

BIOMECTIN 18 EC

SAFETY DATA SHEET

1. IDENTIFICATION OF PRODUCT AND COMPANY

Product Name: BIOMECTIN 18 EC
Other identifier: Abamectin 18 g/l
Recommended use: Insecticide and Acaricide
Restrictions on use: Agriculture

Supplier: Villa Crop Protection (Pty) Ltd.
 Co. Reg. No.: 1992/002474/07
 PO Box 10413,
 Aston Manor, 1620, South Africa
Telephone: (011) 3962233
Fax: (011) 3964666
Website: www.villacrop.co.za

Emergency telephone numbers:
24 Hr Transport / Spill emergency no:
 (Hazcall24) +27 86 044 4411
 (Client: Villa Crop Protection)
 Griffon Poison Information Centre +27 82 446 8946
 (Client: Villa Crop Protection)
Poisoning Emergency telephone numbers:
 Griffon Poison Information Centre +27 82 446 8946
 Poisons Information Centre +27 861 555 777

2. HAZARD IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	Hazard categories	H-statements
Physical		
Flammable	Flammable Liquid 3	H226
Health		
Oral	Acute Toxicity 3	H301
Aspiration	Aspiration Toxicity 1	H304
Dermal	Acute Toxicity 3 Skin Irritation 3	H311 H316
Eye	Eye Damage 1	H318
Inhalation	Acute Toxicity 3	H331
Reproductive	Reproductive Toxicity 2	H361
Specific Target Organ Toxicity Single Exposure	Specific Target Organ Toxicity Single Exposure 1	H370
Specific Target Organ Toxicity Repeated Exposure	Specific Target Organ Toxicity Repeated Exposure 2	H373
Environment		
Aquatic acute	Aquatic acute 1	H400
Aquatic chronic	Aquatic chronic 1	H410

The most important adverse effects:

Physiochemical effects: Flammable liquid and vapour.

Human health effects:

Toxic if swallowed.
 Causes serious eye damage.
 Toxic if inhaled.
 Suspected of damaging fertility.
 Causes damage to organs.

Label elements:



Signal word: Danger

H226: Flammable liquid and vapour.
 H301: Toxic if swallowed.
 H304: May be fatal if swallowed and enters airways.
 H311: Toxic in contact with skin.
 H316: Causes mild skin irritation.
 H318: Causes serious eye damage.
 H331: Toxic if inhaled.
 H361: Suspected of damaging fertility or the unborn child.
 H370: Causes damage to the central nervous system.
 H373: May cause damage to the central nervous system through prolonged or repeated exposure.
 H400: Very toxic to aquatic life.
 H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P203: Obtain, read and follow all safety instructions before use.
 P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P240: Ground and bond container and receiving equipment.
 P242: Use non-sparking tools.
 P243: Take action to prevent static discharges.
 P261: Avoid breathing fume, mists, vapours or spray.
 P264+P265: Wash hands thoroughly after handling. Do not touch eyes.
 P270: Do not eat, drink or smoke when using this product.
 P271: Use only outdoors or in a well-ventilated area.
 P273: Avoid release into the environment.
 P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
 P301+P316: IF SWALLOWED: Get emergency medical help immediately.

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P302+P352: IF ON SKIN: Wash with plenty of water and non-abrasive soap.
 P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [shower].
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P354+P338: IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P316: IF exposed or concerned: Get emergency help immediately.
 P330+P331: Rinse mouth. Do NOT induce vomiting.
 P332+P317: If skin irritation occurs: get medical help.
 P370+P378: In case of fire: Use carbon dioxide, dry chemical or foam to extinguish.
 P391: Collect spillage.
 P403+P233: Store in a well-ventilated place. Keep container tightly closed.
 P405+P235: Store locked up. Keep cool.
 P501: Dispose of contents/container to suitable landfill in accordance with local regulations.

Other hazards:

None known.

Toxicity:

Classification according to GHS: 3

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture

Chemical name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Abamectin	71751-41-2	2.11%	Acute Tox. 2 Acute Tox. 1 STOT RE 2 Aquatic Acute 1 Aquatic Chronic 1 Repr. 2
Methylated alcohol	67-56-1	< 25%	Flam. Liq. 2 Acute Tox. 3 Acute Tox. 3 Acute Tox. 3 STOT SE 1
Solvesso	64742-94-5	< 75%	Asp. Tox. 1
Phenylsulphonate salt	84989-14-0	< 5 %	Skin Irrit. 2 Eye Dam. 1 Aquatic Chronic 3

4. FIRST AID MEASURES

Remove the victim from the area of exposure. Wash off remaining material with plenty of water. In the event of any complaints or symptoms, avoid further exposure and immediately consult a doctor.

Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. **Seek medical attention if irritation occurs. Immediately seek medical attention if you feel unwell after inhalation.**

Skin: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. Obtain medical attention if irritation persists.

Eyes: Flush eyes with clean water for at least 15 – 20 minutes. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. **Seek medical attention.**

Ingestion: Immediately seek medical attention or call a poison control centre for treatment advice. Do not induce vomiting. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water. Water may not be advisable, vomiting may not be recommended, judge based on information available.

Anticipated acute effects:

Toxic if swallowed.

May be fatal if swallowed and enters airways.

Causes mild skin irritation.

Causes serious eye damage.

Anticipated delayed effects:

Suspected of damaging fertility.

Causes damage to the central nervous system.

May cause damage to the central nervous system through prolonged or repeated exposure.

Most important symptoms / effects: None known.

Advice to physician: Treat symptomatically and supportively. The product contains solvent that may cause chemical pneumonitis if aspirated into lungs. Watch for delayed onset of pulmonary. If ingested perform gastric lavage and administer activated charcoal.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media: Use carbon dioxide, dry chemical or foam.

Unsuitable Extinguishing Media: Use water only to cool heated containers. Avoid water coming into contact with the product.

Specific hazards: Hazards or hazard products arising from combustion.

Special fire-fighting procedures: Remove spectators from surrounding area. Isolate the fire area and evacuate all personnel downwind of the fire. Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Remain upwind of fire. Avoid inhaling

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hazardous vapours and fumes from burning materials. Remove container from fire area if possible and without risk. Do not use high volume water jet, due to contamination risk. Do not scatter the burning material. Water can be used to cool unaffected containers but must be contained for later disposal. Contain fire control agents for later disposal. Avoid pollution of waterways by run-off from the site.

Personal protective equipment: Wear NIOSH / MSHA approved self-contained breathing apparatus and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: Avoid contact with skin and eyes. **Do not breathe in spray mist or vapours.** Ventilate area of spill or leak, especially in contained areas.

Protective equipment: Refer to Section 8 for personal protective equipment to be worn during containment and clean-up of a spill involving this product.

Emergency procedures: Alert firefighting personnel, evacuate unprotected personnel and animals.

Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. This product is classified as very toxic to aquatic organisms and causes long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges into watercourses should be reported immediately to the police and the Department of Water / Environmental Affairs.

Methods and Materials for Containment: Contain spilt product by diking area with sand or earth.

Methods and Materials for Clean-up: Cover contained spill with an inert absorbent material such as sand, vermiculite, earth or other appropriate material. Vacuum, scoop, or sweep up material and place the material into a clean, dry, sealable container. Label containers with the contents and dispose of according to local regulations. Do not place spilt material back in original container. Do not re-use spilt material. Collect washings and add to the drums already collected. Do not flush spilt material or washings into drains or waterways. To decontaminate the spill area, tools and equipment, wash with water and suitable detergent. See section 13 for disposal considerations.

7. HANDLING AND STORAGE

Handling:

Precautions for safe handling: Toxic if swallowed. Avoid contact with skin and eyes. Toxic if inhaled. Do not inhale spray mist or vapours. Ensure adequate ventilation during handling and use. Do not handle broken packages without protective equipment. Immediately clean up spills that occur during handling. Keep containers closed when not in

use. In the case of contact with the product refer to First Aid Measures – Section 4.

General occupational hygiene: Practice good hygiene when using this material. Wash hands before eating, drinking, chewing gum, smoking, using the toilet or applying cosmetics. Worker should shower at the end of each workday. Launder all clothing before it is re-used.

Storage:

Conditions for safe storage: Keep under lock and key and out of reach of unauthorised persons, children and animals. Store in its original, labelled container, tightly closed in an isolated, dry, cool and well-ventilated area. Do not store near heat, open flame, sources of ignition or hot. Avoid excess heat. Not to be stored next to foodstuffs, feed and water supplies. Avoid cross contamination with other pesticides and fertilisers.

