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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name GUARDIAN EC882

Product code (UVP) 62293363

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

Use Herbicide

Restrictions on use See product label for restrictions.

1.3 Details of the supplier of the safety data sheet

Supplier Bayer (Pty) Ltd.

1st Floor, Waterfall Circle 9 Country Estate Drive

Waterfall City

2090 Midrand, Johannesburg

South Africa

Telephone +27 (011) 921 5911 **Telefax** +27 (011) 921 5766

Responsible Department QHSE - Nigel, South Africa

+27 (011) 365 8675 (during business hours only)

1.4 Emergency telephone no.

Emergency telephone no. +27 (0861) 555 777 (Western Cape Poisons Helpline)

Global Incident Response

Hotline (24h)

+1 (760) 476 3964 (Company 3E for Bayer AG, Crop Science Division)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Acute toxicity: Category 4

H302 Harmful if swallowed.

Acute toxicity: Category 4

H332 Harmful if inhaled. Skin sensitisation: Category 1A

H317 May cause an allergic skin reaction.

Eye irritation: Category 2

H319 Causes serious eye irritation.

Specific target organ toxicity - single exposure: Category 3

H335 May cause respiratory irritation.

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Carcinogenicity: Category 2

H351 Suspected of causing cancer.

Specific target organ toxicity - repeated exposure: Category 2

H373 May cause damage to organs through prolonged or repeated exposure.

Short-term (acute) aquatic hazard: Category 1 H400 Very toxic to aquatic life.

Long-term (chronic) aquatic hazard: Category 1

H410 Very toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling in accordance with Regulation (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures, as amended.

Hazard label for supply/use required.

Hazardous components which must be listed on the label:

- Acetochlor
- Furilazole







Signal word: Warning

Hazard statements

H302	Harmful if swallowed.
H332	Harmful if inhaled.

H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

H373 May cause damage to organs (Kidney, Liver) through prolonged or repeated exposure.

H351 Suspected of causing cancer.

H410 Very toxic to aquatic life with long lasting effects.

EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

P201 Obtain special instructions before use.

P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.

P391 Collect spillage.

P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No additional hazards known beside those mentioned.

Acetochlor: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB). Furilazole: This substance is not considered to be persistent, bioaccumulative and toxic (PBT). This substance is not considered to be very persistent and very bioaccumulative (vPvB).

Ecological information: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f)

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or Commission Delegated regulation (EU) 2017/2100 or Commission

Regulation (EU) 2018/605 at levels of 0.1% or higher.

Toxicological information: The substance/mixture does not contain components considered to

have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission

Regulation (EU) 2018/605 at levels of 0.1% or higher.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS 3.2 Mixtures

Chemical nature

Emulsifiable concentrate (EC) Acetochlor 840g/l, Furilazole 42g/l

Hazardous components

Hazard statements according to Regulation (EC) No. 1272/2008

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification REGULATION (EC) No 1272/2008	Conc. [%]
Acetochlor	34256-82-1	121212000	75,8
Furilazole	121776-33-8	Acute Tox. 4, H302 Skin Sens. 1A, H317 Carc. 2, H351 STOT RE 2, H373 Aquatic Chronic 2, H411	3,8
Solvent Naphtha (petroleum), heavy aromatic	64742-94-5 01-2119451151-53-xxxx	Carc. 2, H351 Asp. Tox. 1, H304 Aquatic Chronic 2, H411	8,6
Calcium dodecylbenzenesulphonat e	26264-06-2 01-2119560592-37-XXXX	Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Chronic 3, H412	2,9

Further information

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice Move out of dangerous area. Place and transport victim in stable

position (lying sideways). Remove contaminated clothing immediately

and dispose of safely.

Inhalation Move to fresh air. Keep patient warm and at rest. Call a physician or

poison control center immediately.

Skin contact Immediately wash with plenty of soap and water for at least 15 minutes.

Take off contaminated clothing and shoes immediately. Call a physician

or poison control center immediately.

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Rinse immediately with plenty of water, also under the eyelids, for at **Eve contact**

> least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a physician or poison control

center immediately.

