CAUTIONS

- Avoid breathing vapor or spray mist.
- Do not get in eyes, on skin, or 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 for at least 15 minutes and get medical attention.
- Wash and dry clothing and shoes before re-use.
- When applying in enclosed areas, wear a mask or respirator of a type passed by the U.S. Department of Agriculture for VAPAM** protection.
- Keep children and pets out of area being treated.
- Do not store near feed or foodstuffs.
- Keep container tightly closed when not in use.
- Do not store below 0° F. or above 150° F.
- PERFORATE EMPTY CONTAINER, CRUSH, BURY with waste in safe area away from crops and water supplies.

PRODUCT INFORMATION

VAPOROOTER* is a water-soluble, foam-type, surface-active formulation of VAPAM**. When properly applied to sewer mains, VAPOROOTER* kills and inhibits the growth of plant roots in the interior of the mains.

VAPOROOTER* liquid is converted into a gaseous fumigant and is maintained in an active foam state on pipe and root surfaces when the sewer mains are properly sprayed or soaked with the VAPOROOTER* solution.

VAPOROOTER* is a non-systemic chemical for control of roots in sewer mains, drain-lines, and other conduits. This material also helps control fungi and bacteria that produce slimes and fatty acids. These organic materials often generate hydrogen sulfide in the sewer main. Only the roots and organic deposits in the sewer lines are affected by VAPOROOTER*. No harmful residue remains. The gaseous fumigant is dissipated within a few hours and the foam is biodegradable.

PROCEDURE FOR CONTROLLING ROOT GROWTH IN SEWER MAINS BY SOAKING THE LINE WITH VAPOROOTER SOLUTION

1. Determine which of the collection lines have known root problems. Start with the first manhole section in the upstream end of the line and be sure there are four or five sections downstream which can be soaked progressively with the same solution by passing the solution downstream.
2. Plug the main securely at the manhole on the downstream end of the first section to be soaked. Add water to the upstream manhole of this section at the rate of approximately 40 gallons a minute. While this water is being added to the manhole, add Vaporooter concentrate in sufficient quantity to assure that the required amount of water to fill that section of the main and the taps will have 1% volume/volume of Vaporooter in solution.

   EXAMPLE: Assuming the first section to be soaked is a 6-inch main 400 feet in length, it will require 1.5 gallons per foot, or 600 gallons to fill the main, and 1% volume/volume solution of Vaporooter will require the addition of 6 gallons of Vaporooter concentrate.
3. After this solution has been allowed to stand in the line for at least 30 minutes, and preferably for an hour, then the next downstream manhole should have the main plugged and the upstream plug should be removed, allowing Vaporooter solution to fill the section of the line. Again, this reused batch of solution should remain in the line for 30 minutes to an hour. By following this method of passing the same batch of solution down sections of line, it is f same batch of solution t feet of line at a total co 3½c to 5c per foot, in 6-i
4. Where the same batch several downstream sec ed lines, we can furnish make it practical to pum Vaporooter solution to a cleanouts or back flow lines can be plugged w flatable plugs to guard plumbing fixtures.
5. The spray method will b some sewers that are i due to the location of th line grades as related to

	Pipe Di
SEWER PIPE CAPACITY	4 inc
	6 inc
	8 inc
	10 inc
	12 inc

U.S.D.A. REG. NO. 9993-1

EPA 9993-00001-AA

(680322)

5 GAL. NET

VAPOROOTER*

A FOAMING FUMIGANT

RIDS SEWER LINES OF ROOTS

HELPS CONTROL SLIMES WHICH GENERATE HYDROGEN SULFIDE

ACTIVE INGREDIENT:	
Sodium methyldithiocarbamate (anhydrous)	28.8%
INERT INGREDIENTS	71.2%
	100.0%

Weight per gallon — 9.7 lbs.

A FORMULATION OF VAPAM**

*Airrigation's Reg. T.M.
**Stauffer Chemical Company's Reg. T.M. and U.S. Pat. Nos. 2,766,554; 2,791,605

CAUTION

KEEP OUT OF REACH OF CHILDREN

HARMFUL IF INHALED OR SWALLOWED. IRRITATING TO EYES, NOSE, THROAT, AND SKIN.

(See left panel for additional cautions.)