Incompatible substances and mixtures: Refer to product label.

Packaging material: Fluorinated plastic containers.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration

Components	Exposure limits	Type of exposure limit	Source
Methyl alcohol	200 ppm	8-hour TWA	www.osha.gov

Engineering Controls:

It is essential to provide adequate ventilation. The measures appropriate for a particular worksite depend on how this material is used and on the extent of exposure. Local Exhaust: Provide general or local exhaust ventilation systems to maintain airborne concentrations below OELs or other specified exposure limits. Local exhaust ventilation is preferred. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire and other applicable regulations.

Personal Protective Equipment:

Respiratory Protection: If used in a poorly ventilated area (airborne concentrations exceed exposure limits), use a NIOSH approved, air-purifying respirator with cartridges / canisters approved for organic vapours.

Hand Protection: The use of chemically protective impervious gloves is recommended to prevent against skin contact.

Eye Protection: The use of chemical safety goggles is recommended to prevent against eye contact. Contact lenses are not protective eye devices.

Skin and Body Protection: Employees must wear appropriate protective impervious clothing, rubber boots,

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hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing.
Emergency eyewash: Where there is any possibility that an employee's eyes may be exposed to this substance, the employer should provide an eye wash fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Yellow liquid, emulsifiable concentrate.
Odour: Aromatic.
Odour threshold: Not available.
pH (1% aqueous dilution): Not available.
Melting point: Not available.
Freezing Point: Not available.
Boiling Point: Not available.
Flash Point: 61 °C.
Flammability: Flammable liquid and vapour.
Upper / lower explosion limits: Not available.
Vapour Pressure (mm Hg): Not available.
Relative Vapour Density: Not available.
Density / Relative density: 0.9 g/ml @ 20 °C.
Solubility: Emulsifies in water.
n-octanol / water partition coefficient: Not available.
Auto-ignition temperature: Not available.
Decomposition temperature: Not available.
Viscosity: Not available.

10. STABILITY AND REACTIVITY

Chemical stability: The product is stable for two years at ambient temperature and pressure, under normal storage and handling conditions. Avoid storage under extreme temperatures and conditions. Store below 50 °C, preferably below 30 °C, and not for prolonged periods in direct sunlight.
Reactivity: None known.
Possibility of hazardous reactions: Unlikely to occur.
Conditions to avoid: Extreme heat or exposure to flames.
Incompatible materials: Strong oxidizers, strong bases, strong reducing agents.
Hazardous decomposition products: Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Nitrogen and its compounds and oxides of nitrogen.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY: Calculated according to GHS
Oral LD₅₀ <190 mg/kg
Dermal LD₅₀ < 1000 mg/kg
Inhalation LC₅₀ (4h) > 0.5 mg/l

Skin Irritation: Causes mild skin irritation.
Eye Damage: Causes serious eye damage.
Skin Sensitization: Product is not a skin sensitizer.
Respiratory Sensitization: Not anticipated to be a respiratory sensitizer.
Reproductive cell mutagenicity: Not calculated.
Carcinogenicity: Not calculated.
Reproductive toxicity: Suspected of damaging fertility.
Specific target organ toxicity – single exposure: Causes damage to central nervous system.
Specific target organ toxicity – repeated exposure: May cause damage to central nervous system through prolonged or repeated exposure.
Aspiration hazard: May be fatal if swallowed and enters airways.
Chronic Effects: Not calculated.
POTENTIAL ADVERSE EFFECTS:
Inhalation: Toxic if inhaled.
Ingestion: Toxic if swallowed.

12. ECOLOGICAL INFORMATION

This product is considered a marine pollutant.

ECOTOXICITY DATA:

Active ingredient / inert name

Fish:

LC ₅₀ (96 h)	Rainbow trout	0.007 mg/l
	Bluegill sunfish	0.0096 mg/l
	Fathead minnows	0.0147 mg/l.

