

METHOMYL 200 SL

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: METHOMYL 200 SL
Other identifier: Methomyl 200 g/l
Recommended use: Insecticide
Restrictions on use: (Agriculture); May only be sold and used by a registered pest control operator.

Supplier: Universal Crop Protection (Pty) Ltd.
Co. Reg. No.: 1983/008184/07
PO Box 801
Kempton Park 1620
South Africa
Telephone: (011) 396 2233
Fax: (011) 396 4666
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. HAZARDS IDENTIFICATION

UN GHS, Regulation EC 1272/2008 [EU-GHS/CLP] EU & SANS 10234:2008		
Hazard classes	Hazard categories	H-statements
Physical		
Flammable	Flam. Liq. 2	H225
Health		
Oral	Acute Tox. 3	H301
Inhalation	Acute Tox. 4	H332
Specific Target Organ Toxicity-Single Exposure	STOT SE 1	H370
Environment		
Aquatic acute	Aquatic Acute 1	H400
Aquatic chronic	Aquatic Chronic 1	H410

The most important adverse effects:

Physiochemical effects:

Highly flammable liquid and vapour (Flam. Liq. 3).

Human health effects:

Toxic if swallowed (Acute Tox. 3).

Harmful if inhaled (Acute Tox. 4).

Causes damage to organs (H370).

Label elements:



Signal word: Danger

Hazard statements:

H225: Highly flammable liquid and vapour.
H301: Toxic if swallowed.
H332: Harmful if inhaled.
H370: Causes damage to organs.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233: Keep container tightly closed.
P240: Ground and bond container and receiving equipment.
P241: Wear NIOSH/MSHA approved self-contained breathing apparatus and full protective gear.
P242: Use non-sparking tools.
P243: Take action to prevent static discharges.
P260: Do not breathe dust, fume, gas, mist, vapours, or spray.
P264: Wash hands and face thoroughly after handling.
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.
P303 + P361 + P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P316: IF exposed or concerned: Get emergency help immediately.
P321: Refer to label for specific treatment.
P330: Rinse mouth.
P370+P378: In case of fire: Use carbon dioxide, dry powder, or alcohol-resistant foam to extinguish.
P391: Collect spillage.
P405: Store locked up.
P403 + P235: Store in a well-ventilated place. Keep cool.
P501: Dispose of content/container to suitable landfill in accordance with local regulations.

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Special labelling of certain mixtures:

None known.

Other hazards:

None known.

Toxicity:

Classification according to GHS: Category 3

3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance/Mixture: Mixture

Composition:

Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Methomyl	16752-77-5	20.62 %	Acute Tox. 2 (H300) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Methanol	67-56-1	< 50%	Flam. Liq. 2 (H225) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370)

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.

Immediately consult a doctor.

Inhalation: Remove person from contaminated area to fresh air. If breathing has stopped, give mechanical artificial respiration (not direct mouth-to-mouth). Maintain airway and blood pressure and administer oxygen if available. Keep affected person warm and at rest. Treat symptomatically and supportively. Qualified personnel should perform administration of oxygen. **Get medical attention immediately.**

Skin: Remove contaminated clothing and shoes. Gently wipe off excess chemical. Wash skin gently and thoroughly with water and non-abrasive soap. **Get medical attention immediately.**

Eyes: Flush eyes with clean water for 15 – 20 minutes or until the product is removed. Lift eyelids to facilitate irrigation. If present, remove contact lenses after 5 minutes and continue rinsing. Take care not to rinse contaminated water into the unaffected eye. If symptoms of poisoning occur, **get medical attention immediately**; treat respiratory difficulty with mechanical artificial respiration and oxygen. Observe patient for at least 24 to

36 hours. Qualified medical personnel should administer oxygen.

Ingestion: If swallowed, rinse mouth thoroughly with water and **immediately get medical attention**. If person is alert and respiration is not depressed, give syrup of Ipecac followed by water or activated charcoal if instructed. If vomiting occurs, keep head below hips to prevent aspiration.

Establish and maintain airway. Treat respiratory difficulty with artificial respiration and oxygen. Apply mouth-to-nose respiration. Qualified medical personnel should administer oxygen.

Do not give anything by mouth to an unconsciousness person.

