

**FARM-AG INTERNATIONAL (Pty) Ltd**

P.O. Box 1523, Durban 4000

Head Office : 61 Marshall Dr., Old Mill Industrial Park, Mount Edgecombe **South Africa**

Registration Number: 2005/011761/07

Tel + 27 31 003 3486 • Fax + 27 31 502 5825

**SECTION 1 - PRODUCT & COMPANY IDENTIFICATION**

**Product Name:** FarmAg Bromacil 500 SC  
**Product Use:** Herbicide  
**Effective Date:** March 2016  
**Revision Date:** September 2017

**24 Hr Emergency Number:** 082 771 2712

**In case of poisoning:**

Poison Information Centre: 082 446 8946

Tygerberg Hospital: (021) 931 6129

Poison Emergency Enquiries (021) 689 5227

**In case of Spillage:**

HAZMAT: 0800 147 112

**SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS**

**Common Name:** Bromacil  
**Chemical Name:** 5-bromo-3-sec-butyl-6-methyluracil  
 (IUPAC)

**CAS No.:** 53404-19-6

**Chemical family:** Uracil

**Molecular formula:** C<sub>9</sub>H<sub>13</sub>BrN<sub>2</sub>O<sub>2</sub>

**Use:** Herbicide used to control a wide range of annual and perennial weeds.

**Formulation:** **Bromacil 500 SC**  
 Suspension Concentrate

**Hazardous ingredients of toxicological concern:**

<u>Inert:</u>	<u>concern:</u>	<u>% present:</u>
Bromacil	harmful	± 50%
Inerts	harmful ± 5%	

**Symbol:** Xi, Xn, N

**Indication of Danger:** Irritating, harmful and toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

**RISK-PHRASE(S)** R20/22, R36/38, R 51/52

**SECTION 3 - HAZARD IDENTIFICATION****Toxicity class:**

WHO III;

**Likely routes of exposure:**

Eye contact, skin contact, ingestion, and inhalation.

**Ingestion:**

**Eye contact:** Irritating to eyes

**Skin contact:** Irritating to skin

**Ingestion:** Toxic if ingested in large amounts.

**SECTION 4 - FIRST AID MEASURES AND PRECAUTIONS****Inhalation:**

Remove source of contamination, or leave contaminated area to fresh air as rapidly as possible. Treat symptomatically and supportively.

**Skin and Eye contamination:**

Skin contamination should be removed promptly by washing with soap and water. Contamination of the eyes should be treated immediately by flushing of the eyes with gently flowing lukewarm water for 15 minutes, holding the eyelids open. If dermal or ocular irritation persists, medical attention should be obtained without delay.

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Ingestions of these herbicides are likely to be followed by vomiting and diarrhea due to the irritant properties of most of the toxicants.

Management depends on:

- a) the best estimate of quantity originally ingested,
- b) time elapsed since ingestion,
- c) effectiveness of vomiting, and
- d) the clinical status of the subject.

**Activated charcoal** is probably effective in limiting irritant effects and reducing absorption of most or all of these herbicides. Aluminum hydroxide gels maybe useful in neutralizing the irritant actions of the more acidic agents. Sorbitol should be given to induce catharsis if bowel sounds are present and if spontaneous diarrhea has not already commenced. Dehydration and electrolyte disturbances may be severe enough to require oral or intravenous fluids.

Advice to the physician:

There are no specific antidotes for poisoning by these herbicides. In the case of suicidal ingestions, particularly, the possibility must always be kept in mind that multiple toxic substances may have been swallowed. If large amounts of herbicide have been ingested, and if the patient is fully alert, induce emesis with Syrup of Ipecac, followed by several glasses of water. Dosage for adults and children over 12 years: 30 ml; dosage for children under 12 years: 15 ml. When vomiting has stopped, give activated charcoal. Add sorbitol to the charcoal slurry unless diarrhea has already commenced. If, for some reason, the patient is not fully alert, put in place a cuffed endotracheal tube to protect the airway, then aspirate and lavage the stomach with slurry of activated charcoal. Leave a quantity of charcoal, with sorbitol, in the stomach before withdrawing the stomach tube. Repeated administration of charcoal at half or more the initial dosage every 2 to 4 hours may be beneficial. If the amount of ingested herbicides was small, if effective emesis has already occurred, or if treatment is delayed, administer the activated charcoal and sorbitol by mouth. If serious dehydration and electrolyte depletion have occurred as a result of vomiting and diarrhea, monitor blood electrolytes and fluid balance and administer intravenous infusions of glucose, normal saline, Ringer's solution, or Ringer's-lactate to restore extracellular fluid volume and electrolytes. Follow this with oral nutrients as soon as fluids can be retained. Fluids serve to support excretion of the toxicants. Supportive measures are ordinarily sufficient for successful management of excessive exposures to these herbicides. If the patient's condition deteriorates in spite of good supportive care, the operation of an alternative or additional toxicant should be suspected.

