

SECTION 1: Identification

1.1. Product identifier

Product form	: Mixture
Trade name	: Farmag Bromacil 800 WP (bromacil 800 g/kg)
Type of product	: Herbicide
CAS-No.	: 314-40-9
Product group	: End product

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture	: A wettable powder applied as a soil herbicide with long residual action for the control of annual and perennial broadleaf weeds and some grasses as listed, in citrus, pineapples and industrial areas.
------------------------------	---

1.3. Supplier's details

Supplier

Farm-Ag International (Pty) Ltd
Old Mill Industrial Park
61, Marshall Drive
P.O. Box 1523
4300 Mount Edgecombe – Durban KwaZulu Natal
South Africa
T 031 003 3486

1.4. Emergency telephone number

Emergency number	: 24 Hr Emergency Number: In case of Poisoning: Poison Information Helpline : 0861 555 777
	In case of Spillage: HAZMAT:0800 147 112

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture


Classification according to the United Nations GHS

Acute toxicity (oral), Category 4	H302
Skin corrosion/irritation, Category 3	H316
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Hazardous to the aquatic environment – Chronic Hazard, Category 1	H410

Full text of H-statements: see section 16

2.2. Label elements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA)	: 
Signal word (GHS-ZA)	: Warning
Hazardous ingredients	: Bromacil 97.7 TC
Hazard statements (GHS ZA)	: H302 - Harmful if swallowed. H316 - Causes mild skin irritation H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (GHS ZA)	: P101 - If medical advice is needed, have product container or label at hand.

Farmag Bromacil 800 WP (bromacil 800 g/kg)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

P102 - Keep out of reach of children.
P103 - Read label before use.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P273 - Avoid release to the environment.
P301+P312 - IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
P330 - Rinse mouth.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P391 - Collect spillage.
P501 - Dispose of contents and container to an approved waste disposal plant.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects : Harmful if swallowed, Causes mild skin irritation, Very toxic to aquatic life with long lasting effects.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
Bromacil 97.7 TC	CAS-No.: 314-40-9	≥ 80 – < 85	Acute Tox. 4 (Oral), H302 Acute Tox. Not classified (Dermal) Acute Tox. Not classified (Inhalation:dust,mist) Aquatic Acute 1, H400 (M=100) Aquatic Chronic 1, H410
Calcium lignosulfonate	CAS-No.: 8061-52-7	≥ 5 – < 10	Acute Tox. Not classified (Oral) Aquatic Acute Not classified Aquatic Chronic 4, H413
sodium alkyl naphthalene sulfonate blend	CAS-No.: 105864-15-1	≥ 1 – < 5	Skin Irrit. 2, H315 Eye Irrit. 2A, H319

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a poison center or a doctor if you feel unwell.
First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation occurs: Get medical advice/attention.
First-aid measures after eye contact : Rinse eyes with water as a precaution.
First-aid measures after ingestion : Rinse mouth. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after skin contact : Irritation.

Farmag Bromacil 800 WP (bromacil 800 g/kg)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

4.3. Indication of any immediate medical attention and special treatment needed

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: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Foam. Dry powder. Water spray.
- Unsuitable extinguishing media : Water spray as a fog can be used for cooling of unaffected stock, but avoid water coming in contact with the product. Do not use direct jet of water. Contain water used for fire-fighting for later disposal. Avoid the accumulation of polluted run-off from the site.

5.2. Special hazards arising from the substance or mixture

- Fire 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.
- Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
- Personal protection (Emergency response) : Wear respiratory protection, Wear protective gloves, Wear protective clothing, Wear eye protection, Face-shield



SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

No additional information available

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

Farmag Bromacil 800 WP (bromacil 800 g/kg)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

6.2. 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.

6.3. Methods and material for containment and cleaning up

- For containment : Collect spillage.
- Methods for cleaning up : 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.
- Other information : Dispose of materials or solid residues at an authorized site.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Ensure good ventilation of the work station. Avoid contact with skin and eyes. Wear personal protective equipment.
- Hygiene measures : Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.
- Storage area : Store in a dry area. Keep only in the original container. Store out of reach of unauthorised persons, children and animals.
- Information on mixed storage : KEEP SUBSTANCE AWAY FROM: Food supplies. Water supplies.
- Maximum storage period : 2 years

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Bromacil 97.7 TC (314-40-9)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	Bromacil
OEL TWA	10 mg/m ³
Regulatory reference	Government Notice No. R. 280, 2021
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Bromacil
OEL TWA	10 mg/m ³
OEL TWA [ppm]	1 ppm
OEL STEL	20 mg/m ³
OEL STEL [ppm]	2 ppm
Regulatory reference	Government Notice No. R 904
kaolin (1332-58-7)	
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Kaolin
OEL TWA	3 mg/m ³ respirable particulate
Regulatory reference	Government Notice No. R 904

