

BEFORE USING THIS PRODUCT READ THE LABEL CAREFULLY!

Herbicide



WABEK 510 SL

Reg. No. L 9145 Act/Wet No. 36 of/van 1947

1: 8/3/2013 – June 2017

A soil fumigant for the control of germinating weed seeds, nematodes and certain soil fungi in agricultural and horticultural soils, seedbeds and planting media as indicated.

'n Grondberokingsmiddel vir die beheer van ontkiemende onkruidsaad, aalwurms en sekere grondswamme in saadbeddings, in landbou- en tuinbougronde en plantmedia soos aangedui.

ACTIVE INGREDIENT / AKTIEWE BESTANDEEL

metam-sodium (thiocarbamate) **510 g/L** metannatrium (tiokarbamaat)

HRAC HERBICIDE GROUP CODE **Z** HRAC ONKRUIDDODER GROEPKODE

IRAC INSECTICIDE GROUP CODE **1A** IRAC INSEKDODER GROEPKODE

FRAC FUNGICIDE GROUP CODE **M3** FRAC SWAMDODER GROEPKODE



villa

Registration holder / Registrasiehouer:

Villa Crop Protection (Pty) Ltd.

Co. Reg. No. / Mpy. Reg. Nr. 1992/002474/07

PO Box / Posbus 10413, Aston Manor, 1630

Tel: 011 396 2233

Website / Webblad: www.villacrop.co.za

UN Number: 3266



**HARMFUL
SKADELIK**

Willow Set & Print 011 394-4486



DIRECTIONS FOR USE ENCLOSED

Batch number:

Lotnummer:

REFER TO DETAILS PRINTED

ON CONTAINER/BAG

GEBRUIKSAANWYSYNGS INGESLUIT

VERWYS NA BESONDERHEDE

GEDRUK OP HOUER/SAK

Date formulated:

Formuleringsdatum:

WABEK 510 SL

Reg. No. L 9145 Act/Wet No. 36 of/van 1947

HRAC HERBICIDE GROUP CODE/HRAC ONKRUIDDODER GROEPKODE: Z

IRAC INSECTICIDE GROUP CODE/IRAC INSEKDODER GROEPKODE: 1A

FRAC FUNGICIDE GROUP CODE/FRAC SWAMDODER GROEPKODE: M3

ACTIVE INGREDIENT / AKTIEWE BESTANDDEEL:

metam-sodium (thiocarbamate) / metamnatrium (tiokarbamaat).....510 g/l

Registration holder / Registrasiehouer:

VILLA CROP PROTECTION (PTY) LTD.

Co. Reg. No. 1992/002474/07 Mpy. Reg. Nr.

P.O. Box / Posbus 801, KEMPTON PARK, 1620

Tel. (011) 396 2233

HARMFUL**SKADELIK****WARNINGS**

- Handle with care.
- Harmful if inhaled or swallowed.
- Causes irritation to skin, eyes, nose and throat.
- Toxic to fish and wildlife.
- **Leave** the area immediately after treatment of soil.
- Do not use in confined areas without adequate ventilation where fumes may enter adjoining premises containing growing plants.
- Do not use in greenhouses where desirable plants are present.
- Do not treat within 5 metres of existing trees and field crops.
- Store under lock and key in a cool, dry, well-ventilated place in the original container, tightly closed and secured.
- Store away from food, feeds, seed, fertilizers and other agricultural remedies.
- Keep out of reach of children, uninformed persons and animals.
- Re-entry: Do not enter treated area within 1 day after treatment unless wearing protective clothing.
- **In case of poisoning, take the patient immediately to a doctor and make this label available to him/her.**

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 climatic and storage conditions, quality of dilution water, compatibility with other substances not indicated on the label and the occurrence of resistance of the pests/diseases/weeds to the remedy concerned, as well as by the method, time and accuracy of application. The registration holder further 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 event of any uncertainty.

PRECAUTIONS

- Avoid inhalation of the spray mist or fumes.
- Wear full protective clothing, a face shield, rubber gloves and boots when handling the product, preparing the spray mixture and during application.
- Ventilate a confined area thoroughly during use.
- Wash with soap and water after use and after accidental skin contact.
- Wash contaminated clothing after use.
- Do not eat, drink or smoke whilst mixing or applying the product, or before washing hands and face and change of clothing.
- Prevent contamination of food, feeds, drinking water and eating utensils.
- Prevent drift of spray mist onto other crops, grazing, rivers, dams and areas not under treatment or to nearby water sources.
- To prevent corrosion, clean spray equipment thoroughly after use or before using with other remedies.

