes and Symphyids

Soil-Borne diseases such as Rhizoctonia, Pythium, Phytophthora, Verticillium, Sclerotinia, Oak Root Fungus and Club Root of Crucifers.

ACTIVE INGREDIENT: Sodium methyldithiocarbamate(anhydrous)	32.7%
INERT INGREDIENTS: - - - - -	67.3%
TOTAL	100.0%

Contains 3.18 lbs. Active Ingredient METAM SODIUM per gallon

KEEP OUT OF REACH OF CHILDREN CAUTION

"PRECAUCION AL USUARIO: Si usted no lee ingles, no use este producto hasta que la etiqueta haya sido explicado ampliamente"

STATEMENT OF PRACTICAL TREATMENT

Immediately start the procedures below and contact a Poison Control Center, a physician or the nearest hospital. Describe the type and extent of exposure, 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 if irritation persists. **IF IN EYES:** Immediately flush eyes with large amounts of 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 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.

PRECAUTIONARY STATEMENT

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION: Harmful if inhaled or swallowed, irritating to eyes, nose, throat and skin. Avoid breathing vapors or spray mist. Avoid contact with skin, on eyes, or clothing. In case of contact, immediately remove contaminated clothing. Wash and dry clothing before reuse. Keep children and pets out of treated areas until treatment is completed and pesticide has dissipated.

PROTECTIVE CLOTHING AND EQUIPMENT REQUIREMENTS

1. The following protective clothing and equipment are required to be used by persons actually engaged in carrying out any operations that are likely to involve direct contact with Metam Sodium including mixing-loading, equipment calibrations or adjustments, clean up and repair of application equipment (equipment includes, but is not restricted to shanks, tillers, drop lines, and holding tanks); sampling; clean up of spills; fumigant transfer; and residue disposal, or by any other person engaging in activities likely to result in direct contact with the product. This protective equipment must also be used for any operations that are done within 8 feet of unshielded, pressurized hoses containing Metam Sodium.

a. A properly **FIT-TESTED** NIOSH or MSHA approved half-face respirator with organic vapor cartridge plus non-venting chemical goggles, or a NIOSH or MSHA approved full-face respirator with organic vapor cartridges. b. Body covering that has long sleeves and long pants. When a closed system is not used, mixers and loaders must also wear chemical resistant apron or cloth coveralls. c. Chemical resistant gloves and boots.

2. The following protective clothing must be worn at all times by persons operating or monitoring application equipment or entering treated fields within 48 hours after completion of application.

a. Chemical resistant footwear.
b. Body covering that has long sleeves and long pants.

3. The following protective clothing and equipment must be immediately available at all times for use by persons operating tractor drawn ground application equipment or monitoring application equipment, or entering treated fields within 48 hours after completion of application.

a. A properly **FIT-TESTED** NIOSH or MSHA approved half-face respirator with organic vapor cartridge plus non-venting chemical goggles, or a NIOSH or MSHA approved full-face respirator with organic vapor cartridges. This equipment must be worn when the pungent, rotten egg odor of Metam Sodium is detected.

b. Chemical resistant gloves. These must be worn when a person is engaged in carrying out any operation that is likely to involve direct contact with the product, including those operations listed in the preceding paragraph No. 1 above. (SEE SIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS)

EPA REG. NO. 5481-420 EPA EST. NO. 5481-CA-1
NET CONTENTS GALLON

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ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not contaminate water when disposing of equipment washwaters. Apply this product only as specified on this label.

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 through any irrigation system.

REENTRY AND WORKER SAFETY STATEMENT

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected person. Do not enter treated areas for 48 hours after application unless protective clothing is worn; (chemical resistant footwear and body covering with long sleeves and long pants; a respirator if odor is detected and chemical resistant gloves if direct contact with the product is involved). Because certain States may require more restrictive reentry intervals consult your State Department of Agriculture for further information. Written or oral warning must be given to workers and persons who are expected to be in treated areas or in an area to be treated with this product. (Indicate specific oral warnings which inform workers and persons of areas that may not be entered without specific protective clothing, period of time area must be vacated and appropriate action to take in case of accidental exposure.) When oral warnings are given, warnings shall be given in a language customarily understood by the workers or persons. Oral warnings must be given if there is a reason to believe that written warnings cannot be understood. Written warnings must include the following information.

