FarmAg Bromopropylate 500 EC (bromopropylate 500 g/l)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010
Issue date: 8/30/2022 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form	:	Mixture
Trade name	:	FarmAg Bromopropylate 500 EC (bromopropylate 500 g/l)
Type of product	:	Insecticide
CAS-No.	:	18181-80-1

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

Use of the substance/mixture	:	An emulsifiable concentrate contact acaricide with a long residual activity for the control of certain mites in bananas, citrus, cotton, mangoes and grapes.

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

Flammable liquids, Category 3	H226
Acute toxicity (oral), Category 5	H303
Acute toxicity (dermal), Category 5	H313
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Specific target organ toxicity – Repeated exposure, Category 2	H373
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)	:	Danger
Hazardous ingredients	:	Bromopropylate 92% TC, Calcium dodecylbenzenesulfonate, Solvent Naphtha

Hazard statements (GHS ZA)	:	H226 - Flammable liquid and vapour. H303 - May be harmful if swallowed H313 - May be harmful in contact with skin H315 - Causes skin irritation. H318 - Causes serious eye damage. H373 - May cause damage to organs through prolonged or repeated exposure. 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. P102 - Keep out of reach of children. P103 - Read label before use. P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 - Keep container tightly closed. P240 - Ground and bond container and receiving equipment. P241 - Use explosion-proof equipment. P242 - Use non-sparking tools. P243 - Take action to prevent static discharges. P260 - Do not breathe spray. P264 - Wash hands, forearms and face thoroughly after handling. P273 - Avoid release to the environment. P280 - Wear protective clothing, eye protection, face protection, protective gloves. P302+P352 - IF ON SKIN: Wash with plenty of soap and water. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately call a doctor. P312 - Call a POISON CENTER or doctor if you feel unwell. P332+P313 - If skin irritation occurs: Get medical advice. P362+P364 - Take off contaminated clothing and wash it before reuse. P370+P378 - In case of fire: Use carbon dioxide (CO2), foam to extinguish. P391 - Collect spillage. P403+P235 - Store in a well-ventilated place. Keep cool. P501 - Dispose of contents and container to a hazardous or special waste collection point.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects	:	Flammable liquid and vapour,Toxic if inhaled,Harmful in contact with skin,Harmful if swallowed,Causes skin irritation,Causes serious eye damage,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
Bromopropylate 92% TC	CAS-No.: 18181-80-1	≥ 45 – < 50	Acute Tox. Not classified (Oral) Acute Tox. 5 (Dermal), H313 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Name	Product identifier	%	Classification according to the United Nations GHS
Solvent Naphtha	CAS-No.: 64742-94-5	≥ 40 – < 45	Flam. Liq. 3, H226 Acute Tox. Not classified (Oral) Acute Tox. 5 (Dermal), H313 Eye Irrit. 2A, H319 STOT RE 2, H373 Asp. Tox. 1, H304 Aquatic Acute 2, H401 Aquatic Chronic 2, H411
Tristyrylphenol Ethoxylates	CAS-No.: 99734-09-5	≥ 5 – < 10	Eye Irrit. 2A, H319 Aquatic Chronic 2, H411
Calcium dodecylbenzenesulfonate	CAS-No.: 26264-06-2	≥ 5 – < 10	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 4, H413

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. Move the victim to fresh air or remove source of contamination. Keep person warm and at rest. Assure fresh air breathing. If breathing is difficult, give artificial respiration. Seek medical advice. Get immediate medical advice/attention. Call a doctor.

First-aid measures after skin contact : Wash with water and soap. Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Remove contact lenses, if present and easy to do. Continue rinsing. If irritation persists, consult a doctor/medical service. Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.

First-aid measures after ingestion : Immediately after ingestion: give lots of water to drink. If swallowed, seek medical advice immediately and show this container or label. 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.

Symptoms/effects after eye contact : Serious damage to eyes.

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

Treat symptomatically. No antidote available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Flammable liquid and vapour.

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) : Fire-resistant protective clothing,Face-shield,Gloves,Protective goggles,Wear foot protection,Wear respiratory protection

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. No open flames, no sparks, and no smoking. Avoid breathing fume, mist, spray, vapours. Avoid contact with skin, eyes and clothing.

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".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.

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 : Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Use only outdoors or in a well-ventilated area. Avoid breathing vapours, spray, mist. Do not get in eyes, on skin, or on clothing.