Daphnia:

EC ₅₀ (48 h)		0.00012 mg/l
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Algae:

EC ₅₀ (72 h)	<i>Pseudokirchneriella subcapitata</i>	> 100 mg/l
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Birds:

Acute oral LD ₅₀	Mallard ducks	84.6 mg/kg
	Bobwhite quail	>2000 mg/kg

Dietary LC ₅₀	Mallard ducks	383 mg/kg diet
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Bees:

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LD ₅₀ contact		0.001 µg/bee
Worms:		
LC ₅₀ (14 d)	Earthworms	33 mg/kg soil
Other aquatic spp.		
LC ₅₀ (14 d)	Pink shrimps	0.0016 mg/l
LC ₅₀ (96 h)	Blue crabs	0.153 mg/l

ENVIRONMENTAL EFFECTS

Based on information for the active ingredient
Plants: Degradation/metabolism by three plant species is similar and occurs predominantly by photolysis on the plant surfaces. The definition of the residues is thus expressed as the combined residues of avermectin B₁ and its 8,9-Z-avermectin B₁ photoisomer.
Persistence and degradability: Binds tightly to soil, with rapid degradation by soil micro-organisms. No bioaccumulation.
Bio-accumulative potential: Not determined.
Mobility in soil: Not determined.
Other adverse effects: Not determined.

13. DISPOSAL CONSIDERATION

Waste: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or re-processed. Never pour untreated waste or surplus product into public sewers or where there is any danger of run-off or seepage into water systems. Do not contaminate rivers, dams or any other water sources with the product or used containers. Comply with local legislation applying to waste disposal. The product may be taken to a registered waste disposal site or incineration plant.
Container: Emptied containers retain product residues. Do not re-use the empty container for any other purpose. Triple rinse empty containers by inverting 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 third of that of the container. Add the rinsings to the contents of the spray tank before destroying the container in the prescribed manner. Destroy the container by perforating and flattening and dispose of through an approved waste dump site, incineration plant or recycling company. Observe all labelled safeguards until container is destroyed.

Puncture the triple rinsed container and dispose of via an approved collector or recycler (www.croplife.co.za). Do not bury, burn or donate the container to any other parties that may use it as a container for food or beverages. Observe all labelled safeguards until container is destroyed.

14. TRANSPORT INFORMATION

UN Number: 2903

Road Transport ADR / ORD:

Class: 6.1, 3
 Packaging group: II
 UN Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S., flash point not less than 23 °C (Abamectin 18 g/l)

Maritime Transport IMDG / IMO:

Class: 6.1, 3
 Packaging group: II
 UN Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S., flash point not less than 23 °C (Abamectin 18 g/l)

Marine pollutant (Y/N):

Air Transport IATA / ICAO:

Class: 6.1, 3
 Packaging group: II
 UN Proper Shipping Name: PESTICIDE, LIQUID, TOXIC, FLAMMABLE, N.O.S., flash point not less than 23 °C (Abamectin 18 g/l)

Special / Environmental Precautions: Wedge drums tightly to avoid movement.

Transport in bulk: Refer to MARPOL 73/78, Annex II and the IBC code.

15. REGULATORY INFORMATION

Safety, health and environmental regulations / legislation for the mixture:

OHSA 1993 Regulations for Hazardous Chemical Substances.

Relevant information regarding restrictions: None.

EU regulation: Regulation EC1272/2008 (EU-GHS/CLP)

Other national regulations: None.

Chemical Safety Assessment carried out? No

16. OTHER INFORMATION

Packaging: Packed in 10, 20, 25, 50, 100, 250 and 500 millilitres 1, 5, 10, 20 and 25 litres fluorinated plastic containers or glass containers labelled according to South African regulations and guidelines.

Other hazard statements, abbreviations and explanations:

H300: Fatal if swallowed.

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H330: Fatal if inhaled.
H301: Toxic if swallowed.
H311: Toxic in contact with skin.
H331: Toxic if inhaled.
H412: Harmful to aquatic life with long lasting effects.
IATA: International Air Transport Association.
IBC: International Bulk Chemical.
ICAO: International Civil Aviation Organization.
IMDG: International Maritime Dangerous Goods
IMO: International Maritime Organization.
LD₅₀ value: The median lethal dose or the amount of a toxic agent that is sufficient to kill 50 percent of a population within a certain period of time.
OEL/RL: Occupational exposure limit-recommended limit.
TWA: Time-weighted average – The average exposure over a specified period, usually a nominal eight hours.
ST/STEL: Short-term exposure limits.
Disclaimer: The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage and use of the product. It is not applicable to unusual or non-standard uses of the product nor where instructions or recommendations are not followed. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof.

END OF DOCUMENT

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For detailed information on revisions, contact the Registration holder.