

**SERENO**

Version 1
Revision Date 10.04.2003

GB
102000001522

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING**Product information**

Trade name : SERENO
 Product code : 10810A
 Specification : 11380
 Usage : fungicide
 Company : Bayer CropScience Limited
 Hauxton
 Cambridge
 Cambridgeshire CB2 5HU
 Great Britain
 Telephone : +44(0)1223 870312
 Telefax : +44(0)1223 872142
 Emergency telephone : 0800-220876 (UK only)
 number : +44(0)1223-870312

2. COMPOSITION/INFORMATION ON INGREDIENTS**Chemical nature**

Water dispersible granules (WG)
 Fenamidone/Mancozeb 10:50% WG

Hazardous components

| Chemical Name | CAS-No. | Symbol(s): | R-phrases(s) | Concentration [%] |
|-------------------------------------------------|-------------|------------|--------------|-------------------|
| Fenamidone | 161326-34-7 | N | R50/53 | 10.00 |
| Mancozeb | 8018-01-7 | Xi | R37 R43 | 50.00 |
| Sodium methylene polymethylnaphthyl sulphionate | 81065-51-2 | Xi | R36 | > 5.00 - < 25.00 |
| Sodium dioctyl sulphosuccinate | 577-11-7 | Xi | R38 R41 | > 1.00 - < 5.00 |
| Kaolin | 1332-58-7 | | | > 1.00 - < 5.00 |

3. HAZARDS IDENTIFICATION**Risk advice to man and the environment**

Irritating to eyes and respiratory system.
 Very toxic to aquatic organisms.

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4. FIRST AID MEASURES

- Inhalation : Move to fresh air.
- Skin contact : Take off all contaminated clothing immediately. Wash off with soap and water. If skin irritation persists, call a physician.
- Eye contact : Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
- Ingestion : Drink 1 or 2 glasses of water. Obtain medical attention.

Notes to physician

- Symptoms : Eye and mucous membrane irritation, dermatitis
- Treatment : There is no antidote.
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

- Suitable extinguishing media : foam
carbon dioxide (CO₂)
dry powder
- Specific hazards during fire fighting : In the event of fire the following can be released:
carbon monoxide (CO)
carbon dioxide (CO₂)
nitrogen oxides (NO_x)
sulphur oxides
- Special protective equipment for fire-fighters : Use breathing apparatus.
- Further information : Contain the spread of the fire-fighting media.

6. ACCIDENTAL RELEASE MEASURES

- Personal precautions : Avoid contact with spilled product or contaminated surfaces.
When dealing with a spillage do not eat, drink or smoke.
- Environmental precautions : Keep people and animals away.
Do not discharge into the drains/surface water/groundwater.
If spillage enters drains leading to sewage works inform local water company immediately.
If spillage enters rivers or watercourses, inform the Environment Agency (emergency telephone number 0800 807060).
- Methods for cleaning up : Pick up and fill the product into a tightly closed container.

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Use approved industrial vacuum cleaner for removal.

Additional advice : Information regarding personal protective equipment, see section 8.
Information regarding waste disposal, see section 13.

7. HANDLING AND STORAGE**Handling**

Advice on safe handling : Smoking, eating and drinking should be prohibited in the application area.

Storage

Requirements for storage areas and containers : Keep out of the reach of children.

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

Suitable materials : Rigid material with protection against moisture

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Refer to COSHH assessment (Control of substances Hazardous to Health Regulations 1999 as amended). Engineering controls should be used in preference to personal protective equipment wherever practicable.

Components with workplace control parameters

| Components | CAS-No. | Control parameters | Update | Basis |
|------------|-----------|---------------------------|--------|----------|
| Kaolin | 1332-58-7 | 2 mg/m ³ (TWA) | 2002 | EH40 OES |

Engineering measures

Provide appropriate exhaust ventilation at places where dust is formed.

Personal protective equipment

Respiratory protection : Suitable mask with particle filter P3 (BS EN 143).

Hand protection : Chemical resistant gloves
PVC gloves
nitrile gloves

Eye protection : tightly fitting safety goggles

Skin and body protection : Light protective clothing

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9. PHYSICAL AND CHEMICAL PROPERTIES**Appearance**

Form : pellets
Colour : bronze

Safety data

pH : 6.5 - 7.5
Note: Determined as a 1% emulsion in distilled water.

Bulk density : 0.69 kg/m³

Water solubility : Note: dispersible

Partition coefficient (n-octanol/water) : log Pow: 1.33
Note: The value mentioned relates to the active ingredient mancozeb.

Partition coefficient (n-octanol/water) : log Pow: 2.8
Note: The value mentioned relates to the active ingredient fenamidone.

10. STABILITY AND REACTIVITY

Self heating : Note: May self heat in case of storage in mass at high temperature.

