

# AVOCET®

## SAFETY DATA SHEET

### 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** AVOCET®  
**Other identifier:** Paclobutrazol 250 SC  
**Recommended use:** Plant growth regulator  
**Restrictions on use:** Horticulture

**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](http://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
<b>Health</b>		
Eye irritant	Eye Irrit. 2	H319
Reproductive toxicity	Repr. 2	H361d
<b>Environment</b>		
Aquatic chronic	Aquatic Chronic 2	H411

**The most important adverse effects:**  
**Physiochemical effects:**  
None known.  
**Human health effects:**  
Suspected of damaging the unborn child.  
Causes serious eye irritation.

#### Label elements:



**Signal word:** Warning.

#### Hazard statements:

H319: Causes serious eye irritation.  
H361d: Suspected of damaging the unborn child.  
H411: Toxic to aquatic life with long lasting effects.

#### Precautionary statements:

P203: Obtain, read and follow all safety instructions before use.  
P264+P265: Wash hands and face thoroughly after handling. Do not touch eyes.  
P273: Avoid release into the environment.  
P280: Wear impervious rubber gloves and boots, protective clothing and chemical safety goggles.  
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.  
P337+P317: If eye irritation persists: Get medical help.  
P391: Collect spillage.  
P405: Store locked up.  
P501: Dispose of contents/container to suitable landfill in accordance with local regulations.

#### Special labelling of certain mixtures:

None known.

#### Other hazards:

None known.

#### Toxicity:

Classification according to GHS: Not classified.

### 3: COMPOSITION / INFORMATION ON INGREDIENTS

**Substance/Mixture:** Mixture.  
**Composition:**

Chemical Name	CAS	Conc. (m/v %)	Classification EC 1272/2008
Paclobutrazol	76738-62-0	25%	Acute Tox.4 (H302) Acute Tox. 4 (H332) Eye Irrit. 2 (H319) Repr. 2 (H361d) Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)
Dispersant	68425-94-5	< 4%	Eye Irrit. 2 (H319)
Biocide	2634-33-5	< 0.2%	Acute Tox.4 (H302) Skin Irrit. 2 (H315) Skin Sens. 1 (H317) Eye Dam. 1 (H318) Aquatic Acute 1 (H400)
Sodium hydroxide	1310-73-2	< 0.05%	Skin Corr. 1A (H314)

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### 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 and assist breathing as needed. Remove anything of a restrictive nature promptly. Seek medical attention if irritation occurs.

**Skin:** Remove contaminated clothing and wash before re-using. Flush skin with water and then wash with soap and water. Seek medical attention if skin irritation persists.

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

**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.

**Anticipated acute effects:** Eye irritation.

**Anticipated delayed effects:** Suspected of damaging the unborn child.

**Most important symptoms/effects:** Causes serious eye irritation.

**Advice to physician:** Treat symptomatically and supportively. No specific antidote known.

### 5: FIRE-FIGHTING MEASURES

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

**Unsuitable Extinguishing Media:** Water jet. Use a water jet only to cool heated containers.

**Specific hazards:** Large volumes may penetrate the soil and contaminate groundwater.

**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 bunker gear.

### 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions:** Avoid contact with skin and eyes. Do not breathe in fumes.

**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 as the product is classified to be toxic to aquatic organisms with long lasting effects. Any spillages or uncontrolled discharges into water courses should be immediately reported 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:** Avoid contact with skin and eyes. 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 again.

**Storage: Conditions for safe storage:** Store in its original container in dry, cool, well-ventilated area. Avoid excess heat. Not to be stored next to foodstuffs, feed and water supplies. Keep out of reach of children, uninformed persons and animals. Do not contaminate other pesticides and fertilizers. **Incompatible substances and mixtures:** Refer to product label. **Packaging material:** Fluorinated plastic containers.

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### 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

#### Permissible concentration

Components	Exposure limits	Type of exposure limit
Paclobutrazol	5 mg/m <sup>3</sup>	8 h TWA

#### 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 OSHA PELs 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 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; 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:** Brown, free-flowing, liquid, Suspension concentrate.

**Odour:** Almond odour.

**pH (1% aqueous dilution):** 7.

**Melting point:** Not available.

**Freezing Point:** Not available.

**Boiling Point:** Not available.

**Flash Point:** > 93 °C.

**Flammability:** Not flammable.

**Upper/lower explosion limits:** Not explosive.

**Vapour Pressure (mm Hg):** Not available.

**Relative Vapour Density:** Not available.

**Density:** 1.02 g/ml

**Solubility:** Miscible with water.

**n-octanol/water partition coefficient:** Not available.

**Auto-ignition temperature:** Not available.

**Decomposition temperature:** Not available.

**Viscosity:** 99.8 - 531.0 mPa.sec 20°C.

### 10. STABILITY AND REACTIVITY

**Chemical Stability:** Product is stable at ambient temperature and pressure, under normal storage and handling conditions. Stable for up to 2 years when stored in a dry, cool covered warehouse in original, well-labelled containers. Store at low temperature conditions, below 50°C, preferably below 30 °C and not for prolonged periods in direct sunlight.

