



LUNA EXPERIENCE SC 400

Version 1 / ZA
102000032925

1/10
Revision Date: 15.08.2017
Print Date: 16.08.2017

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

1.1 Product identifier

Trade name LUNA EXPERIENCE SC 400
Product code (UVP) 79465815

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

Use Fungicide

1.3 Details of the supplier of the safety data sheet

Supplier Bayer (Pty) Ltd.
27 Wrench Road, P.O. Box 143
1600 Isando
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.

Eye irritation: Category 2

H319 Causes serious eye irritation.

Reproductive toxicity: Category 2

H361d Suspected of damaging the unborn child.

Chronic aquatic toxicity: 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:

- Tebuconazole
- Fluopyram



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Signal word: Warning

Hazard statements

- H319 Causes serious eye irritation.
- H361d Suspected of damaging the unborn child.
- H410 Very toxic to aquatic life with long lasting effects.
- EUH208 Contains 1,2-benzisothiazolin-3-one. May produce an allergic reaction.
- EUH401 To avoid risks to human health and the environment, comply with the instructions for use.

Precautionary statements

- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P308 + P311 IF exposed or concerned: Call a POISON CENTER/ doctor/ physician.
- P501 Dispose of contents/container in accordance with local regulation.

2.3 Other hazards

No other hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

Chemical nature

Suspension concentrate (=flowable concentrate)(SC)
200 g/l Fluopyram, 200 g/l Tebuconazole, the composition of 102000032925-01 is identical to 102000021448-03

Hazardous components

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

Name	CAS-No. / EC-No. / REACH Reg. No.	Classification	Conc. [%]
		REGULATION (EC) No 1272/2008	
Tebuconazole	107534-96-3	Acute Tox. 4, H302 Repr. 2, H361d Aquatic Acute 1, H400 Aquatic Chronic 1, H410	17,7
Fluopyram	658066-35-4 619-797-7	Aquatic Chronic 2, H411	17,7
Alkyl polysaccharide	68515-73-1	Eye Dam. 1, H318	> 3 – < 10
1,2-Benzisothiazol-3(2H)-one	2634-33-5	Skin Sens. 1, H317 Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Dam. 1, H318 Aquatic Acute 1, H400	> 0,005 – < 0,05
Alcohols, C11-14-iso-, C13-rich, ethoxylated	78330-21-9	Acute Tox. 4, H302 Eye Dam. 1, H318 Aquatic Chronic 3, H412	< 3



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Further information

Tebuconazole	107534-96-3	M-Factor: 1 (acute), 10 (chronic)
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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	Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Do NOT induce vomiting. Call a physician or poison control center immediately.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms No symptoms known or expected.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment Treat symptomatically. In case of ingestion gastric lavage should be considered in cases of significant ingestions only within the first 2 hours. However, the application of activated charcoal and sodium sulphate is always advisable. There is no specific antidote.

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: Hydrogen chloride (HCl), Hydrogen cyanide (hydrocyanic acid), Hydrogen fluoride, Carbon monoxide (CO), Nitrogen oxides (NOx)

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 Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.

**LUNA EXPERIENCE SC 400**Version 1 / ZA
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Precautions Avoid contact with spilled product or contaminated surfaces. Use personal protective equipment.

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

Methods for cleaning up Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Clean contaminated floors and objects thoroughly, observing environmental regulations. Keep in suitable, closed containers for disposal.

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 Use only in area provided with appropriate exhaust ventilation.

Advice on protection against fire and explosion Keep away from heat and sources of ignition.

Hygiene measures Avoid contact with skin, eyes and clothing. Keep working clothes separately. Wash hands immediately after work, if necessary take a shower. Remove soiled clothing immediately and clean thoroughly before using again. Garments that cannot be cleaned must be destroyed (burnt).

7.2 Conditions for safe storage, including any incompatibilities

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

Advice on common storage Keep away from food, drink and animal feedingstuffs.

Suitable materials HDPE (high density polyethylene)

7.3 Specific end use(s) Refer to the label and/or leaflet.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**8.1 Control parameters**

Components	CAS-No.	Control parameters	Update	Basis
Tebuconazole	107534-96-3	0,2 mg/m ³ (SK-ABS)		OES BCS*
Fluopyram	658066-35-4	0,34 mg/m ³ (TWA)		OES BCS*

*OES BCS: Internal Bayer AG, Crop Science Division "Occupational Exposure Standard"

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Respiratory protection is not required under anticipated circumstances of exposure.

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 on the outside cannot be removed. Wash hands frequently and always before eating, drinking, smoking or using the toilet.

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 6 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	suspension
Colour	white to beige
Odour	characteristic
pH	5,0 - 8,0 at 100 % (23 °C)
Flash point	> 65 °C No flash point up to decomposition.
Ignition temperature	430 °C
Auto-ignition temperature	430 °C
Density	ca. 1,13 g/cm ³ at 20 °C



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Water solubility	completely miscible
Partition coefficient: n-octanol/water	Tebuconazole: log Pow: 3,7 Fluopyram: log Pow: 3,3
Surface tension	28 mN/m at 25 °C
Oxidizing properties	No oxidizing properties
Explosivity	Not explosive 92/69/EEC, A.14 / OECD 113
9.2 Other information	Further safety related physical-chemical data are not known.

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Thermal decomposition Stable under normal conditions.

