



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

Julie Porter  
AMVAC  
4695 MacArthur Court  
Suite 1250  
Newport Beach, CA 92660

DEC 27 2011

Subject: Metam Sodium Manufacturer's Concentrate  
EPA Reg. No. 5481-416  
Phase 2 RED Mitigation Amendment Dated June 28, 2011  
EPA Decision Number 459114

Dear Ms. Porter:

The amended label referred to above, submitted in connection with reregistration of metam sodium under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable provided the following label revisions are made and the following conditions are met:

**LABEL REVISION**

1. On page 1, revise the ingredient statement by deleting the word "Inert" and replace with "Other" Ingredients. In addition, revise the percentages to 42.0% and 58.0%, respectively.
2. On page 4, update the "Storage and Disposal" section in accordance with EPA's Label Review Manual <http://www.epa.gov/oppfead1/labeling/lrm/chap-13.pdf>.
3. On page 4, update the "Limited Warranty and Disclaimer" statement in accordance with EPA's Label Review Manual <http://www.epa.gov/oppfead1/labeling/lrm/chap-12.pdf>.

**CONDITIONS**

1. EPA has determined that the risk mitigation measures on the revised label for this product are necessary to adequately protect human health and the environment. Therefore, pursuant to 40 CFR § 152.130(d), EPA has decided that no product bearing previously approved labeling may be sold or distributed (released for shipment) by its registrant after December 1, 2012. Wherever state approval is required for sale or distribution of this product with this new labeling, EPA strongly encourages you to

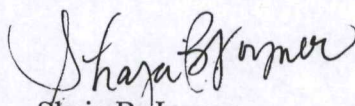


submit an application to the state authority as soon as possible. You should be aware that the Agency does not intend to modify the December 1, 2012, deadline because of any failure to obtain state approvals.

2. Submit one copy of the final printed label that incorporates the required changes before the product is released for shipment.

One copy of the label stamped "Accepted with comments" is enclosed for your records. If you have any questions, please contact Jose Gayoso by phone at (703) 347-8652 or via email at [gayoso.jose@epa.gov](mailto:gayoso.jose@epa.gov) or Shaja Joyner by phone at (703) 308-3194 or email at [joyner.shaja@epa.gov](mailto:joyner.shaja@epa.gov).

Sincerely,



Shaja B. Joyner  
Product Manager (20)  
Fungicide Branch  
Registration Division (7504P)



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ACCEPTED  
with COMMENTS  
In EPA Letter Dated  
**DEC 27 2011**  
Under the Federal Insecticide,  
Fungicide, and Rodenticide Act,  
as amended, for the pesticide  
registered under EPA Reg. No.  
5481-416

# METAM SODIUM

## Manufacturer's Concentrate

### A FORMULATION INTERMEDIATE

For formulation into end-use products only for use as:

- Fumigant solutions for control of weeds, fungi and nematodes in soil of ornamental, food and fiber crops.
- Fumigant solutions for control of decay and insects in wood and wood products.
- Anti-microbial agents
- Products to control roots and fungi in sewers.

**ACTIVE INGREDIENT:**

Sodium methyldithiocarbamate (anhydrous)..... 44.7%

**INERT INGREDIENTS:**..... 55.3%

**TOTAL:** ..... 100.0%

## KEEP OUT OF REACH OF CHILDREN

## DANGER - PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.  
(If you do not understand the label, find someone to explain it to you in detail).


FIRST AID	
<b>If on skin or clothing:</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If in eyes:</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If inhaled:</b>	<ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul>
<b>If swallowed:</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have a person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul>
EMERGENCY INFORMATION	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment.	
FOR THE FOLLOWING EMERGENCIES, PHONE 24 HOURS A DAY:	
Transportation: CHEMTREC.....	1-800-424-9300
Other: AMVAC.....	1-323-264-3910

Labeling for products formulated for applications around homes and other structures which people inhabit or otherwise occupy must include appropriate wording for "Restricted Use Pesticides" and will include small-area applications such as non-field application (including greenhouse) to seed beds, plant beds, lawns and other limited areas.

SEE SIDE/BACK PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS AND DIRECTIONS FOR USE.

EPA Reg. No. 5481-416  
EPA Est. No. 5481-CA-1

Net Weight:  
As Marked on Container

  
4100 E. Washington Blvd.  
Los Angeles, CA 90023 U.S.A  
1-323-264-3910 • www.amvac-chemical.com



Formulator's are responsible for obtaining and maintaining EPA registrations on their Metam Sodium formulated products.

