

VALIDUS 200 EW

SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: VALIDUS 200 EW
Other identifier: Myclobutanil 200 g/l EW
Recommended use: Fungicide
Restrictions on use: Agriculture

Registration Holder: Universal Crop Protection (Pty) Ltd.
Co. Reg. No.: 1983/008184/07
 65 Botes Road, Glen Marais
 Kempton Park, 1619, South Africa
 (011) 396 2233
 (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
Health		
Oral	Acute Tox. 5	H303
Dermal	Acute Tox. 5	H313
Eye	Eye Irrit. 2	H319
Inhalation	Acute Tox. 5	H332
Aspiration	Asp. Tox. 1	H304
Reproductive toxicity	Repr. 2	H361d
Environment		
Aquatic chronic	Aquatic chronic 2	H411

The most important adverse effects:
Physiochemical effects: None known.

Human health effects:
 May be harmful if swallowed (Acute Tox. 5).
 May be fatal if swallowed and enters airways (Asp. Tox. 1).
 May be harmful in contact with skin (Acute Tox. 5).
 Causes serious eye irritation (Eye Irrit. 2).
 Harmful if inhaled (Acute Tox. 5).
 Suspected of damaging fertility or the unborn child (Repr. 2).

Toxic to aquatic life with long lasting effects (Aquatic Chronic 2).

Label elements:



Signal word: Danger

Hazard statements:

H303: May be harmful if swallowed.
 H304: May be fatal if swallowed and enters airways.
 H313: May be harmful in contact with skin.
 H319: Causes serious eye irritation.
 H332: Harmful if inhaled.
 H361d: Suspected of damaging fertility or the unborn child.
 H411: Toxic to aquatic life with long lasting effects.

Precautionary statements:

P203: Obtain, read and follow all safety instructions before use.
 P261: Avoid breathing dust, fume, gas, mists, vapours or spray.
 P264+P265: Wash hands thoroughly after handling. Do not touch eyes.
 P271: Use only outdoors or in a well-ventilated area.
 P273: Avoid release to the environment.
 P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.
 P391: Collect spillage.
 P301+P316: IF SWALLOWED: Get emergency medical help immediately.
 P302+P317: IF ON SKIN: Get medical help.
 P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P318: IF exposed or concerned, get medical advice.
 P331: Do NOT induce vomiting.
 P337+P317: If eye irritation persists: Get medical help.
 P405: Store locked up.
 P501: Dispose of content/container to suitable landfill in accordance with local regulations.

Other hazards:

None known.

Toxicity:

Classification according to GHS: Category 4

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3. COMPOSITION / INFORMATION ON INGREDIENTS

Substance / Mixture: Mixture
Composition:

Chemical name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Myclobutanil	88671-89-0	19.82 %	Acute Tox. 4 (H302) Eye Irrit. 2 (H319) Aquatic Chronic 2 (H411) Repr. 2 (H361d)
Soprophor BSU	99734-09-5	< 10%	Aquatic Chronic 3 (H412)
Acetophenone	98-86-2	< 15%	Acute Tox. 4 (H302) Eye Irrit. 2 (H319)
Solvesso 150	64742-94-5	< 30%	Asp. Tox. 1 (H304)
Proxel GXL	2634-33-5	< 1 %	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Dam. 1 (H318) Skin Sens. 1 (H317) Aquatic Acute 1 (H400)

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. If concerned, immediately consult a doctor.

Inhalation: Remove person from contaminated area to fresh air and assist breathing as needed. **Seek medical attention if irritation occurs.**

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: Seek medical attention or call a poison control centre for treatment advice. Do not induce vomiting unless instructed to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person. If the person is alert, rinse mouth thoroughly with water.

Anticipated acute effects: May be harmful in contact with skin. May be fatal if swallowed and enters airways. May be harmful in contact with skin. Causes serious eye irritation. Harmful if inhaled.

Anticipated delayed effects: Suspected of damaging fertility or the unborn child.

Most important symptoms / effects: None known.

Advice to physician: Probable mucosal damage may contraindicate the use of gastric lavage. If lavage is performed, suggest endotracheal and or oesophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

5. FIRE-FIGHTING MEASURES

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

Unsuitable Extinguishing Media: High volume water jet. Use a water jet only to cool heated containers.

Specific hazards: Pesticide particulates can become airborne. Combustion generates toxic fumes of the following: hydrogen chloride and/or hydrogen cyanide.

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 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 eyes. Do not breathe in spray mist or dust. 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. Wear a face shield or goggles, overalls buttoned to neck and wrist, chemical resistant gloves and boots.

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

Environmental Precautions: Prevent spilled product from entering sewers, waterways or ground water. This

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product is classified as toxic to aquatic organisms and may cause 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 spilled product by diking area with sand or earth.

