

VILLA METAFORCE 500 SC

MATERIAL SAFETY DATA SHEET

1. PRODUCT & COMPANY IDENTIFICATION

Product Name: METAFORCE 500 SC
 Herbicide
UN No.: 3082
Supplier: Villa Crop Protection (Pty) Ltd.
 PO Box 10413
 Aston Manor, 1630, South Africa
Telephone: (011) 396 2233
Fax: (011) 396 4666
Website: www.villacrop.co.za

Emergency telephone: +27 11 396 2233
 (08:00 – 16:30)

24 Hr Emergency Numbers:

Bateleur: +27 83 1233 911 or
 (Client: Villa Crop Protection) +27 860 333 911

In case of Poisoning:

Western Cape Poisons Tel. Service +27 861 555 777
 Griffon Poison Information Centre +27 82 446 8946
 Tygerberg Hospital +27 21 931 6129

2. COMPOSITION/INFORMATION ON INGREDIENTS

Common Name: Metazachlor
Chemical Name: 2-chloro-N-(pyrazol-1-ylmethyl)acet-2',6'-xylidide (IUPAC)
Chemical Abstracts name: 2-chloro-N-(2,6-dimethylphenyl)-N-(1H-pyrazol-1-ylmethyl)acetamide
CAS No.: [67129-08-2]
Chemical Family: chloroacetamide
Chemical Formula: C₁₄H₁₆ClN₃O (Mol. wt.: 277.8)

Formulation: Metazachlor: 500 g/l
 Suspension concentrate

Use / Mode of Action: Selective herbicide, absorbed by the hypocotyls and roots that inhibits germination.

Hazardous Ingredients:

Ingredient:	Concern:	% Present
Metazachlor	slightly toxic	50 %
Antifreezer	irritant, slightly toxic	5 %
Antiseptic	irritant, possible mutagen	0.2 %

SYMBOLS: N, Xn, Xi

RISK-PHRASE (S): R 20/22, R 36/37/38, R 51

3. HAZARD IDENTIFICATION

Animal studies have shown that **Metazachlor** can cause damage to the liver, kidneys and blood count when it is repeatedly orally administered in high doses.

Toxicity class: WHO U (a.i.).

Unlikely to present acute hazard in normal use.

Likely routes of exposure:

Skin and eye contact, ingestion, and inhalation.

Ingestion: May be harmful when swallowed.

Inhalation: May be harmful by inhalation. May cause irritation to respiratory tract.

Eye and Skin contact: May cause irritation to the skin and eyes.

4. FIRST AID MEASURES AND PRECAUTIONS

Irritant effects on skin and mucous membrane are the most common reactions. Large ingestions can cause nausea, vomiting, abdominal distress and diarrhoea.

Inhalation: Immediately remove source of contamination or move person to fresh air. If breathing has stopped, perform artificial respiration and if breathing is laboured administer oxygen. Keep person calm and at rest. Treat symptomatically and supportively as and when required. Seek medical advice.

Skin contact: Remove contaminated clothing, shoes and leather goods immediately. Wash skin gently and thoroughly with non-abrasive soap or mild detergent and large amounts of water until no evidence of chemical remains (approximately 15 to 20 minutes). Wash clothing before re-use. Thoroughly clean shoes before re-use. Seek medical advice if necessary.

Eye contact: Flush eyes immediately with large amounts of gently flowing cold water or normal saline solution, occasionally lifting upper and lower lids, until no evidence of chemical remains (approximately 15 to 20 minutes). If redness, itching or a burning sensation develops, have eyes examined and treated by medical personnel.

Ingestion: Provided the patient is conscious, wash out mouth with water. Vomiting should only be induced under the direction of a physician or a poison control centre. Never give anything by mouth to an unconscious person.

Get medical attention immediately.

Advice to physician: There is no specific antidote. Treat symptomatically and supportively.

5. FIRE FIGHTING MEASURES

Flammable properties: Non-flammable.

Extinguishing agents: Extinguish fires with CO₂, dry chemical, halogenated agents, water fog and foam. Water spray can be used for cooling of unaffected stock. Burning liquids may be moved by flushing water to protect personnel and minimize property damage. Use as little water as possible. Use spray or fog. Solid stream may cause spreading.