Ingestion Call a physician or poison control center immediately. Rinse out mouth

and give water in small sips to drink. DO NOT induce vomiting unless directed to do so by a physician or poison control center. Never give anything by mouth to an unconscious person. Do not leave victim

unattended.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms May cause allergic skin reaction.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment Appropriate supportive and symptomatic treatment as indicated by the

patient's condition is recommended.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Unsuitable High volume water jet

5.2 Special hazards arising

from the substance or

mixture

In the event of fire the following may be released:, Carbon monoxide (CO), Carbon dioxide (CO2), Nitrogen oxides (NOx), Hydrogen chloride (HCI)

5.3 Advice for firefighters

Special protective

equipment for firefighters

In the event of fire and/or explosion do not breathe fumes. In the event of

fire, wear self-contained breathing apparatus.

Further information Keep out of smoke. Fight fire from upwind position. Cool closed

containers exposed to fire with water spray. Do not allow run-off from fire

fighting to enter drains or water courses.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Precautions Use personal protective equipment. Keep unauthorized people away.

Avoid contact with spilled product or contaminated surfaces.

6.2 Environmental precautions

Do not allow to get into surface water, drains and ground water.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, Methods for cleaning up

universal binder, sawdust). Collect and transfer the product into a properly labelled and tightly closed container. Keep in suitable, closed

containers for disposal. Clean contaminated floors and objects

thoroughly, observing environmental regulations.

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Additional advice Use personal protective equipment. If the product is accidentally

spilled, do not allow to enter soil, waterways or waste water canal. Do

not allow product to contact non-target plants.

6.4 Reference to other

sections

Information regarding safe handling, see section 7.

Information regarding personal protective equipment, see section 8.

Information regarding waste disposal, see section 13.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

Hygiene measures Wash hands thoroughly with soap and water after handling and before

eating, drinking, chewing gum, using tobacco, using the toilet or applying

cosmetics.

Remove Personal Protective Equipment (PPE) immediately after handling this product. Remove soiled clothing immediately and clean thoroughly before using again. Wash thoroughly and put on clean clothing. Keep working clothes separately. Garments that cannot be

cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers

Store in original container. Keep containers tightly closed in a dry, cool and well-ventilated place. Store in a place accessible by authorized persons only. Keep away from direct sunlight. Protect from freezing.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

7.3 Specific end use(s)

Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

No known occupational limit values.

8.2 Exposure controls

Respiratory protection If product is handled while not enclosed, and if contact may occur:

Wear respirator with an organic vapours and gas filter mask (protection factor 10) conforming to EN140 type A or equivalent. Respiratory protection should only be used to control residual risk of short duration activities, when all reasonably practicable steps have been taken to reduce exposure at source e.g. containment and/or local extract ventilation. Always follow respirator manufacturer's

instructions regarding wearing and maintenance.

Hand protection Please observe the instructions regarding permeability and

breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the

contact time.

Wash gloves when contaminated. Dispose of when contaminated inside, when perforated or when contamination outside cannot be

removed.

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Material Nitrile rubber
Rate of permeability > 480 min
Glove thickness > 0,4 mm
Protective index Class 6

Directive Protective gloves complying with EN

374.

Eye protection Wear goggles (conforming to EN166, Field of Use = 5 or equivalent).

Skin and body protection Wear standard coveralls and Category 3 Type 4 suit.

If there is a risk of significant exposure, consider a higher protective

type suit.

Wear two layers of clothing wherever possible. Polyester/cotton or cotton overalls should be worn under chemical protection suit and

should be professionally laundered frequently.

If chemical protection suit is splashed, sprayed or significantly contaminated, decontaminate as far as possible, then carefully

remove and dispose of as advised by manufacturer.

General protective measures If product is handled while not enclosed, and if contact may occur:

Complete suit protecting against chemicals

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form Liquid

Colouramber to brownOdourcharacteristicOdour ThresholdNo data available

pH 5,5 (10 g/l)

Melting point/ range No data available

Boiling Point

No data available

Flash point 95 °C

Flammability Not applicable

Auto-ignition temperature 445 °C

Thermal decomposition No data available

Minimum ignition energy Not applicable
Self-accelarating No data available

decomposition temperature

(SADT)

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Upper explosion limitNo data availableLower explosion limitNo data available

Vapour pressure No significant volatility.

