FarmAg 2,4-D 480 SL

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	:	FarmAg 2,4-D 480 SL
Type of product	:	Herbicide
CAS-No.	:	2008-39-1
Product group	:	End product

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

Use of the substance/mixture	:	A water soluble herbicide with selective hormone action for the control of broadleaf weeds in crops as indicated.

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 Not classified	
Acute toxicity (oral), Category 4	H302
Acute toxicity (dermal), Category 5	H313
Acute toxicity (inhalation:vapour) Category 4	H332
Skin corrosion/irritation, Category 1	H314
Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment – Acute Hazard, Category 1	H400
Hazardous to the aquatic environment – Chronic Hazard, Category 2	H411

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 : 2,4-D Acid TC 96%, Dimethylamine

Hazard statements (GHS ZA) : H302+H332 - Harmful if swallowed or if inhaled
H313 - May be harmful in contact with skin
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H400 - Very toxic to aquatic life.
H411 - 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.
P260 - Do not breathe vapours, spray.
P261 - Avoid breathing spray, vapours.
P264 - Wash hands, forearms and face thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 - IF SWALLOWED: Call a doctor if you feel unwell.
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 doctor.
P312 - Call a doctor if you feel unwell.
P321 - Specific treatment (see supplemental first aid instruction on this label).
P330 - Rinse mouth.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P363 - Wash contaminated clothing before reuse.
P391 - Collect spillage.
P405 - Store locked up.
P501 - Dispose of contents and container to an approved waste disposal plant.

2.3. Other hazards

Adverse physicochemical, human health and environmental effects : Causes damage to organs (if swallowed),Harmful if inhaled,Harmful if swallowed,Harmful in contact with skin,Causes severe skin burns and eye damage,May cause an allergic skin reaction,Causes serious eye damage,Very toxic to aquatic life,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
2,4-D Acid TC 96%	CAS-No.: 2008-39-1	≥ 40 – < 45	Acute Tox. 4 (Oral), H302 Acute Tox. 5 (Dermal), H313 Acute Tox. 4 (Inhalation:dust,mist), H332 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Acute 1, H400 Aquatic Chronic 2, H411

Name	Product identifier	%	Classification according to the United Nations GHS
Dimethylamine	CAS-No.: 124-40-3	≥ 5 – < 10	Flam. Liq. 1, H224 Acute Tox. 4 (Oral), H302 Acute Tox. 5 (Dermal), H313 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 2, H401 Aquatic Chronic 3, H412

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Call a physician immediately.

First-aid measures after inhalation : Remove source of contamination, or leave contaminated area to fresh air as rapidly as possible. Keep affected person warm and at rest. Treat symptomatically and supportively. Administration of oxygen should be performed by qualified personnel. Get medical attention immediately if effects persist.

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 : Vapour may be irritating to the mucous membranes and respiratory tract.

Symptoms/effects after skin contact : Burns. May cause an allergic skin reaction.

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

Symptoms/effects after ingestion : In case of over-exposure to product and excessive amounts are swallowed, may cause nausea, vomiting,
sweating, headaches, muscle soreness, abdominal pain and loss of coordination. May cause burns of mouth, throat
and oesophagus.

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

This product contains a phenoxy herbicide. There is no antidote. Treat symptomatically and supportively. Empty stomach by gastric lavage with activated charcoal, is advised. Follow with saline cathartic. Avoid oily laxatives.

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 : Decomposes on heating, emitting toxic fumes including those of hydrogen chloride and phosgene. Fire fighters to wear self-contained breathing apparatus if risk of exposure to products of decomposition.

5.3. Advice for firefighters

Firefighting instructions : Isolate the fire area and evacuate downwind. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Contain fire control agents for later disposal. Use a recommended extinguishing agent for the type of surrounding fire. Avoid inhaling hazardous vapours. Do not scatter the material. Avoid pollution of waterways.

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,Wear a 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. Do not breathe 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

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

Technical measures : Relatively safe to handle. Handle with the care and caution due crop protection chemicals. Avoid spillage. Harmful by inhalation or if swallowed. Avoid contact with eyes and skin and inhalation of fumes. Avoid exposure to spray. Use with adequate ventilation. Wash hands before eating, drinking, chewing gum, smoking or using the toilet. Operators should change and wash clothing daily. Remove clothing immediately if the herbicide 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.

Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. 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 cool.

Storage area : Store in a dry area.

Information on mixed storage : KEEP SUBSTANCE AWAY FROM: Food supplies. Water supplies.
Maximum storage period : 2 year
Storage temperature : > 30 °C

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Dimethylamine (124-40-3)	
South Africa - Occupational Exposure Limits (Recommended Limits)	
Local name	Dimethylamine
OEL TWA [ppm]	10 ppm
OEL STEL [ppm]	30 ppm
Remark	DSEN (dermal sensitisation, potential to produce dermal sensitisation)
Regulatory reference	Government Notice No. R. 280, 2021
South Africa - Occupational Exposure Limits (Airborne Pollutants)	
Local name	Dimethylamine
OEL TWA	18 mg/m³
OEL TWA [ppm]	10 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 : Clear brown to light brown liquid.
Odour : Mild odour.
Odour threshold : No data available
pH : 8 – 10
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	:	95 °C
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	:	1.13
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	:	Not explosive.
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)	:	Harmful if swallowed.
Acute toxicity (dermal)	:	May be harmful in contact with skin.
Acute toxicity (inhalation)	:	Harmful if inhaled.