Firefighting: Remove spectators from surrounding area. Isolate the fire area and evacuate upwind. Use a

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recommended extinguishing agent for the type of surrounding fire.

Fight fire from maximum distance and use unmanned hose holder or monitor nozzles. Contain fire control agents for later disposal. Avoid inhaling hazardous vapours and fumes from burning materials. Keep upwind. Remove container from fire area if possible and without risk. Water can be used to cool unaffected containers but must be contained for later disposal.

Dyke fire control water for later disposal. Do not scatter the material. Avoid pollution of waterways.

Do not use high volume water jet, due to contamination risk. Contain water used for fire fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

Personal protective equipment: Fire fighters should wear full protective fire-fighting clothing including positive-pressure self-contained breathing apparatus (SCBA). Avoid contact with this material during fire-fighting operations.

6. ACCIDENTAL RELEASE MEASURES (SPILLAGE)

Personal precautions: Avoid contact with skin and eyes. Do not breathe fumes. For personal protection see Section 8.

Environmental precautions: Metazachlor is slightly to moderately toxic to fish and other aquatic organisms. It is regarded as an environmentally hazardous substance.

Do not allow entering into drains or watercourses. Spillage or uncontrolled discharges into water courses (or public waters) to be reported immediately to the Police and to the Department of Water/Environmental Affairs.

Occupational spill: Do not touch spilled material; stop leak if you can do it without risk. Keep out unprotected persons and animals.

For spills: Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e.g. vermiculite, dry sand, earth) and place in a chemical waste container. Do not use combustible materials such as saw dust. Place the material into a clean, dry container and cover for subsequent disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Prevent material from spreading by damming in with absorptive material. Do not flush spilled material into drains. Keep spectators away and upwind. To decontaminate spill area, tools and equipment, wash with a suitable solution (i.e. organic solvent, detergent bleach or caustic). Add the solution to the drums already collected. Label drums with its content and dispose of it in accordance with local regulations. Open burning or dumping of this material is prohibited. Do not get water inside containers.

7. HANDLING AND STORAGE REQUIREMENTS

Handling: Avoid inhalation and contact with eyes and skin, or clothing. Use with adequate ventilation. Do not handle broken packages without protective equipment. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove personal protective equipment immediately after handling this product. Do not apply directly to areas where surface water is present, or to intertidal areas below the mean high water mark. Water used to clean equipment must be disposed of correctly to avoid contamination.

Storage: Keep under lock and key and out of reach of children, uninformed persons and animals. Store in its original container in a dry, cool, well-ventilated area. Not to be stored close to food, feedstuffs, water supplies, seed and fertilisers.

Storage stability: Stable for a period of 2 years under normal warehouse conditions.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

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. Ensure that control systems are properly designed and maintained. Comply with occupational safety, environmental, fire, and other applicable regulations.

PERSONAL PROTECTIVE EQUIPMENT: Only spark-resistant equipment should be used. Comply with occupational safety, environmental, fire and other applicable regulations.

Respirator: If vapour exposures causes eye discomfort, an approved full-face respirator suitable for protection from spray or mists of pesticides is required. Limitations of respirator use specified by the approved agency and the manufacturer must be observed.

Clothing: Employee must wear appropriate protective (impervious) clothing, boots, hat and equipment to prevent repeated or prolonged skin contact with this substance. Do not wear leather clothing. Contaminated leather items, such as shoes, belts and watchbands should be disposed of.

Gloves: Employee must wear appropriate chemical resistant protective gloves (PVC or neoprene gloves) to prevent contact with this substance.

Eye protection: The use of chemical resistant goggles or face shield.

Emergency eye-wash: Where there is any possibility that an employee's eyes may be exposed to this substance; the employer should provide an eye wash

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fountain or appropriate alternative within the immediate work area for emergency use.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White to off-white suspension liquid.

Solubility in water: Dispersible.

Flammability: Not flammable.

pH of 1% aqueous dilution: 5.0 to 8.0.

10. STABILITY AND REACTIVITY

Storage stability: 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.

11. TOXICOLOGICAL INFORMATION

Formulation (calculated): Acute oral LD₅₀:

Technical: 2150 mg/kg in rats

Formulated: 2150 mg/kg in rats

Acute dermal LD₅₀:

Technical: 6810 mg/kg in rats

Formulated: 6810 mg/kg in rats

Acute inhalation LC₅₀: (technical)

Technical: LC₅₀ (4 h) for rats >34.5 mg/ℓ air.

