



SERENADE ASO

Version 1 / EU
102000027859

1/8
Revision Date: 11.03.2013
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SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Trade name SERENADE ASO
Product code (UVP) 80939272

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

Use Fungicide, Bactericide

1.3 Details of the supplier of the safety data sheet

Supplier Bayer CropScience AG
Alfred-Nobel-Straße 50
40789 Monheim am Rhein
Germany

Telefax +49(0)2173-38-7394
Responsible Department Product Safety and Specification Management
+49(0)2173-38-3409/3685 (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 CropScience)

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.

Not classified, the classification criteria are not met.

Classification according to EU Directives 67/548/EEC or 1999/45/EC

Not classified, the classification criteria are not met.

2.2 Label elements

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

No hazard label for supply/use required.

2.3 Other hazards

No particular hazards known.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

**SERENADE ASO**Version 1 / EU
102000027859

2/8

Revision Date: 11.03.2013
Print Date: 19.02.2015**Chemical nature**

Wettable powder (WP)

Hazardous components

R-phrases according to EC directive 67/548/EEC

Hazard statements according to Regulation (EC) No. 1907/2006

Name	CAS-No. / EC-No.	Classification		Concentration [%]
		EC Directive 67/548/EEC	Regulation (EC) No 1272/2008	
Bacillus subtilis, strain QST 713		Not classified	Not classified	14,60

Further information

For the full text of the R-phrases/ Hazard 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. If symptoms persist, call a physician.

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

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



SERENADE ASO

Version 1 / EU
102000027859

3/8
Revision Date: 11.03.2013
Print Date: 19.02.2015

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture

Dangerous gases are evolved in the event of a fire.

5.3 Advice for firefighters

Special protective equipment for fire-fighters

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

Avoid dust formation.

Avoid contact with spilled product or contaminated surfaces.

When dealing with a spillage do not eat, drink or smoke.

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

Avoid dust formation.

Sweep up or vacuum up spillage and collect in suitable container for disposal.

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.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling

No specific precautions required when handling unopened packs/containers; follow relevant manual handling advice.

Avoid dust formation.

Ensure adequate ventilation.

**SERENADE ASO**Version 1 / EU
102000027859

4/8

Revision Date: 11.03.2013
Print Date: 19.02.2015**Hygiene measures**

Avoid contact with skin, eyes and clothing.

When using, do not eat, drink or smoke.

Wash hands immediately after work, if necessary take a shower.

Remove soiled clothing immediately and clean thoroughly before using again.

7.2 Conditions for safe storage, including any incompatibilities**Requirements for storage areas and containers**

Store in original container and out of the reach of children, preferably in a locked storage area.

Keep away from direct sunlight.

Keep containers tightly closed in a dry, cool and well-ventilated place.

Advice on common storage

Keep away from food, drink and animal feedingstuffs.

7.3 Specific end uses

Refer to the label and/or leaflet.

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

No control parameters known.

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	Wear respirator with a particle filter mask (protection factor 20) conforming to European Norm EN149FFP3 or EN140P3 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	Wear CE Marked (or equivalent) nitrile rubber gloves (minimum thickness 0,40 mm). Wash when contaminated. Dispose of when contaminated inside, when perforated or when contamination outside cannot be removed. Wash hands always before eating, drinking, smoking or using the toilet.
Eye protection	Wear goggles conforming to EN166 (Field of Use 5 or equivalent).
Skin and body protection	Wear standard coverall and type 5 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.



SERENADE ASO

Version 1 / EU
102000027859

5/8

Revision Date: 11.03.2013
Print Date: 19.02.2015

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	powder
Colour	beige to brown
Odour	sweet, earthy
Odour Threshold	no data available
pH	4,7 - 7,5 at 1 % no data available
Flash point	no data available
Minimum ignition energy	no data available
Upper explosion limit	no data available
Lower explosion limit	no data available
Vapour pressure	no data available
Relative vapour density	no data available
Water solubility	dispersible
Partition coefficient: n-octanol/water	no data available
Viscosity, dynamic	not applicable
Explosivity	no data available

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



SERENADE ASO

Version 1 / EU
102000027859Revision Date: 11.03.2013
Print Date: 19.02.2015

6/8

Extremes of temperature and direct sunlight.

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

no data available

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity LD50 (rat) > 2.000 mg/kg

Acute inhalation toxicity LC50 (rat) 0,63 mg/l
Determined in the form of liquid aerosol.
Highest attainable concentration.
No deaths

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

Skin irritation No skin irritation (rabbit)

Eye irritation No eye irritation (rabbit)

Sensitisation Non-sensitizing. (guinea pig)

Assessment repeated dose toxicity
Bacillus subtilis did not cause specific target organ toxicity in experimental animal studies.

Assessment Mutagenicity
Test not required for microorganisms.

Assessment Carcinogenicity
Test not required for microorganisms.

Assessment Toxicity to Reproduction
Test not required for microorganisms.

Assessment developmental toxicity
Test not required for microorganisms.

SECTION 12: ECOLOGICAL INFORMATION

12.1 Toxicity

Toxicity to fish LC50 (Rainbow trout (Oncorhynchus mykiss)) 162 mg/l
Exposure time: 30 d
The value mentioned relates to the active ingredient.



SERENADE ASO

Version 1 / EU
1020000278597/8
Revision Date: 11.03.2013
Print Date: 19.02.2015

Toxicity to aquatic invertebrates	LC50 (Water flea (Daphnia magna)) 108 mg/l Exposure time: 48 h The value mentioned relates to the active ingredient.
Toxicity to aquatic plants	NOEC (Scenedesmus subspicatus) \geq 100 mg/l The value mentioned relates to the active ingredient. LOEC (Scenedesmus subspicatus) $>$ 100 mg/l The value mentioned relates to the active ingredient.

12.2 Persistence and degradability

Biodegradability Not applicable for this mixture.

12.3 Bioaccumulative potential

Bioaccumulation Not applicable for this mixture.

12.4 Mobility in soil

Mobility in soil Not applicable for this mixture.

12.5 Results of PBT and vPvB assessment

Not relevant as no chemical safety report is necessary.

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.
Follow advice on product label and/or leaflet.

Waste key for the unused product

020109 Agrochemical waste other than those mentioned in 020108

SECTION 14: TRANSPORT INFORMATION

According to ADN/ADR/RID/IMDG/IATA not classified as dangerous goods.

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

14.1 – 14.5 Not applicable.

14.6 Special precautions for user



SERENADE ASO

Version 1 / EU
102000027859

Revision Date: 11.03.2013
Print Date: 19.02.2015

8/8

See sections 6 to 8 of this Safety Data Sheet.

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 R-phrases mentioned in Section 3

Text of the hazard statements mentioned in Section 3

The information contained within this Safety Data Sheet is in accordance with the guidelines established by Regulation (EU) 1907/2006 and Regulation (EU) 453/2010 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.
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