



**LUNA SENSATION SC500 20X500ML BOT GEA**

Version 5 /  
102000012886

1/11  
Revision Date: 29.03.2017  
Print Date: 16.08.2017

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

**1.1 Product identifier**

**Trade name** LUNA SENSATION SC500 20X500ML BOT GEA  
**Product code (UVP)** 84469882

**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 AG  
Kaiser-Wilhelm-Allee 1  
51373 Leverkusen  
Germany

**Telefax** +49(0)2173-38-7394

**Responsible Department** Substance Classification & Registration  
+49(0)2173-38-3409 (during business hours only)  
Email: BCS-SDS@bayer.com

**1.4 Emergency telephone no.**

**Emergency telephone no.** Global Incident Response Hotline (24h)  
+1 (760) 476-3964 (Company 3E for Bayer AG, Crop Science Division)

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**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 aquatic toxicity: Category 1  
H400 Very toxic to aquatic life.

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:**

- Fluopyram
- Trifloxystrobin



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- H302 Harmful if swallowed.  
 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.  
 EUH208 Contains Trifloxystrobin, 1,2-benzisothiazolin-3-one, 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one. May produce an allergic reaction.

**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)  
Fluopyram/Trifloxystrobin 250:250 g/l**Hazardous components**

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

| Name   | CAS-No. /<br>EC-No. /<br>REACH Reg. No. | Classification   | Conc. [%]              |
|--|---|--|------------------------|
|  |   | REGULATION (EC) No<br>1272/2008  |                        |
| Fluopyram  | 658066-35-4<br>619-797-7                | Aquatic Chronic 2, H411  | 21,37                  |
| Trifloxystrobin  | 141517-21-7                             | Skin Sens. 1, H317<br>Aquatic Acute 1, H400<br>Aquatic Chronic 1, H410   | 21,37                  |
| 1,2-Benzisothiazol-3(2H)-one   | 2634-33-5<br>220-120-9                  | Skin Sens. 1, H317<br>Acute Tox. 4, H302<br>Skin Irrit. 2, H315<br>Eye Dam. 1, H318<br>Aquatic Acute 1, H400                         | > 0,005 – <<br>0,05    |
| Mixture of: 5-chloro-2-methyl-4-isothiazolin-3-one and 2-methyl-4-isothiazolin-3-one | 55965-84-9                              | Acute Tox. 3, H331<br>Acute Tox. 3, H311<br>Acute Tox. 3, H301<br>Skin Corr. 1B, H314<br>Skin Sens. 1, H317<br>Aquatic Acute 1, H400 | > 0,0002 – <<br>0,0015 |



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|  |  |                         |  |
|--|--|-------------------------|--|
|  |  | Aquatic Chronic 1, H410 |  |
|--|--|-------------------------|--|

**Further information**

|                 |             |                       |
|-----------------|-------------|-----------------------|
| Trifloxystrobin | 141517-21-7 | M-Factor: 100 (acute) |
|-----------------|-------------|-----------------------|

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**

|                       |  |
|-----------------------|--|
| <b>General advice</b> | Move out of dangerous area. Place and transport victim in stable position (lying sideways). Remove contaminated clothing immediately and dispose of safely.  |
| <b>Inhalation</b>     | Move to fresh air. Keep patient warm and at rest. Call a physician or poison control center immediately.   |
| <b>Skin contact</b>   | Wash off thoroughly with plenty of soap and water, if available with polyethyleneglycol 400, subsequently rinse with water. If symptoms persist, call a physician.   |
| <b>Eye contact</b>    | 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. |
| <b>Ingestion</b>      | 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** To date no symptoms are known.

**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**

|                   |  |
|-------------------|--|
| <b>Suitable</b>   | Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. |
| <b>Unsuitable</b> | High volume water jet  |



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|  |  |
|--|--|
| <b>5.2 Special hazards arising from the substance or mixture</b> | 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) |
| <b>5.3 Advice for firefighters</b>                               |  |
| <b>Special protective equipment for firefighters</b>             | In the event of fire and/or explosion do not breathe fumes. In the event of fire, wear self-contained breathing apparatus.   |
| <b>Further information</b>                                       | Contain the spread of the fire-fighting media. Do not allow run-off from fire fighting to enter drains or water courses.   |

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**SECTION 6: ACCIDENTAL RELEASE MEASURES**

**6.1 Personal precautions, protective equipment and emergency procedures**

**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). Collect and transfer the product into a properly labelled and tightly closed container. Clean contaminated floors and objects thoroughly, observing environmental regulations.