## **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.

### **ENVIRONMENTAL HAZARDS**

This pesticide is toxic to mammals, birds, fish, and aquatic invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA.

### **DIRECTIONS FOR USE**

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

Only for formulation into a fumigant for the following use(s):

Cover crops (i.e., crops planted between periods of regular crop production to prevent soil erosion). The terminated crop must not be used for any food or feed purposes after [Name of Product] has been applied;

Crops grown solely for seed;

as well as pre-plant soil uses for (in alphabetical order):

alfalfa; amaranth (including leafy amaranth, Chinese spinach, tampala); anise; apple (including: balsam, crabapple); apricot; artichokes; arugula (rocket); asparagus (nursery production only); barley; basil; beans (including: lima, green, fava, seed beans); beet (including garden);

berry (including black satin berry, blackberry, blueberry, boysenberry, chesterberry, lowberry, wild raspberry, youngberry, darrowberry, dewberry, cloudberry, elderberry, Cherokee blackberry, coryberry, European barberry, huckleberry, hullberry, gooseberry, cranberry, highbush cranberry, Himalayaberry, jostaberry, juneberry, saskatoon berry, lingonberry, loganberry, lavacaberry, lucretiaberry, mammoth blackberry, marionberry, bingleberry, mountain pepper berries, mulberry, olallieberry, dirksen thornless berry, nectarberry, Oregon evergreen berry, partridgeberry, phenomenalberry, rangeberry, raspberry (black and red), ravenberry, riberry, rossberry, schisandra berry, serviceberry, Shawnee blackberry, strawberry)

bok choy; broccoli; brussels sprouts; cabbage (including Napa); calabaza; calamondin; cardoon; carrot; casaba; cauliflower; celeriac; celery (including: Chinese); celtuce; chayote (fruit); che; cherry (including: sweet and tart, chokecherry, pincherry); chervil; cheyenne;

Chilean guava; Chinese greens; Chinese okra; Chinese waxgourd (Chinese preserving melon); chinquapin; chironja; chrysanthemum; cilantro; citrus citron; citrus hybrids; collard; corn salad; corn; cotton; cress (including: upland, yellow rocket, winter cress); cucumber (including: Chinese cucumber); cucuzza; currant, (including: black, red, native and other varieties and hybrids);

dandelion; dill; dock (sorrel); eggplant; endive (escarole); fennel, Florence (finocchio); forest seedlings; garland; garlic; gherkin; ginger; gourd; grape; grapefruit; hechima; herbs (all); honey balls; honeysuckle; hyotan; kale; kiwifruit (including: fuzzy and hardy); kohlrabi; kumquat; leek; lemon; lettuce (including: head and leaf); lime; loquat; mandarin (including: tangerine and satsuma); mango; mayhaw; maypop;

melon (including: bitter melon, cantaloupe, hybrids and/or cultivars, citron melon, crenshaw melon, golden pershaw melon, mango melon, honeydew melon, muskmelon, Persian melon, pineapple melon, Santa Claus melon, snake melon, watermelon);

mint; muntries; mustard; nectarine; nursery stock (fruit seedlings and rose bushes only);



nursery tree crops (including crops like maple, ash, dogwood);

nut (including: almond, beech nut, cashew, chestnut, hickory nut, Brazil nut, macadamia nut (bush nut), filbert (hazelnut), pecan, pistachio, walnut (black and English/Persian);

onion; orach; orange (including: sour and sweet); ornamentals; parsley; peas (including: English and garden); peach; peanut; pear (including: oriental and balsam); pepper; phalsa; plum (including: Chickasaw and Damson); plumcot; potato; prune (fresh); pummelo; pumpkin; purslane (including: garden and winter); quince;

radicchio (red chicory); radish (including Oriental); rappini; rhubarb; rye; salal; sea buckthorn; soybean; spinach (including: New Zealand, Malabar, Indian); squash, (including: summer, winter, butternut, straightneck, Acorn, crookneck, hubbard, scallop, spaghetti); sugar beet; sweet potato; swiss chard; tangelo; tanger; tobacco; tomatoes; tree nuts (orchard replant only); turf (including golf courses); turnip; vegetable marrow; wheat; yams; zucchini.”

“Use in greenhouses is prohibited. Application with handheld equipment is prohibited. Application with cement grinder and shredder equipment is prohibited. Open pour applications are prohibited.” End use products with directions or use for soil fumigation must specifically prohibit these uses, and all references to such applications must be removed.