ACCEPTED
THE FEDERAL INSECTICIDE
AND RODENTICIDE ACT
U.S. POISON REGISTRATION
Aug 2, 1971

manufactured

exclusively for

AIRRIGATION ENGINEERING COMPANY, INC.

Post Office Box H Carmel Valley, California 93924 PHONE: 408-659-2000

DIRECTIONS FO SPRAY PRO

Add three parts water to o ER*, and spray interior o mains at rate of one gall to each 100 feet. Spray 1 mains at rate of one and solution to each 100 feet.

The spray equipment sh draulic type to produce lin 180 pounds per square inc fog-type nozzles should be riage that will maintain near center of pipe being s cone spray should be dir other, to the rear—in a m pipe surfaces at angles of must have good hydraulic the pipe and roots from al application gives the mos of slimes and fatty acids

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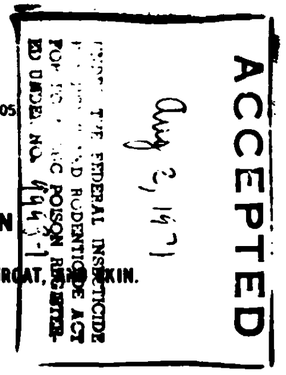

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batch of solution down line for four or five sections of line, it is feasible to use the same batch of solution to treat 1500 to 2000 feet of line at a total cost for Vaporooter of 3½c to 5c per foot, in 6-inch sewer mains.

4. Where the same batch cannot be used in several downstream sections of root-infested lines, we can furnish special plugs that make it practical to pump and transport the Vaporooter solution to another line. House cleanouts or back flow valves on service lines can be plugged with our special inflatable plugs to guard against flooding of plumbing fixtures.
5. The spray method will be necessary to treat some sewers that are impractical to soak, due to the location of the root problem and line grades as related to service taps.

SEWER PIPE CAPACITY

Pipe Diameter	1-foot length
4 inches	0.65 gal.
6 inches	1.47 gal.
8 inches	2.61 gal.
10 inches	4.1 gal.
12 inches	5.9 gal.

DIRECTIONS FOR USE OF SPRAY PROCEDURE

Add three parts water to one part VAPOROOTER*, and spray interior of 6-inch and 8-inch mains at rate of one gallon of this solution to each 100 feet. Spray 10-inch and 12-inch mains at rate of one and one-half gallons of solution to each 100 feet.

The spray equipment should be of the hydraulic type to produce line pressure of 100 to 180 pounds per square inch. Two hollow-cone, fog-type nozzles should be mounted on a carriage that will maintain the nozzle position near center of pipe being sprayed. One hollow-cone spray should be directed forward—the other, to the rear—in a manner to contact all pipe surfaces at angles of 60° to 80°. The spray must have good hydraulic impact and strike the pipe and roots from all sides. This type of application gives the most effective removal of slimes and fatty acids from the pipe and root surfaces and produces the most effective foam characteristics. The effectiveness of the fumigant VAPAM** is enhanced by good foam formation of the small-bubble type and removal of organic films from the surfaces of the pipe and roots.

USE CAUTIONS

USE PROMPTLY AFTER MIXING WITH WATER. DO NOT ALLOW SOLUTION TO STAND.

Wash and flush all equipment with water after each day's use. Disassemble valves and nozzles and clean carefully.

KEEP OFF DESIRABLE LAWNS AND PLANTS. Do not spill or discard solution waste within three feet of the drip-line of plants, shrubs, or trees. If excessive spillage occurs on the street or other paved areas in the vicinity of greenhouses, where growing plants are present or where fumes may enter other buildings containing growing plants, immediately flush the spill thoroughly with water-spray at moderate pressure, to prevent fumes from drifting toward critical areas.

Effluent from treated water may be harmful to fish and other aquatic life.

DO NOT USE IN CONFINED AREAS WITHOUT ADEQUATE VENTILATION.

SPECIAL USAGE

WHEN DESIRABLE TO TREAT EXTERIOR OF PIPE JOINTS TO KILL ROOTS IN VICINITY, use small-sized soil auger or probe with shank injector and apply VAPOROOTER* solution at rate of one quart VAPOROOTER* to three quarts water. Inject one or more gallons of solution in such a manner as to treat the upper two-thirds of the pipe-joint circumference.

NOTICE: Airrigation Engineering Company makes no warranty, express or implied, including the warranties of merchantability and/or fitness for any particular purpose, concerning this material, except those which are contained on this label.