10.2 Chemical stability Stable under recommended storage conditions.

10.4 Conditions to avoid Extremes of temperature and direct sunlight.

10.5 Incompatible materials Store only in the original container.

10.6 Hazardous decomposition products No decomposition products expected under normal conditions of use.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity LD 50 cut-off (Rat) \geq 5.000 mg/kg
Test conducted with a similar formulation.

Acute inhalation toxicity LC50 (Rat) > 1,9 mg/l
Exposure time: 4 h
Determined in the form of liquid aerosol.
Highest attainable concentration.
No deaths
Test conducted with a similar formulation.

Acute dermal toxicity LD50 (Rat) > 5.000 mg/kg
Test conducted with a similar formulation.

Skin irritation No skin irritation (Rabbit)
Test conducted with a similar formulation.

Sensitisation Non-sensitizing. (Mouse)
OECD Test Guideline 429, local lymph node assay (LLNA)
Test conducted with a similar formulation.

Assessment STOT Specific target organ toxicity – single exposure

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

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

Assessment STOT Specific target organ toxicity – repeated exposure

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Tebuconazole did not cause specific target organ toxicity in experimental animal studies.
Fluopyram did not cause specific target organ toxicity in experimental animal studies.

Assessment mutagenicity

Tebuconazole was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.
Fluopyram was not mutagenic or genotoxic in a battery of in vitro and in vivo tests.

Assessment carcinogenicity

Tebuconazole caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Liver. The mechanism of tumour formation is not considered to be relevant to man.
Fluopyram caused at high dose levels an increased incidence of tumours in rats in the following organ(s): Liver.
Fluopyram caused at high dose levels an increased incidence of tumours in mice in the following organ(s): Thyroid.
The tumours seen with Fluopyram were caused through a non-genotoxic mechanism, which is not relevant at low doses. The mechanism that triggers these tumours is not relevant to humans.

Assessment toxicity to reproduction

Tebuconazole caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Tebuconazole is related to parental toxicity.
Fluopyram caused reproduction toxicity in a two-generation study in rats only at dose levels also toxic to the parent animals. The reproduction toxicity seen with Fluopyram is related to parental toxicity.

Assessment developmental toxicity

Tebuconazole caused developmental toxicity only at dose levels toxic to the dams. Tebuconazole caused an increased incidence of post implantation losses, an increased incidence of non-specific malformations.
Fluopyram caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Fluopyram are related to maternal toxicity.

Aspiration hazard

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

SECTION 12: ECOLOGICAL INFORMATION**12.1 Toxicity**

Toxicity to fish	LC50 (Oncorhynchus mykiss (rainbow trout)) 21,7 mg/l static test; Exposure time: 96 h Test conducted with a similar formulation.
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 56,9 mg/l Exposure time: 48 h Test conducted with a similar formulation.
Chronic toxicity to aquatic invertebrates	NOEC (Daphnia (water flea)): 0,01 mg/l Exposure time: 21 d The value mentioned relates to the active ingredient tebuconazole.
Toxicity to aquatic plants	EC50 (Raphidocelis subcapitata (freshwater green alga)) 17,7 mg/l Growth rate; Exposure time: 72 h Test conducted with a similar formulation. EC50 (Lemna gibba (gibbous duckweed)) 0,237 mg/l Growth rate; Exposure time: 7 d The value mentioned relates to the active ingredient tebuconazole.

12.2 Persistence and degradability



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Biodegradability Tebuconazole:
Not rapidly biodegradable
Fluopyram:
Not rapidly biodegradable

Koc Tebuconazole: Koc: 769
Fluopyram: Koc: 279

12.3 Bioaccumulative potential

Bioaccumulation Tebuconazole: Bioconcentration factor (BCF) 35 - 59
Does not bioaccumulate.
Fluopyram: Bioconcentration factor (BCF) 18
Does not bioaccumulate.

12.4 Mobility in soil

Mobility in soil Tebuconazole: Slightly mobile in soils
Fluopyram: Moderately mobile in soils

12.5 Results of PBT and vPvB assessment

PBT and vPvB assessment Tebuconazole: 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).
Fluopyram: 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 Other adverse effects

Additional ecological information No other effects to be mentioned.

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. (TEBUCONAZOLE SOLUTION)
14.3 Transport hazard class(es) 9
14.4 Packing group III
14.5 Environm. Hazardous Mark YES

IMDG

14.1 UN number **3082**



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14.2 Proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID,
N.O.S.
(TEBUCONAZOLE SOLUTION)
14.3 Transport hazard class(es) 9
14.4 Packing 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.
(TEBUCONAZOLE SOLUTION)
14.3 Transport hazard class(es) 9
14.4 Packing group III
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 Annex II of MARPOL and the IBC Code

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

WHO-classification: III (Slightly hazardous)

SECTION 16: OTHER INFORMATION

Text of the hazard statements mentioned in Section 3

H302 Harmful if swallowed.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H361d Suspected of damaging the unborn child.
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.
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



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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)
ICx	Inhibition concentration to x %
IMDG	International Maritime Dangerous Goods
LCx	Lethal concentration to x %
LDx	Lethal dose to x %
LOEC/LOEL	Lowest observed effect concentration/level
MARPOL	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) 2015/830 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. Addressees are requested to observe any additional national requirements.

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