Emma

Safety Data Sheet

according to the GHS Classification and labelling of chemicals – SANS 10234 and the Regulations for Hazardous agents 2021.
Issue date: 28/02/2025 Date of revision: 28/02/2028 Version. 3.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form	:	Mixture
Name	:	Emma
Trade name	:	Emma
Product code	:	UPL_L9022
Product group	:	Trade Product
Active ingredient	:	Emamectin benzoate

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

1.2.1. Relevant identified uses

Main use category	:	Insecticide
Industrial/Professional use spec	:	For agricultural, industrial and professional use only
Use of the substance/mixture	:	A water-soluble granular insecticide for the control of Africa Bollworm and semi-looper in tomatoes, Diamondback moth in cabbage, Fall Armyworm in maize and Eldana in sugarcane.
Use of the substance/mixture	:	Insecticide
Function or use category	:	Pesticides

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

UPL South Africa (Pty) Ltd.
Sunbury Office Park (off Douglas Saunders Drive) La Lucia Ridge, 7
P.O. Box 1726, Mount Edgecombe, 4300
4019 Durban – South Africa
South Africa
T +27 31 514 5600
www.upl-ltd.com/za

1.4. Emergency telephone number

Emergency number(s)	:	Griffon Poison Information Centre: 082 446 8946, Poisons Information Helpline: 0861 555 777, In case of Spillage: Spill Tech: 086 100 0366 / 083 253 6618

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to UN GHS Purple Book (Rev. 9, 2021)

Acute toxicity (oral), Category 4	H302
Acute toxicity (Dermal), Category 3	H311
Acute toxicty (Inhalation (Dusts/Mists), Category 4	H332
Serious eye damage/eye irritation, Category 1	H318
Skin irritant, Category 2	H315
Specific target organ toxicity- Single exposure, Category 2	H371
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

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to UN GHS Classificiation (Purple Book, Rev.9, 2021)

Hazard pictograms :

GHS05 GHS06 GHS08 GHS09

Signal word : Danger

Contains : Emamectin benzoate, surfactant, Sodium dodecyl sulphate

Hazard statements : H311 – Toxic in contact with skin
H302 – Harmful if swallowed.
H332 – Harmful if inhaled
H318 - Causes serious eye damage.
H315 – Causes skin irritation.
H371 – May cause damage to organs.
H373 – May cause damage to organs through prolonged or repeated exposure.
H400 – Very toxic to aquatic life
H410 – Very toxic to aquatic life with long lasting effects.

Precautionary statements : P101 – If medical advise is needed, have product container or label at hand.
P102 – Keep out of reach of children
P103 – Read carefully and follow all instructions.
P260 - Do not breath dust/fumes/gas/mist.
P264+P265 – Wash hands thoroughly after handling. Do not touch eyes
P270 – Do not eat, drink or smoke when using this product.
P271 – Use only outdoors or in a well-ventilated area.
P273 – Avoid release to the environment if this is not the intended use.
P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
P301+P317 – IF SWALLOWED: Get medical help
P302+P352 – IF ON SKIN: Wash with plenty of water.
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.
P308+P316 – IF exposed or cencerned: Get emergency medical help immediately.
P316 – Get emergency medical help immediately.Call a Poison Centre.
P317 – Get medical help.
P319 – Get medical help if you feel unwell.
P321 - Specific treatment – see Section 4 in this SDS.
P330 – Rinse mouth.
P332+P317 – If skin irritation occurs: Get medical help.
P361+P364 – Take off immediately all contaminated clothing and wash it before reuse.
P362+P364 – Take off contaminated clothing and wash it before reuse.
P391 - Collect spillage.
P405 – Store locked up.
P501 - Dispose of contents and container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to UN GHS Purple Book, Rev.9, 2021.
Sodium dodecyl sulphate	CAS-No.: 151-21-3 EC-No.: 205-788-1 REACH-no: 01-2119489461-32	2.5 – 10	Acute Tox. 4 (Oral), H302 (ATE=1288 mg/kg bodyweight) Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412
Emamectin benzoate	CAS-No.: 155569-91-8 EC-No.: 605-015-1	2.5 – 10	Acute Tox. 3 (Oral), H301 (ATE=100 mg/kg bodyweight) Acute Tox. 3 (Dermal), H311 (ATE=100 mg/kg bodyweight) Acute Tox. 3 (Inhalation:dust,mist), H331 (ATE=0.663 mg/l/4h) Eye Dam. 1, H318 STOT SE 1, H370 STOT RE 1, H372 Aquatic Acute 1, H400 (M=10000) Aquatic Chronic 1, H410 (M=10000)
Surfactant Substance identified as having endocrine disrupting properties (ECHA)	CAS-No.: 9036-19-5 EC-No.: 618-541-1	2.5 – 10	Acute Tox. 4 (Oral), H302 (ATE=500 mg/kg bodyweight) Eye Dam. 1, H318 Aquatic Chronic 3, H412

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Sodium dodecyl sulphate	CAS-No.: 151-21-3 EC-No.: 205-788-1 REACH-no: 01-2119489461-32	(10 ≤C < 20) Eye Irrit. 2, H319 (20 ≤C ≤ 100) Eye Dam. 1, H318

Full text of H- statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Gently wash with plenty of soap and water.