**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.

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**SECTION 7: HANDLING AND STORAGE**

**7.1 Precautions for safe handling**

**Advice on safe handling** Use only in area provided with appropriate exhaust ventilation.

**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** 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 frost.

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

**Suitable materials** HDPE (high density polyethylene)



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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    |
|-----------------|-------------|-----------------------------------|--------|----------|
| Fluopyram       | 658066-35-4 | 0,34 mg/m <sup>3</sup><br>(TWA)   |        | OES BCS* |
| Trifloxystrobin | 141517-21-7 | 2,7 mg/m <sup>3</sup><br>(SK-SEN) |        | OES BCS* |

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

## 8.2 Exposure controls

## Personal protective equipment

In normal use and handling conditions please refer to the label and/or leaflet. In all other cases the following recommendations would apply.

## Respiratory protection

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.

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**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES****9.1 Information on basic physical and chemical properties**

|   |   |
|---|---|
| <b>Form</b>                                   | suspension  |
| <b>Colour</b>                                 | white to beige  |
| <b>Odour</b>                                  | characteristic  |
| <b>Odour Threshold</b>                        | No data available   |
| <b>pH</b>                                     | 5,0 - 8,0 at 100 % (23 °C)  |
| <b>Flash point</b>                            | > 100 °C  |
| <b>Ignition temperature</b>                   | 380 °C  |
| <b>Minimum ignition energy</b>                | Not applicable  |
| <b>Upper explosion limit</b>                  | No data available   |
| <b>Lower explosion limit</b>                  | No data available   |
| <b>Vapour pressure</b>                        | No data available   |
| <b>Evaporation rate</b>                       | No data available   |
| <b>Relative vapour density</b>                | No data available   |
| <b>Density</b>                                | ca. 1,17 g/cm <sup>3</sup> at 20 °C                               |
| <b>Water solubility</b>                       | suspensive  |
| <b>Partition coefficient: n-octanol/water</b> | Not applicable  |
| <b>Partition coefficient: n-octanol/water</b> | Fluopyram: log Pow: 3,3<br>Trifloxystrobin: log Pow: 4,5 at 25 °C |
| <b>Surface tension</b>                        | 38 mN/m at 25 °C<br>Determined in the undiluted form.             |
| <b>Oxidizing properties</b>                   | No oxidizing properties   |
| <b>Explosivity</b>                            | Not explosive<br>92/69/EEC, A.14 / OECD 113                       |
| <b>9.2 Other information</b>                  | Further safety related physical-chemical data are not known.      |

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**SECTION 10: STABILITY AND REACTIVITY****10.1 Reactivity****Thermal decomposition** 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.



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- 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.

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**SECTION 11: TOXICOLOGICAL INFORMATION**

**11.1 Information on toxicological effects**

- Acute oral toxicity** LD50 (Rat) 2.000 mg/kg
- Acute inhalation toxicity** LC50 (Rat) > 1,7 mg/l  
Exposure time: 4 h  
Determined in the form of liquid aerosol.  
Highest attainable concentration.  
No deaths
- Acute dermal toxicity** LD50 (Rat) > 2.000 mg/kg
- Skin irritation** No skin irritation (Rabbit)
- Eye irritation** No eye irritation (Rabbit)
- Sensitisation** Non-sensitizing. (Mouse)  
OECD Test Guideline 429, local lymph node assay (LLNA)

**Assessment STOT Specific target organ toxicity – single exposure**

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

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

**Assessment STOT Specific target organ toxicity – repeated exposure**

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

**Assessment mutagenicity**

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

**Assessment carcinogenicity**

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.

Trifloxystrobin was not carcinogenic in lifetime feeding studies in rats and mice.