**SECTION 5 - FIRE-FIGHTING MEASURES****Flash point: Not Flammable****Extinguishing agents:**

Extinguish fires with carbon dioxide, dry powder, or alcohol-resistant foam. Water spray as a fog can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Contain water used for fire-fighting for later disposal.

Avoid the accumulation of polluted run-off from the site.

**Fire and explosion hazard:**

The material does not burn or burns with difficulty. It is not explosive. Airborne **Bromacil** dust may ignite. Should the chemical be involved in a general fire, ensure chemical protective clothing is used and self-contained breathing apparatus. Use water to cool containers, but water will be ineffective on fire. See point 6.

**Extinguishing media:**

Carbon dioxide, dry chemical powders, foam and water spray.

**Personal protective equipment:**

Fire-fighters and others that may be exposed should wear full protective impervious clothing, including gloves and eye protection, and self-contained breathing apparatus. Contact with the fumes and vapours should be avoided by staying upwind. Clean all clothing before re-use. Severely contaminated clothing cannot be adequately decontaminated, and must be disposed as a hazardous waste. Shower with soap and water after contact with this product.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES (SPILLAGE)****Personal precautions:**

Avoid contact with skin and eyes. Do not inhale spray or fumes. For personal protection see Section 8.

**Environmental precautions:**

Do not allow entering 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:**

For small liquid spills, soak up with lime, damp earth or sand, or other non-combustible absorbent material and place into containers for later disposal. For large liquid spills, contain the liquid for later disposal. In situations where product comes in contact with water, contain contaminated water for later disposal. Do not flush spilled material into drains. Keep spectators away.

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**SECTION 7 - HANDLING AND STORAGE REQUIREMENTS****Handling:**

Harmful if swallowed. Irritant to eyes and skin. Avoid contact with eyes and skin, and inhalation of dust, spray and vapour. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking, or using the toilet. Remove clothing immediately if the product gets inside. Then wash skin thoroughly using a non-abrasive soap and put on clean clothing.

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 out of reach of unauthorized persons, children and animals. Store in its original labelled container in shaded, well-ventilated area. Store in dry area. Not to be stored next to foodstuffs and water supplies. Local regulations should be complied with.

**Incompatibility:**

Stable in aqueous media between pH 5 and 9. Hydrolyzed at higher temperatures by strong alkalis and strong acids. It is compatible with other herbicides.

**Hazardous decomposition products:**

Thermal decomposition may release toxic oxides of carbon, nitrogen and sulfur.

**SECTION 8 - EXPOSURE CONTROL/PERSONAL PROTECTION**

Comply with occupational safety, environmental, fire, and other applicable regulations.

**PERSONAL PROTECTIVE EQUIPMENT:****Respirator:**

Where exposure through inhalation may occur when handling and/or when preparing the spray mixture, wear a face mask. If the product is used in dusty or confined conditions or spillage and fire conditions a respirator suitable for protection from dusts and mists of pesticides is adequate.

**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.

**Gloves:**

Employee must wear appropriate chemical resistant protective gloves to prevent contact with this substance.

**Eye protection:**

The use of safety goggles (full-face shield) is recommended.

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

**SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	White to off-white viscous liquid suspension.
<b>Odour:</b>	Paint like smell.
<b>Flammability:</b>	Not flammable.
<b>Explosive properties:</b>	Non explosive.
<b>Flash point:</b>	Not available
<b>Oxidising properties:</b>	Not oxidative.
<b>pH:</b>	6,0 - 9,0
<b>Relative density:</b>	1,190 g/m <sup>3</sup> .

**SECTION 10 - STABILITY AND REACTIVITY****Storage stability:**

Stable at elevated temperatures and at low temperatures. Do not store near crop protection chemicals, feed, fertilizers or seed.

**Decomposition properties:**

Decomposes in the presence of strong acids and poses a fire and explosion hazard in the presence of strong oxidizers. Stable in aqueous solutions.

