Beef A Buff Plus (Organic buffer system and wetter 564 g/l)

Safety Data Sheet

according to SANS 10234:2019 and SANS 11014:2010
Issue date: 9/8/2022 Version: 1.0

SECTION 1: Identification

1.1. Product identifier

Product form	:	Mixture
Trade name	:	Beef A Buff Plus (Organic buffer system and wetter 564 g/l)
Type of product	:	Buffer
CAS-No.	:	[64-19-7] [6131-90-4]
Product group	:	End product

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

Use of the substance/mixture	:	A pH buffer concentrate for increasing the stability of pH sensitive agricultural chemicals.

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 (dermal), Category 4	H312
Acute toxicity (inhalation:vapour) Category 3	H331
Skin corrosion/irritation, Category 1A	H314
Serious eye damage/eye irritation, Category 1	H318
Hazardous to the aquatic environment – Acute Hazard, Category 3	H402

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	:	Acetic acid TC
Hazard statements (GHS ZA)	:	H312 - Harmful in contact with skin. H314 - Causes severe skin burns and eye damage. H331 - Toxic if inhaled.

		H402 - Harmful to aquatic life
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. P260 - Do not breathe vapours, spray. P264 - Wash hands, forearms and face thoroughly after handling. P271 - Use only outdoors or in a well-ventilated area. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection. P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting. 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. P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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 POISON CENTER or doctor. P312 - Call a POISON CENTER or doctor if you feel unwell. P362+P364 - Take off contaminated clothing and wash it before reuse. P363 - Wash contaminated clothing before reuse. P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up. P501 - Dispose of container to an approved waste disposal plant.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects	:	Toxic if inhaled,Harmful in contact with skin,Causes severe skin burns and eye damage,Causes serious eye damage,Harmful to aquatic life

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to the United Nations GHS
Sodium acetate TC	CAS-No.: 6131-90-4	≥ 35 – < 40	Acute Tox. Not classified (Oral) Acute Tox. Not classified (Dermal) Aquatic Acute 3, H402
Acetic acid TC	CAS-No.: 64-19-7	≥ 30 – < 35	Flam. Liq. 3, H226 Acute Tox. 5 (Oral), H303 Acute Tox. 4 (Dermal), H312 Acute Tox. 3 (Inhalation:vapour), H331 Skin Corr. 1A, H314 Aquatic Acute 2, H401
Miranol Jem	-	≥ 1 – < 5	Flam. Liq. Not classified Eye Irrit. 2B, H320

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation	:	Remove person to fresh air and keep comfortable for breathing. Call a doctor.
First-aid measures after skin contact	:	Rinse skin with water/shower. Take off immediately all contaminated clothing. Call a physician immediately.
First-aid measures after eye contact	:	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 : Rinse mouth. Do not induce vomiting. Call a physician immediately.

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

Symptoms/effects after inhalation : Toxic if inhaled.

Symptoms/effects after skin contact : Burns.

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

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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

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

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, eyes and clothing. Do not breathe vapours, spray.

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

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 : Take up liquid spill into absorbent material.

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 : Use only outdoors or in a well-ventilated area. Do not get in eyes, on skin, or on clothing. Wear personal protective equipment. Do not breathe vapours, spray.

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

Storage area : 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

Acetic acid TC (64-19-7)

South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	Acetic acid
OEL TWA [ppm]	20 ppm
OEL STEL [ppm]	30 ppm
Regulatory reference	Government Notice No. R. 280, 2021

South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Acetic acid
OEL TWA	25 mg/m³
OEL TWA [ppm]	10 ppm
OEL STEL	37 mg/m³
OEL STEL [ppm]	15 ppm
Regulatory reference	Government Notice No. R 904