**Assessment toxicity to reproduction**

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.

Trifloxystrobin 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 Trifloxystrobin is related to parental

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toxicity.

**Assessment developmental toxicity**

Fluopyram caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Fluopyram are related to maternal toxicity.

Trifloxystrobin caused developmental toxicity only at dose levels toxic to the dams. The developmental effects seen with Trifloxystrobin 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)) 0,091 mg/l  
Exposure time: 96 h

**Toxicity to aquatic invertebrates** EC50 (Daphnia magna (Water flea)) 0,086 mg/l  
Exposure time: 48 h

**Toxicity to aquatic plants** IC50 (Raphidocelis subcapitata (freshwater green alga)) 0,292 mg/l  
Growth rate; Exposure time: 72 h

**12.2 Persistence and degradability**

**Biodegradability** Fluopyram:  
Not rapidly biodegradable  
Trifloxystrobin:  
Not rapidly biodegradable

**Koc** Fluopyram: Koc: 279  
Trifloxystrobin: Koc: 2377

**12.3 Bioaccumulative potential**

**Bioaccumulation** Fluopyram: Bioconcentration factor (BCF) 18  
Does not bioaccumulate.  
Trifloxystrobin: Bioconcentration factor (BCF) 431  
Does not bioaccumulate.

**12.4 Mobility in soil**

**Mobility in soil** Fluopyram: Moderately mobile in soils  
Trifloxystrobin: Slightly mobile in soils

**12.5 Results of PBT and vPvB assessment**

**PBT and vPvB assessment** 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).  
Trifloxystrobin: 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.





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**SECTION 13: DISPOSAL CONSIDERATIONS**

**13.1 Waste treatment methods**

|   |   |
|---|---|
| <b>Product</b>                          | 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. |
| <b>Contaminated packaging</b>           | Not completely emptied packagings should be disposed of as hazardous waste.   |
| <b>Waste key for the unused product</b> | <b>02 01 08*</b> agrochemical waste containing dangerous substances   |

**SECTION 14: TRANSPORT INFORMATION**

**ADR/RID/ADN**

|                                 |  |
|---------------------------------|--|
| 14.1 UN number                  | <b>3082</b>  |
| 14.2 Proper shipping name       | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN SOLUTION) |
| 14.3 Transport hazard class(es) | 9  |
| 14.4 Packing group              | III  |
| 14.5 Environm. Hazardous Mark   | YES  |
| Hazard no.                      | 90   |
| Tunnel Code                     | E  |

This classification is in principle not valid for carriage by tank vessel on inland waterways. Please refer to the manufacturer for further information.

**IMDG**

|                                 |  |
|---------------------------------|--|
| 14.1 UN number                  | <b>3082</b>  |
| 14.2 Proper shipping name       | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN SOLUTION) |
| 14.3 Transport hazard class(es) | 9  |
| 14.4 Packing group              | III  |
| 14.5 Marine pollutant           | YES  |

**IATA**

|                                 |   |
|---------------------------------|---|
| 14.1 UN number                  | <b>3082</b>   |
| 14.2 Proper shipping name       | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (TRIFLOXYSTROBIN 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.



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**14.7 Transport in bulk according to Annex II of MARPOL 73/78 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)

**15.2 Chemical Safety Assessment**

A chemical safety assessment is not required.

**SECTION 16: OTHER INFORMATION**

**Text of the hazard statements mentioned in Section 3**

|      |   |
|------|---|
| H301 | Toxic if swallowed.                                   |
| H302 | Harmful if swallowed.                                 |
| H311 | Toxic in contact with skin.                           |
| H314 | Causes severe skin burns and eye damage.              |
| H315 | Causes skin irritation.                               |
| H317 | May cause an allergic skin reaction.                  |
| H318 | Causes serious eye damage.                            |
| H331 | Toxic if inhaled.                                     |
| 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.      |

**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) |
| ICx     | Inhibition concentration to x %  |
| IMDG    | International Maritime Dangerous Goods   |
| LCx     | Lethal concentration to x %  |
| LDx     | Lethal dose to x %   |



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|           |  |
|-----------|--|
| 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.