Acute skin irritation: May cause irritation to the skin.

Sensitization: Skin sensitization is not expected with this product, but cannot be excluded.

Acute eye irritation: May cause irritation to the eyes.

ADI: (technical) 0.036 mg/kg bw.

Carcinogenicity: It seems unlikely that the product will be carcinogenic in humans. An inert, present at very low concentrations, may have carcinogenic potential.

Teratogenicity / Reproductive hazard: Teratogenic and developmental effects in humans are unlikely at expected levels of exposure. Under normal circumstances, **Metazachlor** is not likely to have an effect on reproduction in humans.

Mutagenicity: Studies evaluating the mutagenic potential of **Metazachlor** have all shown the compound to be non-mutagenic. An inert, present at very low concentrations, has been investigated as mutagen.

12. ECOLOGICAL INFORMATION

After oral administration in rats, **Metazachlor** was well resorbed and metabolised and eliminated mainly and rapidly via the kidneys as polar conjugates (mainly glucuronides). In plants, **Metazachlor** was extensively metabolised.

ECOTOXICOLOGY: (Technical material)

Birds: Not toxic to birds.

LD₅₀: Bobwhite quail: > 2000 mg/kg

Mallard ducks: > 2150 mg/kg

LC₅₀: Bobwhite quail: > 5620 mg/kg

Mallard ducks: > 5620 mg/kg

Fish: Moderately to slightly toxic to fish.

LC₅₀ (96 hours): Carp: 15 mg/ℓ

Rainbow trout: 4 mg/ℓ

Daphnia: LC₅₀ (48 h): 22 mg/ℓ

Bees: Not toxic to bees.

Highest concentration tested - 3.6%

Earthworms: LC₅₀ (14 days): 440 mg/kg soil

Algae: EC₅₀ (96 h): *Chlorella fusca* - 1.63 mg/ℓ

13. DISPOSAL CONSIDERATION

Pesticide disposal: Open dumping or burning of this pesticide is prohibited. Waste resulting from the use of this product cannot be reused or reprocessed. Never pour untreated waste or surplus products 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 disposal: Emptied containers retain vapour and product residues. Observe all labelled safeguards until container is destroyed.

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.

Do not re-use the empty container for any other purpose but destroy it by perforation and flattening and bury in an approved dumpsite. Prevent contamination of food, feedstuffs, drinking water and eating utensils.

Comply with local legislation applying to waste disposal.

14. TRANSPORT INFORMATION

UN No.: 3082

Road Transport ADR/IRD:

Class: 9

Packing group: III

Shipping name: Environmentally hazardous substance, liquid, N.O.S. (**Metazachlor** 500 g/ℓ)

Air Transport ICAO/IATA:

Class: 9

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Packing group: III
 Shipping name: Environmentally hazardous substance, liquid, N.O.S. (**Metazachlor** 500 g/ℓ)
Maritime Transport IMDG/IMO:
 Class: 9
 Packing group: III
 Shipping name: Environmentally hazardous substance, liquid, N.O.S. (**Metazachlor** 500 g/ℓ)
MARINE POLLUTANT

END OF DOCUMENT
Compiled: October 2006
Reviewed: May 2017

15. REGULATORY INFORMATION

Symbol: N, Xi, Xn
Indication of danger: Environmentally dangerous substance; Irritant and harmful substance.
Risk phrases:
R 20/22 Harmful by inhalation and if swallowed.
R 36/37/38 Irritation to eyes, respiratory system and skin.
R 51 Toxic to aquatic organisms.
Safety phrases:
S 1/2 Keep under lock and key and out of reach of children.
S 7/9 Keep container tightly closed and in a well-ventilated place.
S 23 Do not breathe fumes/vapour/spray.
S 24/25 Avoid contact with skin and eyes.
S 28 After contact with skin, wash immediately with plenty of water and non-abrasive soap.
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 61 Avoid release to the environment. Refer to special instructions / Safety data sheets.
S 62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label

16. OTHER INFORMATION

Packing and Labelling: Packed in 1, 5, 10, 20 & 25 litres plastic containers and labelled according to the South African regulations and guidelines.
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 and storage 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.