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	:	No data available
Colour	:	Colourless. clear.
Odour	:	Strong vinegar smell.
Odour threshold	:	No data available
pH	:	4 – 5
pH solution	:	No data available
Relative evaporation rate (butylacetate=1)	:	No data available
Relative evaporation rate (ether=1)	:	No data available
Melting point	:	0 – 16.6 °C
Freezing point	:	No data available
Boiling point	:	100 – 118
Flash point	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Not applicable
Vapour pressure	:	No data available
Vapour pressure at 50 °C	:	No data available
Relative vapour density at 20 °C	:	No data available
Relative density	:	1.2
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	:	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

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) : Not classified
Acute toxicity (dermal) : Harmful in contact with skin.
Acute toxicity (inhalation) : Toxic if inhaled.

Beef A Buff Plus (Organic buffer system and wetter 564 g/l) ([64-19-7] [6131-90-4])	
ATE ZA (Dermal)	1064.66 mg/kg bodyweight
ATE ZA (vapours)	5.645 mg/l/4h
Unknown acute toxicity (GHS ZA)Unknown acute toxicity (GHS ZA)	38.16% of the mixture consists of ingredient(s) of unknown acute toxicity (Oral) 65.73% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 65.73% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))

Acetic acid TC (64-19-7)	
LD50 oral rat	3310 mg/kg bodyweight (Rat, Male / female, Experimental value, Oral, 6 day(s))
LD50 oral	4960 mg/kg Mice
LD50 dermal rabbit	1060 mg/kg
LC50 Inhalation - Rat	5.62 mg/l

Sodium acetate TC (6131-90-4)	
LD50 oral rat	> 5200 mg/kg (Rat, Oral)
LD50 dermal rabbit	> 10000 mg/kg (Rabbit, Dermal)

Water (7732-18-5)	
LD50 oral rat	90000 mg/kg

Skin corrosion/irritation : Causes severe skin burns.
pH: 4 – 5
Serious eye damage/irritation : Causes serious eye damage.
pH: 4 – 5
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified

Acid Blue Dye (6408-78-2)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Harmful to aquatic life.
Hazardous to the aquatic environment, short–term (acute) : Harmful to aquatic life.
Hazardous to the aquatic environment, long–term (chronic) : Not classified

Acetic acid TC (64-19-7)	
LC50 - Fish [1]	45 mg/l rainbow trout
LC50 - Fish [2]	43.8 mg/l carp
EC50 - Crustacea [1]	18.9 mg/l Daphnia
EC50 72h - Algae [1]	> 1000 mg/l (ISO 10253, Skeletonema costatum, Static system, Salt water, Experimental value, Growth rate)
ErC50 algae	8.1 mg/l Pseudokirchneriella subcapitata
ErC50 other aquatic plants	80.4 mg/l Navicula pelliculosa
BCF - Fish [1]	3.16 (Pisces, Fresh water)
Partition coefficient n-octanol/water (Log Kow)	0.09
Additional ecotoxicological information	Worms: LC50 (14d) for Eisenia fetida >1000 mg/kg soil.

Sodium acetate TC (6131-90-4)	
LC50 - Fish [1]	100 mg/l (964 h, Brachydanio rerio, Anhydrous form)
EC50 - Crustacea [1]	> 1000 mg/l (48 h, Daphnia magna, Anhydrous form)
BCF - Other aquatic organisms [1]	3.162 (Calculated value, Anhydrous form)

Acid Blue Dye (6408-78-2)	
LC50 - Fish [1]	12 mg/l Source: The ECOTOXicology database
Partition coefficient n-octanol/water (Log Pow)	2.22

Water (7732-18-5)	
Partition coefficient n-octanol/water (Log Pow)	-1.38

12.2. Persistence and degradability

Beef A Buff Plus (Organic buffer system and wetter 564 g/l) ([64-19-7] [6131-90-4])	
Persistence and degradability	No additional information available

Acetic acid TC (64-19-7)	
Persistence and degradability	Readily biodegradable in the soil. Readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.6 – 0.74 g O_2/g substance
Chemical oxygen demand (COD)	1.03 g O_2/g substance
ThOD	1.07 g O_2/g substance

Sodium acetate TC (6131-90-4)	
Persistence and degradability	Readily biodegradable in water.