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

Technical measures : Ground/bond container and receiving equipment.

Storage conditions : Store in a well-ventilated place. Keep cool. Keep container tightly closed. Store locked up.

Incompatible materials : Not to be stored next to foodstuffs.

Maximum storage period : 2 years

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

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 inadequate ventilation wear respiratory protection.

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	:	Liquid
Appearance	:	Transparent liquid.
Colour	:	Brown.
Odour	:	aromatic.
Odour threshold	:	No data available
pH	:	6 – 9
pH solution	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Relative evaporation rate (ether=1)	:	No data available
Melting point	:	Not applicable
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	52 °C
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Lower/upper flammability limits ca 2/12 % (Solvesso).
Vapour pressure	:	1 mm Hg
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	:	1.14 g/ml
Relative gas density	:	No data available
Solubility	:	Insoluble in water. expected to form a homogenous emulsion.
Partition coefficient n-octanol/water (Log Pow)	:	No data available
Partition coefficient n-octanol/water (Log Kow)	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available.
Explosive limits	:	No data available
Lower explosion limit	:	No data available
Upper explosion limit	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

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

Unstable at 0 ± 1°C. Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong acids. Alkaline mixtures.

10.6. Hazardous decomposition products

Toxic fumes.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Hazardous in case of ingestion.
Acute toxicity (dermal) : May be harmful in contact with skin.
Acute toxicity (inhalation) : Not classified

FarmAg Bromopropylate 500 EC (bromopropylate 500 g/l) (18181-80-1)	
ATE ZA (oral)	4354.684 mg/kg bodyweight
ATE ZA (Dermal)	2500 mg/kg bodyweight
Unknown acute toxicity (GHS ZA)Unknown acute toxicity (GHS ZA)	46.62% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 12.28% 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 (Vapours))

Bromopropylate 92% TC (18181-80-1)	
LD_{50} oral rat	> 5000 mg/kg
LD_{50} dermal rat	> 4000 mg/kg
LC_{50} Inhalation - Rat	> 4.5 mg/l

Calcium dodecylbenzenesulfonate (26264-06-2)	
LD_{50} oral rat	465 mg/kg

Solvent Naphtha (64742-94-5)	
LD_{50} oral rat	> 5000 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 798.1175 (Acute Oral Toxicity)
LD_{50} dermal rabbit	> 2000 mg/kg bodyweight Animal: rabbit, Guideline: EPA OTS 798.1100 (Acute Dermal Toxicity)

Skin corrosion/irritation : Irritating to skin
pH: 6 – 9
Serious eye damage/irritation : Causes eye irritation
pH: 6 – 9
Respiratory or skin sensitisation : Not a skin sensitizer. May cause respiratory tract irritation
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Solvent Naphtha (64742-94-5)	
LOAEL (oral, rat, 90 days)	1250 mg/kg bodyweight. Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
LOAEL (dermal, rat/rabbit, 90 days)	200 mg/kg bodyweight. Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
LOAEC (inhalation, rat, vapour, 90 days)	4.71 mg/l air. Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)
NOAEL (oral, rat, 90 days)	625 mg/kg bodyweight Animal: rat, Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents)
NOAEL (dermal, rat/rabbit, 90 days)	2000 mg/kg bodyweight Animal: rabbit, Animal sex: male, Guideline: OECD Guideline 410 (Repeated Dose Dermal Toxicity: 21/28-Day Study)
NOAEC (inhalation, rat, vapour, 90 days)	2355 mg/l air Animal: rat, Guideline: EU Method B.29 (Sub-Chronic Inhalation Toxicity:90-Day Study)
	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

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.

Bromopropylate 92% TC (18181-80-1)	
LC_{50} - Fish [1]	0.5 mg/l Bluegill Sunfish (96h)
EC_{50} - Crustacea [1]	0.17 mg/l
NOEC chronic algae	> 52 mg/l Scenedesmus subspicatus
Partition coefficient n-octanol/water (Log Pow)	5.4
Additional ecotoxicological information	Birds: Peking duck LC_{50} = 600 mg/kg (8 days); Mallard duck, acute oral LD_{50} = > 2 000 mg/kg; Japanese quail, acute oral LD_{50} = > 2 000 mg/kg; Japanese quail, dietary LC_{50} = 1 000 mg/kg (8 days); Bromopropylate is toxic to birds when present in high amounts in their diet. Bees: LC_{50} = 183 µg/bee (24 hours). Earthworms: LC_{50} = > 1 000 mg/kg soil (14 days). Bromopropylate is of low toxicity to earthworms.