- Thoroughly clean spraying equipment directly after use and dispose of wash water where it will not contaminate food, grazing, boreholes, rivers or dams.
- **TRIPLE RINSE** empty containers in the following manner: Invert the empty container over the spray or mixing tank and allow draining for at least 30 seconds after the flow has slowed down to a drip. Thereafter rinse the container three times with a volume of water equal to a minimum of a third of that of the container. Add the rinsing to the contents of the spray tank, before destroying the container in the prescribed manner.
- Destroy the empty container by perforation and flattening and dispose of it in a safe way.
- Never **re-use** the empty container for any other purpose.

SYMPTOMS OF HUMAN POISONING

Skin and eye irritation. May cause irritation to the respiratory tract. The solvent in the formulation may cause pulmonary injury.

FIRST AID TREATMENT

- Remove the patient immediately from the source of poisoning to a cool, well-ventilated area and keep him/her calm and reassured.
- **Skin:** In case of accidental skin contact wash contaminated area immediately with plenty of soap and cold water. Do not rub the skin. Do not use a soothing ointment, such as petroleum jelly in case of severe irritation. Should skin irritation persists consult a physician.
- **Eyes:** In case of accidental eye contact, flush immediately with clean, cool water or a normal saline solution for at least 15 minutes. If irritation occurs and persists, obtain medical attention.
- **Inhalation:** If exposure by inhalation is suspected, immediately move the exposed person to fresh air. If the person experiences nausea, headache and dizziness or has difficulty breathing, seek medical assistance immediately.
- **Ingestion:** If swallowed, call a physician immediately. **Do not induce vomiting.** Rinse mouth with copious amounts of water or milk. The patient should drink 1 to 2 glasses of water or milk. This will irrigate the oesophagus and dilute stomach contents. If vomiting occurs, keep head below hips to prevent aspiration. **Do not** apply mouth-to-mouth respiration. Avoid giving alcohol or alcohol related products. In cases where the individual is semi-conscious, unconscious or convulsing, **do not give fluids by mouth. Never** give anything by mouth to an unconscious person.
- **Take the patient to the nearest physician immediately.**

NOTE TO PHYSICIAN

No product specific antidote is known. Probable mucosal damage may contra-indicate the use of gastric lavage. Treat symptomatically.

RESISTANCE WARNING

WABEK 510 SL is a group code Z herbicide, a group code 1A insecticide and a group code M3 fungicide. Any weed/insect/fungus population may contain individuals naturally resistant to **WABEK 510 SL** and other group code Z herbicides/group code 1A insecticides/group code M3 fungicides. The resistant individuals can eventually dominate the weed/insect/fungus population if these herbicides/insecticides/fungicides are used repeatedly. These resistant weeds/insects/fungi may not be controlled by **WABEK 510 SL** or any other group code Z herbicide/group code 1A insecticide/group code M3 fungicide.

To delay herbicide resistance:

- avoid exclusive repeated use of herbicides/insecticides/fungicides from the same herbicide/insecticide/fungicide group code. Alternate or tank mix with products from different herbicide/insecticide/fungicide group codes,
- for tank mixing or alternation with products in fungicide group code M, refer to applicable individual product labels,
- integrate other control methods (chemical, cultural, biological) into weeds control programmes.

For specific information on resistance management contact the registration holder of this product.

DIRECTIONS FOR USE: Use only as directed.

NOTE

IT IS IMPORTANT THAT THE DIRECTIONS BELOW ARE FOLLOWED AS SERIOUS CROP INJURY MAY OCCUR IF NOT USED ACCORDING TO DIRECTIONS. CONSULT YOUR CHEMICAL DEALER IF UNCERTAIN ABOUT THE USE OF THIS PRODUCT.

- **WABEK 510 SL** is a water-soluble soil fumigant and can be easily applied by drenching infected soils.
- Small areas and planting media can be treated by using a watering can, while large areas can be treated using sprinkler irrigation or soil injection.

SOIL PREPARATION: PRE-APPLICATION PROCEDURE

- Cultivate the soil thoroughly to a depth of 50 cm.
- Prepare a fine, even and firm seedbed, free of weeds, trash and clods.
- Plant material that is not decomposed should be removed before application.
- Apply under “good seedbed moisture conditions”, i.e. the soil moisture should be about 60 to 80 % of field capacity.
- Bring soil moisture up to just below field capacity (60 to 80 %), 2 to 3 weeks prior to application. Keep soil moist prior to application as it increases the sensitivity of weed seeds and improves penetration.