WARNING: Area treated with Metam Sodium on Date (____). Do not enter without appropriate protective clothing for 48 hours after application. In case of accidental exposure see STATEMENT OF PRACTICAL TREATMENT found on the Metam Sodium label. Posting also is required. Consult your State Department of Agriculture for further information.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal. **STORAGE:** Store product in a cool, dry, locked place out of reach of children. Do not store below 0° F. Product crystallizes at lower temperatures. If exposed, warm or store at higher temperatures and mix to redissolve 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 according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA regional office for guidance. **CONTAINER DISPOSAL:** (METAL) Triple rinse or equivalent. Then offer for recycling (if allowed) or for incineration or disposal in a sanitary landfill, or by other procedures approved by State and local authorities. (PLASTIC) Triple rinse or equivalent. Puncture and dispose of in a sanitary landfill, or by incineration, or if allowed by State and local authorities by burning. If burned stay out of smoke.

GENERAL INSTRUCTIONS Before applying this product always thoroughly cultivate the area to be treated, breaking up clods and loosening soil deeply and thoroughly a week before treatment, moisten soil after cultivation to the desired depth. If the soil has crusted, cultivate lightly immediately before application.

Then: (a). Lightly sprinkle with water the area to be treated before applying Metam Sodium. (b). Apply Metam Sodium uniformly over the area. (c). Immediately sprinkle treated area with water to seal the soil. Sprinkle to point of run-off. **NOTE: DO NOT ALLOW WATER TO RUN-OFF OF TREATED AREA AS PLANTS IN ADJOINING AREAS MAY BE DAMAGED.**

(d). Immediately cover treated area with a plastic tarp. (e). Weight the tarp down around the edges to prevent wind or inadvertent removal of tarp. **NOTE: WEIGHTS MUST BE HEAVY ENOUGH TO DETER ANIMALS AND CHILDREN.** (f). Do not remove tarp for 48 hours. (g). Seven days after treatment cultivate area to a depth of 2 inches to aerate the soil. (h). Do not seed earlier than 21 days after application. (i). Posting is only required for non-tarped areas. See REENTRY AND WORKER SAFETY STATEMENT on this label.

IMPORTANT! - TARPING IS REQUIRED WHEN USING METAM SODIUM WITHIN 1/2 MILE OF POPULATED AREAS such as schools, hospitals, commercial or office buildings, factories, residential areas, etc. when using Metam Sodium in Seed Beds, Pottling/Planting Soils, Plant Beds, Lawns and other small planting area uses. **TARPING IS NOT REQUIRED IF TREATMENT IS MADE FURTHER THAN 1/2 MILE FROM POPULATED AREAS.**

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PRODUCT INFORMATION

ETAM SODIUM is a water soluble liquid. When applied to properly spaced soil, the liquid is converted into a gaseous fumigant. After efficient interval of time, the gas dissipates leaving the soil ready for seeding.

WHEN TO USE MAXIMUM AND MINIMUM RATES

The application rate of **METAM SODIUM** is dependent on the soil type to be treated and the position in the soil of the pest to be suppressed or controlled. Generally a light sandy soil requires a lower application rate than a heavier mineral soil. In addition, if the pest is in the upper portion of the soil profile (annual weeds) a lower application rate is generally required than if the pest is deeper in the soil profile and deeper penetration is desired (perennial weed seeds). Where a range of application rates is given in this label consult your local agricultural extension service for more specific information.

ORGANIC MATTER IN THE SOIL

Plant material under the soil surface should be thoroughly decomposed before applying **Metam Sodium**. Because of the absorbing effect of humus, soils with high levels of organic matter under the surface require higher than usual doses of **Metam Sodium**. For example, muck soils require twice the amount of fumigant that would be used in mineral soils.

USE PRECAUTIONS

Keep children and pets out of treated area. Keep off desirable lawns and gardens. 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 when fumes may enter nearby houses. 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.

A SOIL FUMIGANT SOLUTION FOR THE FOLLOWING USES

METAM SODIUM 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, Lambquarter, Amaranthus sp. (Pigweed & Careless Weed), Watergrass, Johnson Grass, Nutgrass, Wild Morning-glory and Purslane; Nematodes and Symphyllids (Garden Centipede) and Soil-borne Diseases such as (Rhizoctonia, Pythium, Phytophthora, Verticillium, Sclerotinia, Oak Root Fungus and Club Foot of Crucifers).

CULTIVATION AND PLANTING AFTER APPLICATION

On well drained soil 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 **Metam Sodium** an extended interval should be observed. Where dosages are greater than 100 gals. per acre, wait at least 60 days. On heavy, wet soils, 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 soil are not mixed with treated soils.