Calcium dodecylbenzenesulfonate (26264-06-2)	
Partition coefficient n-octanol/water (Log Pow)	14.1

Solvent Naphtha (64742-94-5)	
LC_{50} - Fish [1]	8.41 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC_{50} - Crustacea [1]	4.7 mg/l Test organisms (species): Daphnia magna
EC_{50} 72h - Algae [1]	12.4 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC_{50} 72h - Algae [2]	18.9 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)

12.2. Persistence and degradability

FarmAg Bromopropylate 500 EC (bromopropylate 500 g/l) (18181-80-1)	
Persistence and degradability	No additional information available

Bromopropylate 92% TC (18181-80-1)	
Persistence and degradability	Bromopropylate is not expected to be volatilised from soil surfaces, whether moist or dry. The half-life in sandy soil was found to be approximately 60 days and in silt loam approximately 30 days. Biodegradation half-lives in soil of 4 to 13 weeks have been reported.

12.3. Bioaccumulative potential

FarmAg Bromopropylate 500 EC (bromopropylate 500 g/l) (18181-80-1)	
Bioaccumulative potential	No additional information available

Bromopropylate 92% TC (18181-80-1)	
Partition coefficient n-octanol/water (Log Pow)	5.4

Calcium dodecylbenzenesulfonate (26264-06-2)	
Partition coefficient n-octanol/water (Log Pow)	14.1

12.4. Mobility in soil

FarmAg Bromopropylate 500 EC (bromopropylate 500 g/l) (18181-80-1)	
Mobility in soil	No additional information available

Bromopropylate 92% TC (18181-80-1)	
Mobility in soil	2722
Partition coefficient n-octanol/water (Log Pow)	5.4

Calcium dodecylbenzenesulfonate (26264-06-2)	
Partition coefficient n-octanol/water (Log Pow)	14.1

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.
Additional information : Flammable vapours may accumulate in the container.

SECTION 14: Transport information

In accordance with SANS / IMDG / IATA

SANS	IMDG	IATA
14.1. UN number		
1992	1992	1992
14.2. Proper Shipping Name		
FLAMMABLE LIQUID, TOXIC, N.O.S. (contains bromopropylate 500 g/l)	FLAMMABLE LIQUID, TOXIC, N.O.S. (contains bromopropylate 500 g/l)	Flammable liquid, toxic, n.o.s. (contains bromopropylate 500 g/l)

SANS	IMDG	IATA
14.3. Transport hazard class(es)		
3 (6.1)	3 (6.1)	3 (6.1)
		
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)	:	223, 274
Limited quantities (SANS)	:	5 L
Limited quantities (SANS)	:	5 L
Packagings, large packagings and IBCs Packing instructions (SANS)	:	P001, IBC03
Portable tank and bulk containers instructions (SANS)	:	T7
Portable tank and bulk container special provisions (SANS)	:	TP1, TP28

IMDG

Special provisions (IMDG)	:	223, 274
Limited quantities (IMDG)	:	5 L
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	P001
IBC packing instructions (IMDG)	:	IBC03
Tank instructions (IMDG)	:	T7
Tank special provisions (IMDG)	:	TP1, TP28
EmS-No. (Fire)	:	F-E - FIRE SCHEDULE Echo - NON-WATER-REACTIVE FLAMMABLE LIQUIDS
EmS-No. (Spillage)	:	S-D - SPILLAGE SCHEDULE Delta - FLAMMABLE LIQUIDS
Stowage category (IMDG)	:	A
Properties and observations (IMDG)	:	Flammable toxic liquid which is not specified by name in this class or, on account of its characteristics, in some other class. Toxic if swallowed, by skin contact or by inhalation.

IATA

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y343
PCA limited quantity max net quantity (IATA)	:	2L
PCA packing instructions (IATA)	:	355
PCA max net quantity (IATA)	:	60L
CAO packing instructions (IATA)	:	366
CAO max net quantity (IATA)	:	220L
Special provisions (IATA)	:	A3
ERG code (IATA)	:	3P

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 : 30/08/2022

Full text of H-statements	
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H303	May be harmful if swallowed
H304	May be fatal if swallowed and enters airways.
H313	May be harmful in contact with skin
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H401	Toxic to aquatic life
H410	Very toxic to aquatic life with long lasting effects.
H411	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.