12.3. Bioaccumulative potential

Beef A Buff Plus (Organic buffer system and wetter 564 g/l) ([64-19-7] [6131-90-4])	
Bioaccumulative potential	No additional information available

Acetic acid TC (64-19-7)	
BCF - Fish [1]	3.16 (Pisces, Fresh water)
Partition coefficient n-octanol/water (Log Kow)	0.09
Bioaccumulative potential	Not bioaccumulative.

Sodium acetate TC (6131-90-4)	
BCF - Other aquatic organisms [1]	3.162 (Calculated value, Anhydrous form)

Sodium acetate TC (6131-90-4)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

Acid Blue Dye (6408-78-2)	
Partition coefficient n-octanol/water (Log Pow)	2.22 Source: Ecological Structure Activity Relationships

Water (7732-18-5)	
Partition coefficient n-octanol/water (Log Pow)	-1.38

12.4. Mobility in soil

Beef A Buff Plus (Organic buffer system and wetter 564 g/l) ([64-19-7] [6131-90-4])	
Mobility in soil	No additional information available

Acetic acid TC (64-19-7)	
Surface tension	26.3 mN/m (30 °C)
Partition coefficient n-octanol/water (Log Kow)	0.09
Ecology - soil	Highly mobile in soil. May be harmful to plant growth, blooming and fruit formation.

Acid Blue Dye (6408-78-2)	
Partition coefficient n-octanol/water (Log Pow)	2.22

Water (7732-18-5)	
Partition coefficient n-octanol/water (Log Pow)	-1.38

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		
2790	2790	2790
14.2. Proper Shipping Name		
ACETIC ACID SOLUTION (contains organic buffer system and wetter)	ACETIC ACID SOLUTION (contains organic buffer system and wetter)	Acetic acid solution (contains organic buffer system and wetter)
14.3. Transport hazard class(es)		
8	8	8
		

SANS	IMDG	IATA
14.4. Packing group		
III	III	III
14.5. Environmental hazards		
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No
No supplementary information available		

14.6. Special precautions for user

SANS

Limited quantities (SANS)	:	5 L
Limited quantities (SANS)	:	5 L
Packagings, large packagings and IBCs Packing instructions (SANS)	:	P001, IBC03, LP01
Portable tank and bulk containers instructions (SANS)	:	T4
Portable tank and bulk container special provisions (SANS)	:	TP1

IMDG

Limited quantities (IMDG)	:	5 L
Excepted quantities (IMDG)	:	E1
Packing instructions (IMDG)	:	P001, LP01
IBC packing instructions (IMDG)	:	IBC03
Tank instructions (IMDG)	:	T4
Tank special provisions (IMDG)	:	TP1
EmS-No. (Fire)	:	F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	:	S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	:	A
Properties and observations (IMDG)	:	Colourless liquid with a pungent odour. Miscible with water.Corrosive to lead and most other metals. Corrosive to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA)	:	E1
PCA Limited quantities (IATA)	:	Y841
PCA limited quantity max net quantity (IATA)	:	1L
PCA packing instructions (IATA)	:	852
PCA max net quantity (IATA)	:	5L
CAO packing instructions (IATA)	:	856
CAO max net quantity (IATA)	:	60L
Special provisions (IATA)	:	A803
ERG code (IATA)	:	8L

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	:	08/09/2022

Full text of H-statements	
H226	Flammable liquid and vapour.
H303	May be harmful if swallowed
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H320	Causes eye irritation
H331	Toxic if inhaled.
H335	May cause respiratory irritation.
H401	Toxic to aquatic life
H402	Harmful to aquatic life
H412	Harmful to aquatic life with long lasting effects.

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.