Hazardous reactions : No hazardous reactions when stored and handled according to prescribed instructions.
Note: Stable under normal conditions.

11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50 (rat) > 2,000 mg/kg

Acute dermal toxicity : LD50 (rat) > 2,000 mg/kg

Skin irritation : rabbit
Result: slight irritant effect - does not require labelling

Eye irritation : rabbit
Result: irritating

Sensitization : Buehler Test guinea pig
Result: non-sensitizing

12. ECOLOGICAL INFORMATION

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| | | |
|---------------------|---|-------------------------------------------------------------------------------|
| Toxicity to fish | : | LC50: 0.23 mg/l Oncorhynchus mykiss (Rainbow trout) Exposure time: 96 h |
| Toxicity to daphnia | : | EC50: 0.15 mg/l Water flea (Daphnia magna) Exposure time: 48 h |
| Toxicity to algae | : | IC50: 0.66 mg/l Senedesmus subspicatus Exposure time: 72 h |

13. DISPOSAL CONSIDERATIONS

| | | |
|----------------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product | : | In accordance with current regulations may be taken to waste disposal site or incineration plant, after consultation with site operator and/or with the responsible authority Can be landfilled or incinerated, when in compliance with local regulations. Advice may be obtained from the local waste regulation authority (part of the Environment Agency in the UK). |
| Contaminated packaging | : | Packaging that cannot be cleaned should be disposed of as product waste. Empty containers can be landfilled, when in compliance with the Environmental Protection (Duty of Care) Regulations 1991. |
| Waste key for the unused product | : | 020108 agrochemical waste containing dangerous substances |

14. TRANSPORT INFORMATION

| | | | |
|----------------|---|--------------------------|----------------------------------------------------------|
| ADR/RID | : | UN-No | 3088 |
| | | Class | 4.2 |
| | | Packaging group | II |
| | | Hazard no. | 40 |
| | | Description of the goods | 3088 SELF-HEATING SOLID, ORGANIC, N.O.S. (MANCOZEB) |
| ADNR | : | UN-No | 3088 |
| | | Class | 4.2 |
| | | Item | 5 |
| | | Letter | b |
| | | Description of the goods | 3088 Self-heating solid, organic, n.o.s. (MANCOZEB) |
| IMDG | : | UN-No | 3088 |
| | | Class | 4.2 |
| | | Packaging group | II |
| | | EmS | 4.2-04 |
| | | Marine pollutant | P |
| | | Description of the goods | SELF-HEATING SOLID, ORGANIC, N.O.S. |

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(MANCOZEB 50.0%)

| | | | |
|----------------|---|------------------------------|-----------------------------------------------------|
| IATA | : | UN-No | 3088 |
| | | Class | 4.2 |
| | | Packaging group | II |
| | | Description of the goods | Self-heating solid, organic, n.o.s. (MANCOZEB) |
| CDG CPL | : | UN-No | 3088 |
| | | Class | 4.2 |
| | | Packaging group | II |
| | | Hazard identification number | 40 |
| | | Emergency action code | 1Y |
| | | Proper shipping name | SELF-HEATING SOLID, ORGANIC, N.O.S. (MANCOZEB) |

15. REGULATORY INFORMATION

This product has been classified in accordance with The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002: CHIP 3.

Hazardous components which must be listed on the label:

- Fenamidone
- Mancozeb

| | | | |
|---------------------|---|----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Symbol(s): | : | Xi N | Irritant Dangerous for the environment |
| R-phrase(s) | : | R36/37 R50 | Irritating to eyes and respiratory system. Very toxic to aquatic organisms. |
| S-phrase(s) | : | S35 S57 | This material and its container must be disposed of in a safe way. Use appropriate containment to avoid environmental contamination. |
| Further information | : | WHO-classification: III (Slightly hazardous) | |

16. OTHER INFORMATION**Further information**

| |
|-------------------------------------------|
| Text of R phrases mentioned in Section 2: |
|-------------------------------------------|

| | |
|-----|------------------------------------------|
| R36 | Irritating to eyes. |
| R37 | Irritating to respiratory system. |
| R38 | Irritating to skin. |
| R41 | Risk of serious damage to eyes. |
| R43 | May cause sensitization by skin contact. |



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R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

The above information is intended to give general health and safety guidance on the storage and transport of the product.

It is not intended to apply to the use of the product for which purposes the product label and any appropriate technical usage literature available should be consulted and any relevant licenses, consents or approvals complied with.

The requirements or recommendations of any relevant site or working procedure, system or policy in force or arising from any risk assessment involving the substance or product should take precedence over any of the guidance contained in this safety data sheet where there is a difference in the information given.

The information provided in this safety data sheet is accurate at the date of publication and will be updated as and when appropriate.

No liability will be accepted for any injury, loss or damage resulting from any failure to take account of information or advice contained in this safety data sheet.

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