Methods and Materials for Clean-up: Do not touch spilled material and keep out unprotected persons and animals. Cover contained spill with an inert absorbent material such as sand, vermiculite, earth or other appropriate material. Treat contaminated areas with water containing soda or detergent. 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. Collect washings and add to the drums already collected. Spilled product cannot be re-used and must be disposed of by incineration or disposal in a chemical waste disposal facility. If containers cannot be recycled, they should be disposed of together with the waste chemical. 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: Avoid skin and eye contact and inhalation of spray mist. **VALIDUS 200 EW** may be harmful in contact with skin. May cause reproductive/ developmental damage and/or organ damage from repeated oral exposure at high doses. May cause internal organ damage from repeated oral exposure at high doses. 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: Plastic bottles.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Permissible concentration

Components	Exposure limits	Type of exposure limit	Source
Myclobutanil	0.05 ppm	TWA	"Hazardous Chemical Substances Regulations, 1995"

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: For most well-ventilated conditions, no respiratory protection should be needed. 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 (PVC or neoprene groves) is required 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, boots, hat and equipment to prevent repeated or prolonged skin contact with this substance.

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: Off-white liquid.

Odour: Aromatic solvent odour.

Odour threshold: Not available.

pH (1% aqueous dilution): 8 to 9.

Melting point: Not available.

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Freezing Point: Not available.
Boiling Point: ± 100 °C.
Flash Point: > 100 °C.
Flammability: Not available.
Upper / lower explosion limits: Not available.
Vapour Pressure (mm Hg): Not available.
Relative Vapour Density: Not available.
Density / Relative density: 1.02 g/cm³
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: No hazardous reactions if stored and handled as indicated.

Possibility of hazardous reactions: None under normal conditions.

Conditions to avoid: Extreme heat or exposure to flames.

Incompatible materials: Strong oxidizing agents and acids.

Hazardous decomposition products: Heating can release vapours poisonous and corrosive fumes that contain hydrogen chloride, hydrogen cyanide, oxides of nitrogen, carbon monoxide.

11. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Calculated according to GHS:

Oral LD₅₀: 4133.84 mg/kg (rat).

Dermal LD₅₀: 3787.21 mg/kg (rat/rabbit).

Inhalation LC₅₀: 2.17 mg/l (rat).

Skin Irritation / Corrosion: May be harmful in contact with skin.

Eye Damage / Irritation: Causes serious eye irritation.

Skin Sensitization: Not classified.

Respiratory Sensitization: Not classified.

Reproductive cell mutagenicity: Not classified.

Carcinogenicity: Not classified.

Reproductive toxicity: Suspected of damaging fertility or the unborn child.

Specific target organ toxicity – single exposure: Not classified.

Specific target organ toxicity – repeated exposure: Not classified.

Aspiration hazard: May be fatal if swallowed and enters airways.

Chronic Effects: Not classified.

POTENTIAL ADVERSE EFFECTS:

Skin contact: May be harmful in contact with skin.

Ingestion: May be harmful if swallowed.

12. ECOLOGICAL INFORMATION

This product is considered a marine pollutant.

ECOTOXICITY DATA:

Active ingredient: Myclobutanil

Fish:

LC ₅₀ (96 h)	Rainbow trout	2.0 mg/l
	Bluegill sunfish	4.4 mg/l

Daphnia:

LC ₅₀ (48 h)		17 mg/l
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Algae:

EC ₅₀ (96 h)	(<i>Selenastrum subspicatus</i>)	0.91 mg/l
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Birds:

Acute oral LD ₅₀	Bobwhite quail	510 mg/kg
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Dietary LC ₅₀ (8 d)	Bobwhite quail & Mallard ducks	> 5000 mg/kg
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Bees:

Oral LD ₅₀		> 33.9 µg/bee
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Contact LD ₅₀ (48 h)		> 39.6 µg/bee
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Worms:

LC ₅₀	Earthworms (<i>Eisenia foetida</i>)	99 mg/kg soil
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ENVIRONMENTAL EFFECTS

Based on information for the active ingredient

Dimethomorph

Plants: Not determined

Animal: Not determined

Persistence and degradability: Aerobic DT₅₀ (lab/20 °C) 192 to 574 days (mean: 354 days) to give minor metabolites. Under field conditions (Germany, early summer application), biphasic DT₅₀ 9 to 33 days (mean: 23 days); DT₉₀ >1 year.

Bio-accumulative potential: Does not accumulate.

Mobility in soil: Soil absorption K_{oc} 224 to 920 ml/g (mean: 517 ml/g).

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

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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 THE EMPTY CONTAINER AS FOLLOWS:** 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: 3082
Road Transport ADR / ORD:
 Class: 9
 Packaging group: III
 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (myclobutanil 200 g/l)

Maritime Transport IMDG / IMO:
 Class: 9
 Packaging group: III
 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (myclobutanil 200 g/l)

Marine pollutant (Y/N): Yes
Air Transport IATA / ICAO:
 Class: 9
 Packaging group: III
 UN Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (myclobutanil 200 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 1ℓ – 25ℓ non-fluorinated plastic containers, labelled according to South African regulations and guidelines.

Other hazard statements, abbreviations and explanations:

H302: Harmful if swallowed.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H318: Causes serious eye damage.

H400: Very toxic to aquatic life.

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.