

Ag-Fume



SOIL
STERILANT

Reg. No. L7365 Act No. 36 of 1947

READ LABEL BEFORE USE
KEEP OUT OF REACH OF CHILDREN AND ANIMALS

Ag-Fume is a soil fumigant for the control of germinating weed seeds, soil fungi and nematodes in agricultural and horticultural soils, seedbeds and planting media as indicated.



DANGER

ACTIVE INGREDIENT

Metam-Sodium (Thiocarbamate)

510 g/t

UN Number: 3267

Emergency contact details
Office Hour Poisoning Helpline
Rolfes Agri (Pty) Ltd.
Tel: +27 (12) 803 0145

Registered, Manufactured & Distributed by:
Rolfes Agri (Pty) Ltd. (Reg. No. 1998/013411/07)
288 Mundt Street, Waltloo, 0184
Gauteng, RSA. • Tel: (012) 803-0145
www.rolfesagri.co.za

HAZARD STATEMENTS:

Harmful if swallowed.
Causes severe skin burns and eye damage.
May cause an allergic skin reaction.
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

PRECAUTIONARY STATEMENTS:

Wash hands and affected area thoroughly after handling.
Do not eat, drink or smoke when using this product.

Rolfes 
Agri

Spill Response and Transpot incidents
Spill Tech, Oil and chemical pollution control
Tel: +27 (86) 100 0366 / +27 (83) 253 6618
www.spilltech.co.za



LIFT HERE

PRECAUTIONS

- If medical advice is needed, have product container or label at hand.
- Keep out of reach of children.
- Read carefully and follow all instructions.
- Do not breath dust/fume/gas/mist/vapours/spray.
- Wash hands and affected area thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Contaminated work clothing should not be allowed out of the workplace.
- Avoid release into the environment.
- Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- IF SWALLOWED: Get medical help.
- IF ON SKIN: Take off immediately all contaminated clothing. Immediately rinse with water for several minutes.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- Get emergency medical help immediately.
- Specific treatment (see first aid treatment on this label).
- Rinse mouth.
- If skin irritation or rash occurs: Get medical help.
- Take off contaminated clothing and wash before reuse.
- Wash contaminated clothing before reuse.
- Collect spillage.
- Store locked up.
- Empty all contents from the container by placing it upside down over the spray tank and holding it there for at least 30 seconds. Puncture the rinsed container to render it useless and send to a recycler.

RELEVANT HAZARDOUS SUBSTANCE:

Metam-Sodium (Thiocarbamate) 30-60 %

WARNINGS

- Leave the immediate area after soil is treated.
- Do not use in confined areas without adequate ventilation or where fumes may penetrate adjoining premises with growing plants.
- Do not treat within 5 metres of existing trees and field crops.
- Do not use in greenhouses where desirable plants are present.
- Store in a cool, well ventilated place away from food, feed and seed.
- **AG-FUME** is corrosive, therefore clean spray apparatus thoroughly after use and dispose of wash water in a safe manner where it will not contaminate crops, grazing, rivers or dams. Destroy empty container and do not use for any other purpose.
- Change and wash your work clothes. Wash yourself.

Although this remedy has been extensively tested under a large variety of conditions, the registration holder does not warrant that it will be efficacious under all conditions because the action and effect thereof may be affected by factors such as abnormal soil, plant media, climatic and storage conditions; quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the disease, pest or weed against the remedy concerned, as well as by the method, time and accuracy of application. The registration holder furthermore does not accept responsibility for damage to crops, vegetation, the environment, or harm to man or animal or for lack of performance of the remedy concerned due to failure of the user to follow the label instructions or to the occurrence of conditions which could not have been foreseen in terms of the registration. Consult the supplier in the event of any uncertainty.

SYMPTOMS OF POISONING:

Overexposure to **AG-FUME** may result in damage to the skin, skin irritation, excessive salivation, sweating, fatigue, weakness, nausea, headache, dizziness, eye, nose, throat and respiratory tract irritation. In addition, dilution to use levels results in the release of methyl isothiocyanate (MITC) and/or hydrogen sulphide. Overexposure to MITC may result in strong skin and eye irritation, running nose, dizziness, cramps, nausea, vomiting and mild to severe disturbances of the nervous system. Overexposure to hydrogen sulphide may result in severe irritation to the eyes and mucous membranes.

FIRST AID TREATMENT:

- **Inhalation:** Remove victim to fresh air. If not breathing, clear the victim's airway and start mouth-to-mouth artificial respiration. If breathing is difficult, give oxygen. Contact a physician immediately.
- **Ingestion:** Immediately dilute the swallowed product by giving large quantities 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. Never give anything by mouth to an unconscious person. Contact a physician immediately.
- **Skin Contact:** Immediately flush all affected areas with large amounts of clear water for at least 15 minutes. Remove contaminated clothing. Do not attempt to neutralize with chemical agents. Wash clothing before re-use. If skin irritation or rash develops, contact a physician immediately.
- **Eye Contact:** Immediately flush eyes with copious amounts of clear, cool running water for a minimum of 15 -20 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Contact a physician immediately. If there will be a delay in getting medical attention, rinse the eyes for at least another 15 minutes.

NOTE TO PHYSICIAN:

Treat symptomatically. Contact the nearest poison control centre for further information.