SPECIAL INSTRUCTIONS: When treating potting soil, or heavier field soils, including soil high in clay or organic matter, it is essentially important that the soils be allowed to aerate and dry thoroughly after using **METAM SODIUM**. During cold and/or wet weather, frequent shallow cultivations may aid the escape of **METAM SODIUM** from the soil. If in doubt transplant a seedling plant and examine for injury before planting crop.

USES, APPLICATION METHODS AND RATES FOR SHALLOW PESTS IN SEED BEDS, PLANT BEDS, LAWNS AND OTHER LIMITED AREAS

To prevent loss from evaporation, use only at times when air temperature is moderate and there is little wind movement. Soil temperature must be from 40 to 90 degrees F. in the treated zone. Treated zone is defined as the depth of treatment that **Metam Sodium** achieves at the time of application. For other conditions, see section, "Cultivation & Planting After Application". Do not apply to soil surface, as in the sprinkler method, when air temperature is over 90 degree F. or when low humidity or high winds would cause loss of **Metam Sodium** before it can be drenched into the soil with additional water. If fumes become unpleasant during treatment, apply more water to seal the fumes into the soil where they should be confined to achieve maximum fumigation benefit.

SPRINKLER CAN METHOD: Place 1 pt. **METAM SODIUM** (1 1/2 pt on very heavy soils or for deep rooted weeds) in a sprinkling can, fill with water and sprinkle uniformly over 50 sq. ft. of well prepared soil. Sprinkle immediately with water until soil is sealed or tarp for 48 hours.

HOSE PROPORTIONER METHOD: Add 1 Qt. to 3 quarts 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 sealed or tarp for 48 hours.

SOIL INJECTION: Space injection rhanks 5 inches apart and inject **METAM SODIUM** into well prepared soil. Follow immediately with a roller to smooth and compact the soil surface. Light watering or a tarp after rolling helps to prevent gas escape. For seedbeds a dosage of 75 to 100 gallons per acre (1 1/2 to 2 pts. per sq. ft.) is recommended.

ROTARY TILLER: Spray or sprinkle diluted **METAM SODIUM** immediately in front of tiller. Use 1 Qt. in 2 1/2 gals 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 help prevent gas escape.

The activity of **METAM SODIUM** is increased by the use of 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 areas to depth of 2 inches to aerate the soil. Do not seed earlier than 21 days after application when tarping method is used.

Use promptly after mixing with water. Do not allow solution to stand. Flush equipment with water after each day's use. Disassemble valves and clean carefully.

TREATMENT OF TREE REPLANT SITES

After removing dead or diseased trees and as much of the root system as possible, make a shallow basin over the planting site. Add **METAM SODIUM** to the stream of water while filling the basin. Use 1 qt. **METAM SODIUM** 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 qts. 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 SODIUM** to the water and mix before filling basin.

PREVENTION OF ROOT GRAFT TRANSMISSION OF DUTCH ELM AND OAK WILT DISEASES.

Immediately after a tree is diagnosed as having Dutch Elm Disease or Oak Wilt disease, isolate the diseased tree from healthy trees with the **METAM SODIUM** treatment. If a diseased tree is less than 20 feet from the 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 the second healthy-appearing trees. This measure is advisable because the causal fungus may have already passed from the diseased to the first healthy-appearing tree before **METAM SODIUM** was applied.

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

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

STEPS TO FOLLOW WHEN TREATING POTTING SOIL

A. SPRINKLER CAN METHOD: 1. Spread soil in a smooth layer 4 inches high on concrete or on pretreated soil.

2. Sprinkle **METAM SODIUM** at the 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 SODIUM** to soil mix at rate of 1 fl. oz. per 2 cu. ft. of soil in cement or similar mixer. Mix thoroughly.

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. SHREDDER: 1. Dilute **METAM SODIUM** in sufficient water to obtain even distribution. As soil is ejected from shredder, spray uniformly on soil stream at rate of 1 fl. oz. per 2 cu. ft. of soil.

2. After all soil is retreated and piled, apply light water seal to entire surface or cover with tarp.

NOTICE: This product conforms to its chemical description and is reasonably fit for the purpose stated on the label, when used in accordance with directions under normal conditions of use. Manufacturer is not responsible for the use of this product contrary to the label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to the manufacturer and/or seller and the buyer assumes the risk of any such use.

(54-420A3, PM3/ amend. to chgs. signal word to Caution; on version dated 05-21-62)

AMVAC CHEMICAL CORPORATION
4100 East Washington Blvd - Los Angeles, CA 90023 U.S.A.

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