Evaporation rate No data available

Relative vapour density No data available

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1,107 (20 °C) Relative density

Water at 4 °C

1,11 g/cm³ (20 °C) Density

Water solubility emulsifiable

Partition coefficient:

n-octanol/water

Acetochlor: log Pow: 4,14 (20 °C)

Furilazole: log Pow: 2,12 (23 °C)

No data available Viscosity, dynamic Viscosity, kinematic No data available **Oxidizing properties** No data available **Explosivity** Not explosive

9.2 Other information Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity Stable under normal conditions.

10.2 Chemical stability Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions No hazardous reactions when stored and handled according to

prescribed instructions.

10.4 Conditions to avoid Extremes of temperature and direct sunlight.

10.5 Incompatible materials No incompatible materials known.

10.6 Hazardous

decomposition products

No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on hazard classes as defined in regulation (EC) No 1272/2008

Acute oral toxicity LD50 (Rat) 1.304 mg/kg

Test conducted with a similar formulation.

ATE (Mix) > 1 - < 5 mg/lAcute inhalation toxicity

calculated

Acute dermal toxicity LD50 (Rat) > 2.000 mg/kg

Test conducted with a similar formulation.

Skin corrosion/irritation Slight irritant effect - does not require labelling. (Rabbit)

Test conducted with a similar formulation.

Serious eye damage/eye

irritation

Irritating to eyes. (Rabbit)

Test conducted with a similar formulation.



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Respiratory or skin Skin: Sensitising (Guinea pig)

sensitisation

Assessment STOT Specific target organ toxicity - single exposure

Acetochlor: May cause respiratory irritation.

Furilazole: Based on available data, the classification criteria are not met.

Assessment STOT Specific target organ toxicity - repeated exposure

Acetochlor caused specific target organ toxicity in experimental animal studies in the following organ(s): Kidnev.

Furilazole caused specific target organ toxicity in experimental animal studies in the following organ(s): Liver.

Assessment mutagenicity

Acetochlor was not genotoxic based on weight of evidence analysis. Furilazole was not genotoxic based on weight of evidence analysis.

Assessment carcinogenicity

Acetochlor caused an increased incidence of tumours in rats in the following organ(s): Nasal, Thyroid. Mode(s) of action not relevant to humans.

Acetochlor caused an increased incidence of tumours in rats, mice in the following organ(s): Liver. Only above the MTD (maximum tolerated dose). The observed effects do not appear to be relevant for humans. Acetochlor caused lung tumours and histocytic sarcomas in mice, probably not treatment related.

Furilazole caused an increased incidence of tumours in rats, mice in the following organ(s): Liver. Only at doses that caused significant hepatotoxicity. Questionable relevance to humans.

Furilazole caused an increased incidence of tumours in mice in the following organ(s): Lungs. Only at doses that caused chronic inflammation. Questionable relevance to humans.

Furilazole caused an increased incidence of tumours in rats in the following organ(s): forestomach. Only at doses that caused substantial irritation. The observed effects do not appear to be relevant for humans.

Assessment toxicity to reproduction

Reproductive effects in rats seen with Acetochlor are only in the presence of significant maternal toxicity. Furilazole did not cause reproductive toxicity in laboratory animals.

Assessment developmental toxicity

Developmental effects in rats seen with Acetochlor are only in the presence of significant maternal toxicity. Acetochlor did not cause developmental toxicity in rabbits. Testicular damage in dogs only in the presence of substantial systemic toxicity.

Furilazole did not cause developmental toxicity in rabbits. The developmental effects seen with Furilazole are related to maternal toxicity.

Aspiration hazard

Based on available data, the classification criteria are not met.

11.2 Information on other hazards

Endocrine disrupting properties

Assessment

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish LC50 (Oncorhynchus mykiss (rainbow trout)) 0,709 mg/l

flow-through test; Exposure time: 96 h Test conducted with a similar formulation.

Toxicity to aquatic invertebrates

EC50 (Daphnia magna (Water flea)) 12 mg/l flow-through test; Exposure

time: 48 h

Test conducted with a similar formulation.

Growth rate; Exposure time: 72 h

Test conducted with a similar formulation.

NOEC (Raphidocelis subcapitata (freshwater green alga)) 0,65 µg/l

Growth rate; Exposure time: 72 h

Test conducted with a similar formulation.