Anticipated acute effects: Carbamate: Cholinesterase inhibitor. The first effects are usually respiratory and may include nasal hyperaemia and watery discharge, chest discomfort, dyspnoea, and wheezing due to increased bronchial secretions and bronchoconstriction. Other systemic effects may begin within a few minutes or several hours of exposure. Symptoms may include nausea, vomiting, diarrhoea, abdominal cramps, headache, vertigo, tightness of the chest, anxiety, ocular pain, ciliary muscle spasm, blurring or dimness of vision, miosis, or in some cases mydriasis, lacrimation, salivation, sweating, and confusion. In severe cases, there may also be involuntary defecation and urination, bradycardia, hypotension, pulmonary oedema, convulsions, coma, and death from respiratory failure or cardiac arrest. Does not accumulate in mammalian tissue and the cholinesterase inhibition reverses rather rapidly. In non-fatal cases, the illness generally lasts less than 24 hours.

Anticipated delayed effects: None known.

Most important symptoms/effects: None known.

Advice to physician: Treat symptomatically and supportively. No specific antidote known. If consciousness level declines or vomiting has not occurred in 15 minutes empty stomach by gastric lavage with the aid of cuffed endotracheal tube using isotonic saline or 5 % sodium bicarbonate followed with activated charcoal. Establish and maintain airway. Treat respiratory difficulty with artificial respiration and oxygen.

Do not give morphine, aminophylline, phenothiazines, reserpine, furosemide, or ethacrynic acid.

Pralidoxime (2-PAM, Protopam) and other oximes are contra-indicated AND THEY SHOULD NOT BE USED.

Antidote: Establish clear airway and tissue oxygenation by aspiration of secretions, and if necessary, by assisted pulmonary ventilation with oxygen. Administer atropine sulphate intravenously or intramuscularly if an injection is not possible. In moderately severe poisoning administer atropine sulphate, 0.4 to 2.0 mg repeated every 15 minutes, until atropinisation is achieved (tachycardia, flushing, dry mouth, mydriasis). Maintain atropinisation by repeated doses for 2 to 12 hours, or longer, depending on the severity of poisoning. Severely poisoned individuals may exhibit remarkable tolerance to atropine. Two or

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more times the dosages suggested above may be needed. Observe treated patients closely at least 24 hours to ensure that symptoms (possibly pulmonary oedema) do not recur as atropinisation wears off. In very severe poisonings, metabolic disposition of toxicant may require several hours or days during which atropinisation must be maintained. Markedly lower levels of urinary metabolites indicate that atropine dosage can be tapered off. As dosage is reduced, check the lung bases frequently for rales. If rales are heard or other symptoms return, re-establish atropinisation promptly.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Use carbon dioxide or dry chemical for small fires and water fog or foam for large fires.

Unsuitable Extinguishing Media: High volume water jet. Water spray can be used for cooling of unaffected stock. Do not get water inside the containers. Runoff to sewers could create fire or explosion hazard.

Specific hazards: Moderate risk of an explosion if product is involved in a fire. Decomposes in fire to emit very toxic fumes of NO_x and SO_x.

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. Keep upwind. Avoid inhaling 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 dust/fumes/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 with long-term adverse effects in the aquatic environment. Any spillages or uncontrolled discharges

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into watercourses should be reported immediately to the police and the Department of Water/Environmental Affairs.

Methods and Materials for Containment: Contain spilled 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 spilled material back in original container. Do not re-use spilled material. Collect washings and add to the drums already collected. Do not flush spilled 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. 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 surfaces. 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
Methanol	200 ppm	TWA (8 hours)	www.osha.gov

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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: Toxic if inhaled. Use a NIOSH approved air-purifying respirator with cartridges/canisters approved for specific use.

Hand Protection: Toxic in contact with skin. 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: Employee must wear appropriate protective impervious clothing; Rubber boots, 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: Homogenous, clear transparent soluble liquid.

Odour: Strong chemical odour.

pH (1% aqueous dilution): 5.96.

Melting point: Not available.

Freezing Point: Not available.

Boiling Point: Not available.

Flash Point: 20 °C (closed cup)

Flammability: Flammable liquid and vapours.

Upper/lower explosion limits: Not available.

Vapour Pressure (mm Hg): Not available.

Relative Vapour Density: Not available.

Density: 0.948 ± 0.01 g/cm³ at 20°C.

Solubility: Soluble 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. Avoid temperatures below 0 °C as crystallisation will occur.

Reactivity: None known.

Possibility of Hazardous Reactions: Will not occur.

Conditions to Avoid: Extreme heat or exposure to flames.