First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor if you feel unwell.

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

Symptoms/effects : May cause damage to organs. Causes damage to organs.

Symptoms/effects after eye contact : Causes serious eye damage.

Symptoms/effects after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.
Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection. Avoid breathing dust/fume/gas/mist/vapours/spray.
Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : On land, sweep or shovel into suitable containers. Store away from other materials.

6.4. Reference to other sections

See Section 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands, forearms and face thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep only in the original container in a cool, well ventilated place away from : Keep container closed when not in use.
Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment:
Avoid all unnecessary exposure. Wash hands, forearms and face thoroughly after handling.

8.2.2.1. Eye and face protection

Eye protection:
Chemical goggles or safety glasses with side shields.

8.2.2.2. Skin protection

Hand protection:
Wear protective gloves.

Body protection:
Wear suitable protective clothing.

8.2.2.3. Respiratory protection

Respiratory protection:
Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Other information:
Do not eat, drink or smoke during use. Do not breathe dust/fume/gas/mist/vapours/spray. Do not eat, drink or smoke when using this product.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Solid

Colour	:	white to slightly yellow.
Appearance	:	Water soluble granule (SG).
Odour	:	odourless.
Odour threshold	:	Not available
Melting point	:	Not available
Freezing point	:	Not available
Boiling point	:	Not available
Flammability	:	Non flammable.
Explosive properties	:	Not explosive.
Oxidising properties	:	Not oxidizing.
Explosive limits	:	Not applicable
Lower explosive limit (LEL)	:	Not applicable
Upper explosive limit (UEL)	:	Not applicable
Flash point	:	Not relevant.
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	Not available
pH	:	7 – 9
pH solution	:	Not available
Viscosity, kinematic	:	Not applicable
Solubility	:	Not available
Partition coefficient n-octanol/water (Log Kow)	:	Not available
Vapour pressure	:	Not available
Vapour pressure at 50 °C	:	Not available
Density	:	0.616
Relative density	:	Not available
Relative vapour density at 20 °C	:	Not applicable
Particle size	:	Not available
Particle size distribution	:	Not available
Particle shape	:	Not available
Particle aspect ratio	:	Not available
Particle aggregation state	:	Not available
Particle agglomeration state	:	Not available
Particle specific surface area	:	Not available
Particle dustiness	:	Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Not established.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in UN GHS Purple Book (Rev. 9, 2021)

Acute toxicity (oral) : Harmful if swallowed.
Acute toxicity (dermal) : Toxic in contact with skin.
Acute toxicity (inhalation) : Harmful if inhaled.

Emma	
ATE calculated (oral)	1250 mg/kg bodyweight
ATE calculated (dermal)	303.92 mg/kg bodyweight
ATE calculated (inhalation)	1.10 mg/l (4h)

Emamectin benzoate (155569-91-8)	
LD50 oral rat (Pesticide manual)	≈ 56 - 63 mg/kg
LD50 oral (ECHA)	Cat.3 (ATE =100)
LD50 dermal rat (Pesticide manual)	>2000 mg/kg
LD50 dermal (ECHA)	Cat. 3 (ATE=100)
LC50 Inhalation – Rat (Pesticide manual)	> 1.05 mg/l/4h (male) , 0.663 mg/l/4h (female)
LC50 Inhalation - Rat (ECHA)	Cat. 3

Surfactant (9036-19-5)	
LD50 oral rat	1900 – 5000 mg/kg Low toxicity if swallowed.
LD50 dermal rabbit	> 3000 mg/kg Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Sodium dodecyl sulphate (151-21-3)	
LD50 oral rat	977 mg/kg (OECD 401 method) (female)
LD50 dermal rabbit	>2000 mg/kg (OECD 404 method)
LD50 inhalation rat	1.51 mg/l/4h

Skin corrosion/irritation : Skin irritant.
pH: 7 – 9
Additional information :
Serious eye damage/irritation : Causes serious eye damage.
pH: 7 – 9
Respiratory or skin sensitisation : Not classified
Additional information : Based on available data, the classification criteria are not met
Germ cell mutagenicity : Not classified
Additional information : Based on available data, the classification criteria are not met
Carcinogenicity : Not classified
Additional information : Based on available data, the classification criteria are not met
Reproductive toxicity : Not classified
Additional information : Based on available data, the classification criteria are not met
STOT-single exposure : May cause damage to organs.

Emamectin benzoate (155569-91-8)	
STOT-single exposure	Causes damage to organs.

STOT-repeated exposure : May cause damage to organs through prolonged or repeated exposure.