Farmag Bromacil 800 WP (bromacil 800 g/kg)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment (PPE)

- Hand protection : Protective gloves
Eye protection : Safety glasses
Skin and body protection : Wear suitable protective clothing
Respiratory protection : In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



8.4. Exposure limit values for the other components

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

- Physical state : Solid
Appearance : No data available
Colour : No data available
Odour : No data available
Odour threshold : No data available
pH : No data available
pH solution : No data available
Relative evaporation rate (butylacetate=1) : No data available
Relative evaporation rate (ether=1) : No data available
Melting point : No data available
Freezing point : Not applicable
Boiling point : No data available
Flash point : Not applicable
Auto-ignition temperature : Not applicable
Decomposition temperature : No data available
Flammability (solid, gas) : Non flammable.
Vapour pressure : No data available
Vapour pressure at 50 °C : No data available
Relative vapour density at 20 °C : No data available
Relative density : No data available
Relative density of saturated gas/air mixture : No data available
Density : No data available
Relative gas density : No data available
Solubility : No data available
Partition coefficient n-octanol/water (Log Pow) : No data available
Partition coefficient n-octanol/water (Log Kow) : No data available
Viscosity, kinematic : Not applicable
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : Not applicable
Lower explosion limit : No data available
Upper explosion limit : No data available

9.2. Other information

No additional information available

Farmag Bromacil 800 WP (bromacil 800 g/kg)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Farmag Bromacil 800 WP (bromacil 800 g/kg) (314-40-9)

ATE ZA (oral)	1300 mg/kg bodyweight
Unknown acute toxicity (GHS ZA)Unknown acute toxicity (GHS ZA)	16.67% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 100% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 100% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))

Bromacil 97.7 TC (314-40-9)

LD50 oral rat	1300 mg/kg Female Rat
LD50 oral	2000 mg/kg Male Rat
LD50 dermal rabbit	> 5000 mg/kg (Rabbit, Dermal)
LC50 Inhalation - Rat	> 5.6 mg/l/4h (4 h, Rat, Inhalation)

Calcium lignosulfonate (8061-52-7)

LD50 oral rat	> 5000 mg/kg
---------------	--------------

silica, precipitated (112926-00-8)

LD50 oral rat	> 5000 mg/kg (Rat, Oral)
---------------	--------------------------

Skin corrosion/irritation : Causes mild skin irritation.
Serious eye damage/irritation : Not classified
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

Farmag Bromacil 800 WP (bromacil 800 g/kg)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

Farmag Bromacil 800 WP (bromacil 800 g/kg) (314-40-9)

Viscosity, kinematic	Not applicable
----------------------	----------------

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute) : Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic) : Very toxic to aquatic life with long lasting effects.

Bromacil 97.7 TC (314-40-9)

LC50 - Fish [1]	36 mg/l Rainbow Trout
LC50 - Fish [2]	127 mg/l Bluegill Sunfish
LC50 - Other aquatic organisms [1]	112.9 mg/l Mysid shrimps
LC50 - Other aquatic organisms [2]	130 mg/l Oyster embryo larvae
EC50 - Crustacea [1]	121 mg/l
EC50 72h - Algae [1]	0.0068 mg/l Selenastrum Capricornutum
BCF - Fish [1]	2.8 – 26.5 (672 h, Leuciscus idus, Fresh weight)
BCF - Fish [2]	4.25 (388 h, Pimephales promelas, Fresh weight)
Partition coefficient n-octanol/water (Log Kow)	1.88
Partition coefficient n-octanol/water (Log Pow)	0
Additional ecotoxicological information	Birds: Acute oral LD50 for bobwhite quail 2250 mg/kg. Dietary LC50 (8d) for mallard ducks and bobwhite quail >10000 mg/kg diet. Bees (LD50, µg/bee) >193 (contact)

Calcium lignosulfonate (8061-52-7)

LC50 - Fish [1]	8327.32 mg/l Source: Ecological Structure Activity Relationships
Partition coefficient n-octanol/water (Log Pow)	0.33 Source: Quantitative Structure Activity Relation

12.2. Persistence and degradability

Farmag Bromacil 800 WP (bromacil 800 g/kg) (314-40-9)

Persistence and degradability	No additional information available
-------------------------------	-------------------------------------

Bromacil 97.7 TC (314-40-9)

Persistence and degradability	Non degradable in the soil. Not readily biodegradable in water.
-------------------------------	---

silica, precipitated (112926-00-8)