Metam-sodium cannot be formulated into end-use products labeled for pre-plant or pre-transplant uses unless the end-use registrant makes available to certified applicators who purchase or apply the end-use product a registrant developed training program approved by EPA. The training program must provide information on (1) how to correctly apply the fumigant, including how to comply with new label requirements; (2) how to protect handlers and bystanders; (3) how to determine buffer zone distances; (4) how to complete an FMP and the post-application summary; (5) how to determine when weather and other site-specific factors are not favorable for fumigant application; (6) how to comply with required GAPs and how to document compliance with GAPs in the FMP; and (7) how to develop and implement emergency response plans. The registrant developed training program must be made available at least annually to the certified applicators. The end-use registrant must be able to provide, upon request, the names, addresses, and certified applicator license and/or certificate number of persons who successfully complete the registrant developed training program.

Metam-sodium cannot be formulated into end-use products labeled for pre-plant or pre-transplant uses unless the end-use registrant ensures Buffer Zone signs suitable for posting buffer zones or templates for the buffer zones signs are available to its downstream distributors/customers who in turn will provide the signs at the point of sale. Templates may be downloaded from [http://www.epa.gov/pesticides/reregistration/soil\\_fumigants/index.htm](http://www.epa.gov/pesticides/reregistration/soil_fumigants/index.htm)

The Buffer Zone sign must meet the following standards:

- Signs must remain legible during the entire posting period, and must meet the general standards outlined in the WPS for sign size, text size, and legibility (see 40 CFR §170.120).



### Contents of Sign



-- "DO NOT ENTER/NO ENTRE,"  
 -- "Metam-sodium and metam-potassium [Name of Product] Fumigant BUFFER ZONE,"  
 -- space for contact information for the certified applicator in charge of the fumigation"

This product may be used to formulate products for specific use(s) not listed on the MUP label if the formulator, user group, or grower has complied with U.S. EPA submission requirements regarding support of such use(s).

### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store product in a cool, dry, locked place out of reach of children. Do not store below 32°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 or reconditioning, or puncture and dispose of 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.

### LIMITED WARRANTY AND DISCLAIMER

The manufacturer warrants (a) that this product conforms to the chemical description on the label; (b) that this product is reasonably fit for the purposes set forth in the directions for use, subject to the inherent risks referred to herein, when it is used in accordance with such directions; and (c) that the directions, warnings, and other statements on this label are based upon responsible experts' evaluations of reasonable tests of effectiveness, of toxicity to laboratory animals and to plants and residues on food crops, and upon reports of field experience. Tests have not been made on all varieties of food crops and plants, or in all states or under all conditions.

**THERE ARE NO EXPRESS WARRANTIES OTHER THAN THOSE SET FORTH HEREIN. THE MANUFACTURER NEITHER MAKES NOR INTENDS, NOR DOES IT AUTHORIZE ANY AGENT OR REPRESENTATIVE, TO MAKE ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, AND IT EXPRESSLY EXCLUDES AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE, OR ANY WARRANTY OF QUALITY OR PERFORMANCE. THIS WARRANTY DOES NOT EXTEND TO, AND THE BUYER SHALL BE SOLELY RESPONSIBLE FOR, ANY AND ALL LOSS OR DAMAGE WHICH RESULTS FROM THE USE OF THIS PRODUCT IN ANY MANNER WHICH IS INCONSISTENT WITH THE LABEL DIRECTIONS, WARNINGS OR CAUTIONS.**

**BUYER'S EXCLUSIVE REMEDY AND MANUFACTURER'S OR SELLER'S EXCLUSIVE LIABILITY FOR ANY AND ALL CLAIMS, LOSSES, DAMAGES, OR INJURIES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, WHETHER OR NOT BASED IN CONTRACT, NEGLIGENCE, STRICT LIABILITY IN TORT OR OTHERWISE, SHALL BE LIMITED, AT THE MANUFACTURER'S OPTION, TO REPLACEMENT OF, OR THE REPAYMENT OF THE PURCHASE PRICE FOR, THE QUANTITY OF PRODUCT WITH RESPECT TO WHICH DAMAGES ARE CLAIMED. IN NO EVENT, SHALL MANUFACTURER OR SELLER BE LIABLE FOR SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.**

AMVAC offers this product, and Buyer accepts it, subject to the foregoing Limited Warranty which may be varied only by agreement in writing signed by an authorized representative of AMVAC.

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