**Reactivity:** None known.

**Possibility of Hazardous Reactions:** Will not occur.

**Conditions to Avoid:** Extreme heat or exposure to flames.

**Incompatible Materials:** Strong oxidising substances.

**Hazardous Decomposition Products:**

Decomposition products may include toxic and irritant fumes.

### 11: TOXICOLOGICAL INFORMATION

#### ACUTE TOXICITY:

**Calculated according to GHS**

**Oral LD<sub>50</sub> rat** > 2107.5 mg/kg

**Dermal LD<sub>50</sub> rat** > 2000 mg/kg

**Inhalation LC<sub>50</sub> (4h) rat** > 13.47 mg/l

**Skin Irritation:** Not calculated.

**Eye Damage/Irritation:** Causes serious eye irritation.

**Skin Sensitization:** Not calculated.

**Respiratory Sensitization:** Not calculated.

**Reproductive cell mutagenicity:** Not calculated.

**Carcinogenicity:** Not calculated.

**Reproductive toxicity:** Suspected of damaging the unborn child.

**Specific target organ toxicity – single exposure:** Not calculated.

**Specific target organ toxicity – repeated exposure:** Not calculated.

**Aspiration hazard:** Not calculated.

**Chronic Effects** (other targets e.g. developmental): Not available.

**POTENTIAL ADVERSE EFFECTS:** None known

### 12: ECOLOGICAL INFORMATION

This product is not expected to be harmful to aquatic organisms.

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### ECOTOXICITY DATA: Based on active ingredient

<b>Fish:</b>		
LC <sub>50</sub> (96 h)	Rainbow trout	27.8 mg/ ml
	Bluegill sunfish	23.6 mg/ ml
<b>Daphnia:</b>		
EC <sub>50</sub> (48 h)		>29.0 mg/ℓ
<b>Algae:</b>		
EC <sub>50</sub> (96 h)	<i>Anabaena flos-aquae</i>	>39.7 mg/ℓ
<b>Other aquatic organisms:</b>		
LC <sub>50</sub> (96 h)	Mysid shrimps	9.0 mg/ℓ
EC <sub>50</sub> (48 h)	Pacific oyster larvae	>10 mg/ℓ
EC <sub>50</sub> (7 d)	<i>Lemna gibba</i>	8.2 µg/ℓ
<b>Birds:</b>		
LD <sub>50</sub>	Japanese quail	>2100 mg/kg
	Mallard duck	>7910 mg/kg
Dietary LC <sub>50</sub> (5 d)	Mallard duck	
	Bobwhite quail	20 000 mg/kg
<b>Bees:</b>		
LD <sub>50</sub> (Oral)	Honeybees	>2.0 µg/bee
LD <sub>50</sub> (Contact)		>40.0 µg/bee
<b>Worms:</b>		
LC <sub>50</sub> (14 d)	Earthworm	> 1000 mg/kg soil

### ENVIRONMENTAL EFFECTS:

Plants – Extensively metabolised in oilseed rape, the most abundant metabolite being triazole alanine. Animals – Rapidly eliminated within the body; tissue retention minimal at low dosages. Bioconcentration factor has been estimated at 44 K<sub>ow</sub>.

**Bio-accumulative Potential:** Bio-accumulates.

**Mobility in soil:** Degrade moderately quickly, DT<sub>50</sub> 27-618 d (lab.), 14-389 d (field). No accumulation and leaching potential.

**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.

**Container:** 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 minimum of one third of that of the container. Add the rinsings to the contents of the spray tank before recycling or destroying the container in the prescribed manner. Comply with local legislation applying to waste disposal.

### 14: TRANSPORT INFORMATION

<b>UN Number:</b>	3082
<b>Road Transport ADR/IRD:</b>	
Class:	9
Packaging group:	III
UN Proper Shipping Name:	Environmentally hazardous substance, Liquid ( <b>Paclobutrazol</b> 250 g/ℓ)
<b>Maritime Transport IMDG/IMO:</b>	
Class:	9
Packaging group:	III
UN Proper Shipping Name:	Environmentally hazardous substance, Liquid ( <b>Paclobutrazol</b> 250 g/ℓ)
<b>Marine Pollutant (Y/N):</b>	Yes.
<b>Air Transport IATA/ICAO:</b>	
Class:	9
Packaging group:	III
UN Proper Shipping Name:	Environmentally hazardous substance, Liquid ( <b>Paclobutrazol</b> 250 g/ℓ)

**Special/Environmental Precautions:** Restricted to professional users.

**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, 2, 5, 10, 20 and 25 litres plastic containers, labelled according to South African regulations and guidelines.

**Other hazard statements, abbreviations and explanations:**

H302: Harmful if swallowed.

H314: Causes severe skin burns and eye damage.

H315: Causes skin irritation.

H317: May cause an allergic reaction.

H318:

H332: Harmful if inhaled.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

**IATA:** International Air Transport Association.



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**IBC:** International Bulk Chemical.

**ICAO:** International Civil Aviation Organization.

**IMDG:** International Maritime Dangerous Goods

**IMO:** International Maritime Organization.

**LD<sub>50</sub> 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.