APPLICATION: USES

Rate of application:

- Apply 500 to 1000 litres **WABEK 510 SL** per hectare depending on soil type, crop and pest.
- Soil properties to consider when determining the application rate include the soil texture, depth of soil to be treated and percentage organic matter.
- To ensure good penetration and optimal working of **WABEK 510 SL**, apply with adequate water volume to moisten the soil to the required depth.

Target pest and depth of treatment:

- Treat only the top 5 to 10 cm of soil for control of **weeds and fungi** causing seed or seedling diseases.
- Application to depths greater than 10 cm may be required for control of **nematodes and fungi**, which occur throughout the rhizosphere.
- For a given soil type, the required application rate will increase proportionally with the depth of the treatment.

NOTE

WABEK 510 SL WILL ONLY CONTROL THOSE PESTS PRESENT IN THE FUMIGATION ZONE AT TREATMENT. RECONTAMINATION MAY OCCUR FOLLOWING THE DISSIPATION OF THE FUMIGANT FROM THE SOIL.

Organic matter in the soil:

Except in the case of cover crops, plant material below the soil surface should be thoroughly decomposed, before **WABEK 510 SL** is applied. Soils with high level of organic matter below the surface require higher than usual doses of **WABEK 510 SL** due to the absorbing effect of humus.

Time of application:

- Apply **WABEK 510 SL** after harvest and 2 to 3 weeks before a new crop is planted (refer to “**PRE-PLANT PROCEDURE**”).
- Do not apply **WABEK 510 SL** at soil temperatures below 10 °C (at 10 to 15 cm depth).
- For best results apply at soil temperatures between 10 to 25 °C.
- Reduced efficacy of **WABEK 510 SL** may occur on turf soils, due to insufficient water penetration and soils with high organic matter content (high absorption coefficient).

APPLICATION METHODS

A. Sprinkler system:

Refer to “PRE-APPLICATION PROCEDURE” to prepare the soil.

- Inject the required volume of **WABEK 510 SL** into the system via a metering pump.
- Apply sufficient water volumes with **WABEK 510 SL**, to ensure that the product reaches the desired treatment level and even distribution.
- Application should only be performed directly from the hydrant, and non-return valves must be used.

- Ensure injection of **WABEK 510 SL** occurs over the full irrigation period.
- Only apply under conditions that ensure even distribution over the treated area.
- Careful supervision is essential throughout the entire application period.
- Keep the treated area moist by applying follow-up irrigation for 1 week after treatment.
- The use of plastic sheeting is recommended on light sandy soils (< 5 % clay) where follow-up irrigation might result in insufficient surface sealing and sub-optimal efficacy.
- After application, flush the entire system for 10 to 15 minutes with clean fresh water.
- Refer to “**POST APPLICATION PROCEDURE**” and “**PRE-PLANT PROCEDURE**”.

B. Soil injection:

Refer to “**PRE-APPLICATION PROCEDURE**” to prepare the soil.

- Soil injection can be used to treat entire fields in a broadcast type application, or it can be used to treat fields in bands.
- Use chisel or shank-type injections to inject **WABEK 510 SL** into prepared plant beds. Seal the soil immediately after use.
- Refer to “**POST APPLICATION PROCEDURE**” and “**PRE-PLANT PROCEDURE**”.

C. Small surfaces and planting media (e.g. seedbeds):

Refer to “**PRE-APPLICATION PROCEDURE**” to prepare the soil.

- Small surfaces and seedbeds can best be treated by means of a watering can.
- Prepare seedbeds prior to treatment. Drench the soil thoroughly with the required amount of **WABEK 510 SL** in a minimum of 10 litres water per 10 m².
- **Preferably treat the total area to minimize contamination from untreated areas. Adhere strictly to “DIRECTIONS FOR USE” on soil preparation.**
- Moisten planting media with the **WABEK 510 SL** solution using a watering can whilst mixing continuously.
- Refer to “**POST APPLICATION PROCEDURE**” and “**PRE-PLANT PROCEDURE**”.

D. Planting hole treatment:

Refer to “**PRE-APPLICATION PROCEDURE**”.

- Prepare a dam around the plant hole (± 1 m²), with a 10 cm wall.
- Half fill the dam with water and then apply the required amount of **WABEK 510 SL** over the surface.
- Fill up immediately to full capacity with water.
- Refer to “**POST APPLICATION PROCEDURE**” and “**PRE-PLANT PROCEDURE**”.