DIRECTIONS FOR USE:

Use only as indicated. **AG-FUME** is a water miscible soil fumigant and can be easily applied by drenching infested soils. Apply when soil temperatures are between 10 and 25 °C, for optimal efficacy. Suboptimal efficacy of **AG-FUME** may occur on turf soils due to insufficient water penetration, soils with high organic matter content (high absorption coefficient), or when soil temperatures are below 10 °C.

PRE-APPLICATION PROCEDURE:

Ensure a well-prepared, fine tilth and even surface, by preparing the soil up to a depth of 50 cm. Remove undecayed vegetable matter. Two to 3 weeks prior to application, bring soil moisture up to field capacity (60 -80 %). Keep soil moist prior to application.

POST APPLICATION PROCEDURE:

Seal treated areas with either (1) follow-up irrigation or (2) plastic sheet, to prevent excessive evaporation from treated areas. Cultivate soil to aerate treated area thoroughly 10 -14 days after application. Repeat shortly before planting. Soil temperatures influence the evaporation rate of the fumigant:

Plant or sow 3 -4 weeks after application for soil temperatures of 10 -15 °C.

Plant or sow 2 -3 weeks after application for soil temperatures above 16 °C.

Soil with a (1) high clay content, (2) high organic fraction or (3) those that are saturated, will retain the fumigant and require a longer waiting period.

ENSURE THE TREATED AREA IS READY FOR USE BY CONDUCTING THE GERMINATION TEST.

GERMINATION TEST:

Take soil samples from both fumigated and untreated areas at depths of 10 and 15 cm. Remove and discard the top surface soil. Half fill a transparent container with the soil and close immediately.

Place cress seeds on moist filter paper or cotton pads and place on top of soil in container. Close container and place near a window at room temperature.

Check 24 -48 hours later for germination. The area is ready for use only if seeds have germinated on both untreated as well as treated soils.

Prevent re-infestation of treated soil by using clean uninfected plant material, irrigation water and equipment.

METHODS OF APPLICATION:

SPRINKLER SYSTEM:

Inject the required amount of **AG-FUME** into the system via a tank mix. Application should be directly from the hydrant, using a non-return valve. Injection of **AG-FUME** must occur over the full irrigation period. Only apply under conditions that ensure even distribution over treated area. It is essential that there is careful supervision. The treated area must be kept moist by applying follow-up irrigation for one week after treatment.

It is recommended that a plastic sheet is used on light sandy soils (< 5 % clay), where surface sealing with follow-up irrigation is difficult to obtain, because of sub-optimal results.

See Post Application Procedure.

SEEDBEDS:

Use a watering can to treat seedbeds and small surfaces. Make up seedbeds prior to treatment.

Drench the soil thoroughly with the required amount of **AG-FUME** in a minimum of 10 ℓ water per 10 square metres. **Preferably treat the total area to minimise contamination from untreated**

areas. Adhere strictly to directions for use on soil preparation.

To obtain optimum efficacy, seal the treated area surface to prevent the gas from escaping, by either:

1. Covering the soil with a plastic sheet. The cover need not be tented, and must be removed after 3 days.
2. Drenching the soil with a further irrigation (4 -5 mm water/ha). Keep the treated area moist with a follow-up irrigation for one week after treatment.

See Post Application Procedure.

PLANTING HOLE TREATMENT:

Prepare a dam around plant hole ($\pm 1 \text{ m} \times 1 \text{ m}$) with a wall of 10 cm in height. Half fill the dam with water and then apply required amount of **AG-FUME** over the surface. Fill up immediately to full capacity with water.

See Pre-Application Procedure.

GROWING MEDIA AND POTTING SOIL:

Media should be moistened with **AG-FUME** solution using a watering can whilst mixing continuously. The use of a cement mixer is ideal for this purpose. Apply 700 - 900 mℓ **AG-FUME** per cubic meter soil, in 30 - 50 litres water. Cover treated soil with a plastic sheet to prevent gases from escaping. Remove cover after three days and aerate the soil.

See Post Application Procedure.

DOSAGE RATE	CONTROL SPECTRUM
650 - 900 ℓ/ha	SOIL FUNGI: Damping off (<i>Fusarium</i> , <i>Pythium</i> , <i>Rhizoctonia spp</i>), Pink root (<i>Pyrenochaeta terrestris</i>), White bulb rot (<i>Sclerotium cepivorum</i>)
(65 - 90 mℓ/m ²)	NEMATODES: Root knot (<i>Meloidogyne spp</i>), Lesion (<i>Pratylenchus spp</i>), Cyst (<i>Heterodera spp</i>), Stubby (<i>Trichodorus spp</i>)
Rate is dependent on infestation level and target spectrum, depth of disinfection which is required and soil type.	WEEDS: Broadleaf: Red garden sorrel (Clover) (<i>Oxalis latifolia</i>), Chickweed (<i>Stellaria media</i>), Khakiweed (<i>Tagetes minuta</i>); Pigweed (<i>Amaranthus deflexus</i> , <i>A. hybridus</i>), Purslane (<i>Portulaca oleracea</i>), Shepherds Purse (<i>Capsella bursa pastoris</i>), Thornapple (<i>Datura spp</i>). Grasses: Annual grasses including Goose grass (<i>Elyusine indica</i>), Sweet Buffalo grass (<i>Panicum schinzii</i>) as well as Yellow nutsedge (<i>Cyperus esculentis</i>).
	LAWNS AND TURF RENOVATION: Common quickgrass (<i>Cynodon dactylon</i>) and Kikuyu (<i>Pennisetum cladestinum</i>)