Persistence and degradability	Biodegradability in soil: not applicable. Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable (inorganic)
ThOD	Not applicable (inorganic)

kaolin (1332-58-7)

Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

Farmag Bromacil 800 WP (bromacil 800 g/kg)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

12.3. Bioaccumulative potential

Farmag Bromacil 800 WP (bromacil 800 g/kg) (314-40-9)

Bioaccumulative potential	No additional information available
---------------------------	-------------------------------------

Bromacil 97.7 TC (314-40-9)

BCF - Fish [1]	2.8 – 26.5 (672 h, Leuciscus idus, Fresh weight)
----------------	--

BCF - Fish [2]	4.25 (388 h, Pimephales promelas, Fresh weight)
----------------	---

Partition coefficient n-octanol/water (Log Pow)	0
---	---

Partition coefficient n-octanol/water (Log Kow)	1.88
---	------

Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
---------------------------	--

Calcium lignosulfonate (8061-52-7)

Partition coefficient n-octanol/water (Log Pow)	0.33 Source: Quantitative Structure Activity Relation
---	---

silica, precipitated (112926-00-8)

Bioaccumulative potential	No bioaccumulation data available.
---------------------------	------------------------------------

kaolin (1332-58-7)

Bioaccumulative potential	No bioaccumulation data available.
---------------------------	------------------------------------

12.4. Mobility in soil

Farmag Bromacil 800 WP (bromacil 800 g/kg) (314-40-9)

Mobility in soil	No additional information available
------------------	-------------------------------------

Bromacil 97.7 TC (314-40-9)

Partition coefficient n-octanol/water (Log Pow)	0
---	---

Partition coefficient n-octanol/water (Log Kow)	1.88
---	------

Ecology - soil	Not toxic to bees.
----------------	--------------------

Calcium lignosulfonate (8061-52-7)

Partition coefficient n-octanol/water (Log Pow)	0.33 Source: Quantitative Structure Activity Relation
---	---

silica, precipitated (112926-00-8)

Ecology - soil	No (test)data on mobility of the substance available.
----------------	---

12.5. Other adverse effects

Ozone : Not classified

Other adverse effects : No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information




In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
3077	3077	3077

Farmag Bromacil 800 WP (bromacil 800 g/kg)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

SANS	IMDG	IATA
14.2. Proper Shipping Name		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains bromacil 800 g/kg)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (contains bromacil 800 g/kg)	Environmentally hazardous substance, solid, n.o.s. (contains bromacil 800 g/kg)
14.3. Transport hazard class(es)		
9	9	9
		
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : Yes	Dangerous for the environment : Yes Marine pollutant : Yes	Dangerous for the environment : Yes
No supplementary information available		

14.6. Special precautions for user

SANS

Special provisions (SANS)	: 179, 274, 331, 335
Limited quantities (SANS)	: 5 kg
Limited quantities (SANS)	: 5 kg
Packagings, large packagings and IBCs Packing instructions (SANS)	: P002, IBC08, LP02
Packagings, large packagings and IBCs Special packing instructions (SANS)	: PP12, B3
Portable tank and bulk containers instructions (SANS)	: T1, BK2
Portable tank and bulk container special provisions (SANS)	: TP33

IMDG

Special provisions (IMDG)	: 274, 335, 966, 967, 969
Limited quantities (IMDG)	: 5 kg
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: LP02, P002
Special packing provisions (IMDG)	: PP12
IBC packing instructions (IMDG)	: IBC08
IBC special provisions (IMDG)	: B3
Tank instructions (IMDG)	: BK1, BK2, BK3, T1
Tank special provisions (IMDG)	: TP33
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-F - SPILLAGE SCHEDULE Foxtrot - WATER-SOLUBLE MARINE POLLUTANTS
Stowage category (IMDG)	: A

IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y956
PCA limited quantity max net quantity (IATA)	: 30kgG
PCA packing instructions (IATA)	: 956
PCA max net quantity (IATA)	: 400kg
CAO packing instructions (IATA)	: 956
CAO max net quantity (IATA)	: 400kg
Special provisions (IATA)	: A97, A158, A179, A197, A215
ERG code (IATA)	: 9L

Farmag Bromacil 800 WP (bromacil 800 g/kg)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health, and environmental national regulations specific for the product

No additional information available

SECTION 16: Other information

Issue date : 09/09/2022

Full text of H-statements	
H302	Harmful if swallowed.
H315	Causes skin irritation.
H316	Causes mild skin irritation
H319	Causes serious eye irritation.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

Safety Data Sheet (SDS), South Africa

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.