E. Growing media and potting soil:

- Media should be moistened with the **WABEK 510 SL** solution using a watering can whilst mixing continuously.
- The use of a cement mixer is ideal for this purpose.
- Apply 700 to 900 ml **WABEK 510 SL** per m³ soil, in 30 to 50 litres water.
- Cover the treated soil with a plastic sheet to prevent gasses from escaping.
- Remove the cover after 3 days.
- Refer to “**PRE-PLANT PROCEDURE**”.

POST APPLICATION PROCEDURE

To obtain optimum efficacy, the surface of the treated area must be sealed, to prevent the gas from escaping either by:

- (i) **Drench:** Irrigate the treated surface with 4 to 5 mm of water approximately two hours after treatment. Repeat in dry conditions. Follow-up with irrigation in order to keep the area moist for 7 days after treatment.
- (ii) **Cover:** On smaller areas, tarpaulins or a plastic sheet can be used to seal the soil surface, which can be removed. The cover doesn't need not be tented. Remove cover after 3 days.

PRE-PLANT PROCEDURE

- **WABEK 510 SL** is harmful to living plants therefore a minimum time interval must lapse between soil fumigation and planting.

- Soil temperatures influence the evaporation rate of **WABEK 510 SL**. On light soils at temperatures of 15 °C and above, planting can begin 2 weeks to 3 weeks after treatment. At temperatures below 15 °C, a waiting period of 3 weeks to 4 weeks is recommended.
- Soils with a high clay content and/or high organic fraction, or those that are saturated, will retain the fumigant and require a longer waiting period.
- It is important to cultivate the soil prior to planting in order to aerate the soil thoroughly.
- In order to ensure that **WABEK 510 SL** has completely escaped from the soil, transplant a radish or tomato seedling into the treated soil. If the plant develops normally without signs of chemical injury, crop planting can begin (**Refer to “Germination Test”**).

Germination Test:

1. Take soil samples from both untreated and fumigated areas at depths of 10 cm and 15 cm. Remove and discard top surface soil. Half fill a transparent container with the soil and close immediately.
 2. Place cress seeds on moist filter paper or cotton pads and place on top of the soil in the container. Close the container and place near a window at room temperature.
 3. Check 24 to 48 hours later for germination. Only if seeds have germinated equally well on both untreated as well as fumigated soils, will the area be ready for use.
- **Ensure that the treated area is ready for use by conducting the germination test.**
 - Prevent re-infestation of treated soil by using clean uninfected plant material, irrigation water and equipment.

APPLICATION RATES

Use and Targets	Dosage rate
<p>Herbicide Weeds: Broadleaf weeds: <i>Amaranthus</i> spp. (Pigweed), <i>Capsella bursa-pastoris</i> (Shepherd's purse), <i>Datura stramonium</i> and <i>D. ferox</i>, (Thorn apple), <i>Oxalis latifolia</i> (Red garden sorrel), <i>Portulaca</i> spp. (Purslane), <i>Stellaria media</i> (Chickweed), <i>Tagetes minuta</i> (Khaki weed).</p> <p>Grass weeds: Including Annual grasses: <i>Cyperus esculentus</i> (Yellow nutsedge), <i>Eleusine indica</i> (Goose grass), <i>Panicum schinzii</i> (Buffalo grass).</p> <p>Lawns and Turf renovation: WABEK 510 SL will also control: <i>Cynodon dactylon</i> (Common couch), <i>Pennisetum clandestinum</i> (Kikuyu).</p>	<p>650 to 900 ℓ / ha (65 to 90 ml / m²)</p> <p>Rate depends on infestation level and target spectrum.</p>
<p>Nematicide / Insecticide Nematodes: <i>Heterodera</i> spp. (Cyst), <i>Meloidogyne</i> spp.* (Root knot, but EXCLUDING <i>Meloidogyne chitwoodi</i> and <i>Meloidogyne fallax</i>), <i>Pratylenchus</i> spp. (Lesion), <i>Trichodorus</i> spp. (Stubby).</p>	<p>650 to 900 ℓ / ha (65 to 90 ml / m²)</p> <p>Rate depends on infestation level and target spectrum.</p>
<p>Fungicide Soil fungi: <i>Fusarium</i> (Damping off), <i>Pyrenochaeta terrestris</i> (Pink root), <i>Pythium</i>, <i>Rhizoctonia</i>, <i>Sclerotium cepivorum</i> (White bulb rot).</p>	<p>650 to 900 ℓ / ha (65 to 90 ml / m²)</p> <p>Rate depends on infestation level and target spectrum.</p>