ErC50 (Lemna minor (common duckweed)) 6,96 μg/l

static test; Exposure time: 7 d

Test conducted with a similar formulation.

12.2 Persistence and degradability

Biodegradability Acetochlor:

Not rapidly biodegradable

Furilazole: 1 %, Exposure time: 28 d

Not readily biodegradable.

Koc Acetochlor: Koc: 204

Furilazole: Koc: 56 - 341

12.3 Bioaccumulative potential

Bioaccumulation Acetochlor: Bioconcentration factor (BCF) 20

Furilazole:

No significant accumulation in organisms.

12.4 Mobility in soil

Mobility in soil Acetochlor: Moderately persistent

Furilazole: Moderately persistent

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Acetochlor: This substance is not considered to be persistent,

bioaccumulative and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulative (vPvB).

Furilazole: This substance is not considered to be persistent,

bioaccumulative and toxic (PBT). This substance is not considered to be

very persistent and very bioaccumulative (vPvB).

12.6 Endocrine disrupting properties

Assessment The substance/mixture does not contain components considered to have

endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission

Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

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Additional ecological

information

No further ecological information is available.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product In accordance with current regulations and, if necessary, after

consultation with the site operator and/or with the responsible authority, the product may be taken to a waste disposal site or incineration plant.

Contaminated packaging Not completely emptied packagings should be disposed of as hazardous

waste.

SECTION 14: TRANSPORT INFORMATION

SANS 10231

14.1 UN number 3082

14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(ACETOCHLOR SOLUTION)

14.3 Transport hazard class(es)
14.4 Packaging Group
14.5 Environm. Hazardous Mark
YES

IMDG

14.1 UN number **3082**

14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(ACETOCHLOR SOLUTION)

14.3 Transport hazard class(es) 9
14.4 Packaging Group III
14.5 Marine pollutant YES

IATA

14.1 UN number 3082

14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,

N.O.S.

(ACETOCHLOR SOLUTION)

14.3 Transport hazard class(es)
14.4 Packaging Group
14.5 Environm. Hazardous Mark
YES

14.6 Special precautions for user

See sections 6 to 8 of this Safety Data Sheet.

14.7 Transport in bulk according to IMO instruments

No transport in bulk according to the IBC Code.

SECTION 15: REGULATORY INFORMATION

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

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WHO-classification: II (Moderately hazardous)

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.
 H318 Causes serious eye damage.
 H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

Abbreviations and acronyms

ADN European Agreement concerning the International Carriage of Dangerous Goods by

Inland Waterways

ADR European Agreement concerning the International Carriage of Dangerous Goods by

Road

ATE Acute toxicity estimate

CAS-Nr. Chemical Abstracts Service number

Conc. Concentration

EC-No. European community number ECx Effective concentration to x %

EINECS European inventory of existing commercial substances

ELINCS European list of notified chemical substances

EN European Standard EU European Union

IATA International Air Transport Association

IBC International Code for the Construction and Equipment of Ships Carrying Dangerous

Chemicals in Bulk (IBC Code) Inhibition concentration to x %

IMDG International Maritime Dangerous Goods

LCx Lethal concentration to x %

LDx Lethal dose to x %

ICx

LOEC/LOEL Lowest observed effect concentration/level

MARPOL: International Convention for the prevention of marine pollution from ships

N.O.S. Not otherwise specified

NOEC/NOEL No observed effect concentration/level

OECD Organization for Economic Co-operation and Development

RID Regulations concerning the International Carriage of Dangerous Goods by Rail

TWA Time weighted average

UN United Nations

WHO World health organisation

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 2020/878 amending Regulation (EU) No 1907/2006 and any subsequent amendments. This data sheet complements the user's instructions, but does not replace them. The information it contains is based on the knowledge available about the product concerned at the time it was compiled. Users are further reminded of the possible risks of using a product for purposes other than those for which it was intended. The required information complies with current EEC legislation.



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Addressees are requested to observe any additional national requirements.

Reason for Revision: The following sections have been revised: Section 11: Toxicological

Information. Safety Data Sheet according to Regulation (EU) No.

2020/878.

Changes since the last version are highlighted in the margin. This version replaces all previous versions.