FarmAg 2,4-D 480 SL (2008-39-1)	
ATE ZA (oral)	1145.36 mg/kg bodyweight
ATE ZA (Dermal)	2675.442 mg/kg bodyweight
ATE ZA (vapours)	11.329 mg/l/4h
Unknown acute toxicity (GHS ZA)Unknown acute toxicity (GHS ZA)	46.45% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 90.7% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Vapours))

2,4-D Acid TC 96% (2008-39-1)	
LD50 oral rat	639 – 764 mg/kg
LD50 dermal rat	> 2000 mg/kg
LC50 Inhalation - Rat	> 3.5 mg/l/4h

Dimethylamine (124-40-3)	
LD50 oral rat	≈ 1000 mg/kg bodyweight Animal: rat
LD50 dermal rat	3900 mg/kg bodyweight Animal: rat

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

Skin corrosion/irritation : Causes severe skin burns.
pH: 8 – 10

Serious eye damage/irritation : Causes serious eye damage.
pH: 8 – 10

Respiratory or skin sensitisation : May cause an allergic skin reaction.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

Dimethylamine (124-40-3)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

Dimethylamine (124-40-3)	
LOAEC (inhalation, rat, gas, 90 days)	10 ppm Animal: rat

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Very toxic to aquatic life. 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) : Toxic to aquatic life with long lasting effects.

2,4-D Acid TC 96% (2008-39-1)	
LC50 - Fish [1]	> 100 mg/l (96h) Rainbow Trout
EC50 - Crustacea [1]	51.2 mg/l
EC50 - Crustacea [2]	4.67 mg/l
EC50 - Other aquatic organisms [1]	0.58 mg/l Lemna Gibba
EC50 72h - Algae [1]	51.2 mg/l Selenastrum capricornutum

2,4-D Acid TC 96% (2008-39-1)	
EC50 72h - Algae [2]	4.67 mg/l Navicula pelliculosa
NOEC (chronic)	0.27 mg/l
BCF - Fish [1]	0.1 (Ictalurus punctatus)
BCF - Fish [2]	0.47 (Lepomis macrochirus)
Partition coefficient n-octanol/water (Log Kow)	0.117
Partition coefficient n-octanol/water (Log Pow)	0.65 (Experimental value)
Additional ecotoxicological information	Birds: Acute Oral LD50 for bobwhite qual 500 mg/kg. LC50 (5d) for mallard ducks > 5620 mg/l; Bees LD50 > 100 (contact); 94 (oral)

Dimethylamine (124-40-3)	
LC50 - Fish [1]	118 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
LC50 - Fish [2]	17 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	88.67 mg/l Test organisms (species): Daphnia magna
NOEC (chronic)	4.2 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

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

12.2. Persistence and degradability

FarmAg 2,4-D 480 SL (2008-39-1)	
Persistence and degradability	No additional information available

2,4-D Acid TC 96% (2008-39-1)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

FarmAg 2,4-D 480 SL (2008-39-1)	
Bioaccumulative potential	No additional information available

2,4-D Acid TC 96% (2008-39-1)	
BCF - Fish [1]	0.1 (Ictalurus punctatus)
BCF - Fish [2]	0.47 (Lepomis macrochirus)
Partition coefficient n-octanol/water (Log Pow)	0.65 (Experimental value)
Partition coefficient n-octanol/water (Log Kow)	0.117
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

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

12.4. Mobility in soil

FarmAg 2,4-D 480 SL (2008-39-1)	
Mobility in soil	No additional information available

2,4-D Acid TC 96% (2008-39-1)	
Partition coefficient n-octanol/water (Log Pow)	0.65 (Experimental value)

2,4-D Acid TC 96% (2008-39-1)	
Partition coefficient n-octanol/water (Log Kow)	0.117

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		
1760	1760	1760
14.2. Proper Shipping Name		
CORROSIVE LIQUID, N.O.S. (contains 2,4-D 480 g/l)	CORROSIVE LIQUID, N.O.S. (contains 2,4-D 480 g/l)	Corrosive liquid, n.o.s. (contains 2,4-D 480 g/l)
14.3. Transport hazard class(es)		
8	8	8
		
14.4. Packing group		
I	I	I
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) : 274
Limited quantities (SANS) : 0
Limited quantities (SANS) : 0
Packagings, large packagings and IBCs Packing instructions (SANS) : P001
Portable tank and bulk containers instructions (SANS) : T14
Portable tank and bulk container special provisions (SANS) : TP2, TP27

IMDG

Special provisions (IMDG)	:	274
Limited quantities (IMDG)	:	0
Excepted quantities (IMDG)	:	E0
Packing instructions (IMDG)	:	P001
Tank instructions (IMDG)	:	T14
Tank special provisions (IMDG)	:	TP2, TP27
EmS-No. (Fire)	:	F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	:	S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	:	B
Properties and observations (IMDG)	:	Causes burns to skin, eyes and mucous membranes.

IATA

PCA Excepted quantities (IATA)	:	E0
PCA Limited quantities (IATA)	:	Forbidden
PCA limited quantity max net quantity (IATA)	:	Forbidden
PCA packing instructions (IATA)	:	850
PCA max net quantity (IATA)	:	0.5L
CAO packing instructions (IATA)	:	854
CAO max net quantity (IATA)	:	2.5L
Special provisions (IATA)	:	A3, 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	
H224	Extremely flammable liquid and vapour.
H302	Harmful if swallowed.
H313	May be harmful in contact with skin
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H400	Very toxic to aquatic life.
H401	Toxic to aquatic life
H411	Toxic to aquatic life with long lasting effects.
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.