Incompatible Materials: Corrosive to iron. The product is compatible with most other pesticides when used at normal rates. Do not physically mix concentrate directly with other herbicides or pesticide concentrates; always dilute first. A compatibility test is required before using with other products. Incompatible with strong bases and oxidising agents.

Hazardous Decomposition Products: Decomposes in fire to emit very toxic fumes of NO_x and SO_x.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS / WHO:

Oral LD₅₀ 137.97 mg/kg

Dermal LD₅₀ >5000 mg/kg

Inhalation LC₅₀ 1.25 mg/l

Skin Irritation/Corrosion: Not classified.

Eye Damage/Irritation: Not classified.

Skin Sensitization: Not classified.

Respiratory Sensitization: Not classified.

Reproductive cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive toxicity: Not classified.

Specific target organ toxicity – single exposure: Causes damage to organs.

Specific target organ toxicity – repeated exposure: Not classified.

Aspiration hazard: Not classified.

Chronic Effects: Not classified.

POTENTIAL ADVERSE EFFECTS:

Inhalation: Harmful if inhaled.

Skin contact: Not classified.

Eye contact: Not classified.

Ingestion: Toxic if swallowed.

12. ECOLOGICAL INFORMATION

This product is considered a marine pollutant.

ECOTOXICITY DATA:

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Fish:

LC ₅₀ (96 h)	Rainbow trout	2.49 mg/l
	Bluegill sunfish	0.63 mg/l

Daphnia:

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LC₅₀ (48 h) 17 ug/ℓ

Algae:

EC₅₀ (72 h) *Selenastrum capricornutum* > 100 mg/ℓ

Birds:

Acute oral LD₅₀ Northern Bobwhite quail 24.2 mg/kg b.w.
Dietary LC₅₀ (8 d) Northern Bobwhite quail 5620 mg/kg diet
Mallard ducks 1780 mg/kg diet

Bees:

LD₅₀ contact 0.16 mg/bee
LD₅₀ oral 0.28 mg/bee

Worms:

LC₅₀ (14 d) *Eisenia foetida* 21 mg/kg dry soil.

ENVIRONMENTAL EFFECTS:

Plants: Rapidly degraded to CO₂ and acetonitrile, with incorporation into natural plant components. More recent studies in tomatoes and grapes have demonstrated similar pathways to those seen in animals, that is, displacement of S-methyl by glutathione followed by transformation to the thiolactic acid derivative, or conjugation with glucose through the sulphur moiety. Hydrolysis of the carbamate ester of methomyl to the oxime and conjugation of the oxime with glucose also occur. Acetonitrile formation was also observed in these crops, with further degradants formed via conjugation of acetonitrile with cysteine.

Persistence and degradability: Rapidly degraded in soil. DT₅₀ 4-8 d at 20 °C and soil moisture pF 2-2.5 in soils with pH from 5.1 to 7.8 and with 1.2 to 3.6% o.m. DT₅₀ in groundwater samples < 0.2 d. K_{oc} 72.

Bio-accumulative Potential: Not determined.

Mobility in soil: Not determined.

Other adverse effects: Not determined.

13. DISPOSAL CONSIDERATIONS

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. Invert the empty container over the spray or mixing tank and drain for at least 30 seconds after the flow has slowed down to dripping. Thereafter rinse the empty container three times in succession with one quarter of the container volume fresh water and decant the rinsate

into the spray or mixing tank. 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: 2758

Road Transport ADR/IRD:

Class: 3 + 6.1
Packaging group: II
UN Proper Shipping Name: CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point < 23 °C (methomyl 200 g/ℓ)

Maritime Transport IMDG/IMO:

Class: 3 + 6.1
Packaging group: II
UN Proper Shipping Name: CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point < 23 °C (methomyl 200 g/ℓ)

Marine Pollutant (Y/N):

Yes.

Air Transport IATA/ICAO:

Class: 3 + 6.1
Packaging group: II
UN Proper Shipping Name: CARBAMATE PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point < 23 °C (methomyl 200 g/ℓ)

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

Transport in bulk (according to MARPOL 73/78, Annex II and the IBC code): Not available.

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 1, 5, 10, 20 & 25 litres fluorinated plastic containers, labelled according to South African regulations and guidelines.

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Other hazard statements, abbreviations and explanations:

H300: Fatal if swallowed.

H301: Toxic if swallowed.

H311: Toxic in contact with skin.

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.