Emamectin benzoate (155569-91-8)	
STOT-repeated exposure	Causes damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified
Additional information : Based on available data, the classification criteria are not met

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

No additional information available

11.2.2. Other information

Potential adverse human health effects and symptoms : Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : 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.
Not rapidly degradable

Emamectin benzoate (155569-91-8)	
LC50 - Fish	0.174 mg/l Rainbow trout
EC50 - Crustacea	0.001 mg/l Daphnia
NOEC (chronic)	12 µg/l (Pimephales promelas)
NOEC chronic crustacea	0.088 µg/L (Daphnia magna)

Surfactant (9036-19-5)	
LC50 - Fish	4 – 8.9 mg/l Pimephales promelas (Fathead minnow)
EC50 Daphnia	18 – 26 mg/l Daphnia magna

Sodium dodecyl sulphate (151-21-3)	
LC50 - Fish	0.59 mg/l/96h Carp, hawk fish
EC50 - Crustacea	1.4 mg/l/48h
ErC50 algae	1.2 mg/l/96h Skeletonema costatum
NOEC chronic fish	> 1.357 mg/l 42d, Pimephales promelas
NOEC chronic crustacea	3.2 mg/l/ 21 days Daphnia magna
NOEC chronic algae	1.25 mg/l/96h Sea Lettuce

12.2. Persistence and degradability

Emma	
Persistence and degradability	May cause long-term adverse effects in the environment.

Emamectin benzoate (155569-91-8)	
Persistence and degradability	Rapidly degraded. not persistent.

Surfactant (9036-19-5)	
Persistence and degradability	Readily biodegradable. May cause long-term adverse effects in the environment.
Biodegradation	> 60 %

12.3. Bioaccumulative potential

Emma	
Bioaccumulative potential	Not established.

Emamectin benzoate (155569-91-8)	
Bioaccumulative potential	There is no bioaccumulation.

Surfactant (9036-19-5)	
Bioconcentration factor (BCF REACH)	15 Estimated
Partition coefficient n-octanol/water (Log Pow)	2.7 Estimated
Bioaccumulative potential	Not established.

Sodium dodecyl sulphate (151-21-3)	
Partition coefficient n-octanol/water (Log Pow)	1.6
Bioaccumulative potential	Low bioaccumulation potential.

12.4. Mobility in soil

Surfactant (9036-19-5)	
Additional information	No data available

12.5. Results of PBT and vPvB assessment

Component	
Sodium dodecyl sulphate (151-21-3)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Surfactant (9036-19-5)	PBT: not yet assessed This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
14.1. UN number or ID number		
UN 3077	UN 3077	UN 3077
14.2. UN proper shipping name		
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Transport document description		
UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, (-)	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III, MARINE POLLUTANT	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., 9, III
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

Overland transport

Hazard identification number (Kemler No.) : 90

Orange plates :

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulatory Information:

Relevant regulatory information regarding authorization, Safety Data Sheets, Occupational Exposure Limits, Hazardous Substances, Dangerous Goods Transport and Waste

South Africa: Occupational Health and Safety Act 1993. Regulations for Hazardous Chemical Agents - 2021. Fertilizer, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act 36 of 1947). **Hazardous Substances Act,** 1973 (Act No.15 of 1973). Regulations for Hazardous Chemical Agents – 2021. SANS11014:2010. Safety Data Sheet for Chemical Products – Content and Order of

Sections. SANS10206: 2020. The Handling, Storage and Disposal of Pesticides. National Road Traffic Act, 1996 (Act No. 93 of 1996). SANS 10228:2012- The identification and classification of dangerous goods for transport by road and rail modes. National Environmental Management: waste Act 59 of 2008.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : Pesticide Manual, ECHA, Supplier SDS's
Other information : None.

Full text of H- statements:	
Acute Tox. 3 (Dermal)	Acute toxicity (dermal), Category 3
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Acute Tox. 4 (Inhalation, Dust/)	Acute toxicity (inhalation), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Skin Irrit. 2	Skin irritation, Category 2
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
STOT-SE 2	Specific target organ toxicity – Single exposure, Category 2
STOT-RE 2	Specific target organ toxicity – Repeated exposure, Category 2
H311	Toxic in contact with skin.
H302	Harmful if swallowed.
H332	Harmful if inhaled
H315	Causes skin irritation.
H318	Causes serious eye damage.
H371	May cause damage to organs.
H373	May cause damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Classification and procedure used to derive the classification for the mixture according to the UN GHS Purple Book (Rev.9, 2021):		
Acute Tox. 4 (Oral)	H302	Calculation method
Acute Tox. 3 (Dermal)	H312	Calculation method
Acute Tox. 4 (Inhalation (dust/mists)	H332	Calculation method
Skin corrosion/Irritation	H315	Calculation method
Eye Dam. 1	H318	Calculation method
STOT SE 2	H371	Calculation method
STOT RE 2	H373	Calculation method

Classification and procedure used to derive the classification for the mixture according to the UN GHS Purple Book (Rev.9, 2021):		
Aquatic Acute 1	H400	Calculation method
Aquatic Chronic 1	H410	Calculation method

Safety Data Sheet (SDS), UN GHS

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.