**Hazardous decomposition products:** Thermal decomposition may release toxic oxides of carbon, nitrogen and sulfur.

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**SECTION 11 -**

<b>Acute oral LD<sub>50</sub> :</b>	Bromacil: 3876 mg/kg (cal.)
<b>Acute dermal LD<sub>50</sub>:</b>	Bromacil: 9346 mg/kg (cal.)
<b>Acute inhalation LC<sub>50</sub> (4h):</b>	Bromacil technical: > 5.6 mg/l air (4 h)
<b>Acute skin irritation:</b>	Mild skin irritant.
<b>Acute eye irritation:</b>	Mild eye irritant.
<b>Dermal sensitisation:</b>	No dermal or systemic evidence of contact hypersensitivity are expected.
<b>Carcinogenic effects:</b>	There is limited evidence that <b>bromacil</b> causes cancer in animals receiving high doses over the course of their lifetimes.
<b>Mutagenic effects:</b>	Several mutagenic screening tests indicate that <b>bromacil</b> is not mutagenic
<b>Teratogenic effects:</b>	There was no evidence of birth defects in the offspring of rats that were given dietary doses of 12.5 mg/kg/day bromacil, nor in rabbits that were given 7.5 mg/kg/day on days 8 through 16 of pregnancy. However, toxic effects and developmental abnormalities of the musculoskeletal system were seen in the embryos or fetuses of rats which inhaled very high bromacil doses of 38 mg/L for 2 hours daily, during days 7 to 14 of pregnancy. These data suggest that humans are unlikely to suffer teratogenic effects from bromacil under normal circumstances.
<b>Bromacil tech.: ADI:</b>	0.025 mg/kg b.w. [1989]

**SECTION 12 - ECOLOGICAL INFORMATION****Mobility, Degradability & Accumulation:**

**Degradability:** The principal metabolite is 5-bromo-sec-butyl-6-hydroxymethyluracil. Duration of residual activity in soil is c. 5 months.

**ECOTOXICOLOGY (technical material):**

**Birds:** Oral LD<sub>50</sub>: bobwhite quail: 2250 mg/kg. Dietary LC<sub>50</sub> (8 D) for Mallard ducks and bobwhite quail > 10 000 mg/kg diet.

**Fish:** LC<sub>50</sub> (48 hours): rainbow trout: 36 mg/l, bluegill sunfish 127 ppm, NOEC (96 h) for sheephead minnows 95.6 mg/l.

**Daphnia magna:** LC<sub>50</sub>: 48 hours: 121 mg/l

**Algae:** LC<sub>50</sub> for Selenastrum carpicornutum 6.8 ppb.

**Bees:** Not toxic to bees. LD<sub>50</sub> (Contact) >193 µg/bee

**SECTION 13 - DISPOSAL CONSIDERATION****Pesticide and container disposal:**

Open dumping or burning of this pesticide is prohibited. 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.

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 third of the volume 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 purposes but destroy it by perforation, 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.

**SECTION 14 - TRANSPORT INFORMATION**

<b>UN NUMBER:</b>	3082
<b>Road Transport ADR/IRD:</b>	
Class:	9
Packing group:	III
Shipping name:	Environmentally hazardous substance, Liquid, N.O.S. (Substituted uracil herbicide)
<b>Air Transport ICAO/IATA:</b>	
Class:	9
Packing group:	III
Shipping name:	Environmentally hazardous substance, Liquid, N.O.S. (Substituted uracil herbicide)

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## Maritime Transport IMDG/IMO:

Class: 9  
Packing group: III  
Shipping name: Environmentally hazardous substance, Liquid, N.O.S.  
(Substituted uracil herbicide)

## SECTION 15 - REGULATORY INFORMATION

**Symbol:** Xi, Xn, N

**Indication of danger:** Irritating, harmful and toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment.

### Risk phrase(s):

**R 20/22** Harmful by inhalation and if swallowed.

**R 36/38** Irritating to eyes and skin.

**R 51/53** Toxic to aquatic organisms, may cause long-term adverse effects in aquatic environment

### Safety phrases:

**S 1/2** Keep out of reach children.

**S 13** Keep away from food, drink and animal feeding stuffs.

**S 22** Do not breathe dust.

**S 24/25** Avoid contact with skin and eyes.

**S 26** In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

**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.

## SECTION 16 - OTHER INFORMATION

### Packaging:

Packed in 1, 5, 10, 20 and 25 litres plastic containers and labeled according to 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, storage use of the product. It is not applicable to unusual or non-standard uses of the product or 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.

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