



Material Safety Data Sheet

SiloSolve® AS

Version: 3 CA / EN

Revision Date: 23-04-2015

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

1.1 Product identifier

Product name: SiloSolve® AS
Material No.: 712797

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

Application: Silage inoculant.

1.3 Details of the supplier of the safety data sheet

Supplier: Chr. Hansen Inc.
9015 West Maple Street
53214-4298 Milwaukee - WI
Phone: +1 414 607-5700

Headquarters: Chr. Hansen A/S
Bøge Allé 10-12
DK-2970 Horsholm
Tel. +45 45 74 74 74

1.4 Emergency telephone number

Emergency telephone: +1 414 607-5700

2. HAZARDS IDENTIFICATION

HMIS Ratings: Health: 1 Flammability: 3 Physical Hazard: 0 Pers. Prot.: E

2.1 Classification of the substance or mixture

The product is not classified, but must be labeled:

2.2 Label elements

Signal Word None.

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Hazard statements None

Precautionary statements None

Supplemental hazard information

Warning: In high concentrations, fine particles may form explosive dust/air mixtures.

2.3 Other hazards

Physical and Chemical Hazards: Small quantities: The hazardous properties of the product are considered to be limited.
Large quantities: In high concentrations, fine particles may form explosive dust/air mixtures.

Human health: Dust may irritate the eyes and the respiratory system. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

Environment: The harmful effects of the product in the environment are considered to be limited.

3. COMPOSITION/INFORMATION ON INGREDIENTS

The product contains: bacteria.

This material is not a controlled product under Canadian WHMIS regulations.

Does not contain substances that must be indicated according to current regulations.

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4. FIRST-AID MEASURES

4.1 Description of first aid measures

Inhalation: Dust inhalation: Move into fresh air and keep at rest. In case of persistent throat irritation or coughing: Seek medical attention and take along these instructions.

Skin contact: Remove contaminated clothing immediately and wash skin with soap and water.

Eye contact: Do not rub eye. Immediately flush with plenty of water for up to 15 minutes. Remove any contact lenses and open eyelids widely. If irritation persists: Seek medical attention and bring these instructions.

Ingestion: Rinse mouth thoroughly. If uncomfortable: Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed:

Dust may irritate the eyes and the respiratory system. Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases.

4.3 Indication of any immediate medical attention and special treatment needed:

Symptomatic treatment.

5. FIRE-FIGHTING MEASURES

5.1 Extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

Potential dust explosion hazard. Fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard.

5.2 Special hazards arising from the substance or mixture

The explosion limits and the flash point are stated in section 9.

5.3 Advice for firefighters

Selection of respiratory protection for fire fighting: follow the general fire precautions indicated in the workplace.

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6. ACCIDENTAL RELEASE MEASURES

- 6.1 Personal precautions, protective equipment and emergency procedures
Avoid generation and spreading of dust. Avoid inhalation of dust and contact with skin and eyes. Follow precautions for safe handling described in this safety data sheet.
- 6.2 Environmental precautions
Avoid discharge into drains, water courses or onto the ground.
- 6.3 Methods and material for containment and cleaning up
Use a vacuum cleaner. If not possible, moisten dust with water before it is collected with shovel, broom or the like. Dust Deposits should not be allowed to accumulate on surfaces, as these may form an explosive mixture if they are released into the atmosphere in sufficient concentration. Avoid dispersal of dust in the air.
- 6.4 Reference to other sections
For personal protection, see section 8.
For waste disposal, see section 13.
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7. HANDLING AND STORAGE

- 7.1 Precautions for safe handling
Safe handling advice: Avoid inhalation of dust and contact with skin and eyes. Observe good industrial hygiene practices.
Technical measures: Keep the workplace clean. Avoid generation, spreading and accumulation of dust.
Large quantities: Ensure appropriate exhaust and ventilation at machinery and at places where dust can be generated.
Take precautionary measures against static discharges when there is a risk of dust explosion.
Technical precautions: Local exhaust is recommended.
- 7.2 Conditions for safe storage, including any incompatibilities
Technical measures for safe storage: Risk of dust explosion: Comply with the regulations on protection against dust explosions.
Storage conditions: Store in tightly closed original container. Store at ambient temperature conditions. For detailed information consult the PI sheet.
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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Control parameters
Provide adequate ventilation. Use work methods which minimize dust production. The risk of inhalation of dust must be minimized as much as possible.

Occupational exposure limits: Dust inhalable: 10 mg/m³. Dust respirable: 3 mg/m³.
- 8.2 Exposure controls

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Respiratory equipment: In case of inadequate ventilation: Use respiratory equipment with particle filter:

EU: FFP3 filter [e.g. 3M 8835 mask]

US: P100 filter [e.g. 3M 8293 mask]

For daily use of more than 3 hours a respirator with a powered air blower should be used.

Hand protection: Gloves are recommended for prolonged use.

Eye protection: Use tight fitting goggles if dust is generated.

Skin protection: No special precautions.

Hygiene measures: Wash hands after contact.

Environmental Exposure Controls: None.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	Powder
Color:	Yellow
Odor:	Faint odor
pH:	Not relevant
Melting point:	Not relevant
Boiling point:	Not relevant
Decomposition temperature:	Not relevant
Flash point:	Not relevant
Relative density:	Not available
Solubility:	Water soluble

10. STABILITY AND REACTIVITY

10.1 Reactivity

None known.

10.2 Chemical stability

Stable under normal temperature conditions and recommended use.

10.3 Possibility of hazardous reactions

None known.

10.4 Conditions to avoid:

None known.

10.5 Incompatible materials

None known.

10.6 Hazardous decomposition products

None known.

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11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Inhalation: Dust may irritate respiratory system. Inhalation of high concentrations of dust or aerosols may cause toxic alveolitis. Symptoms like fever, coldshivering, coughing, difficulties in breathing, headache, muscle and joint pains etc. may appear 6 to 8 hours after exposure. The symptoms normally disappear completely over night without any treatment.

Skin contact: Dust has an irritating effect on moist skin.

Eye contact: Dust in the eyes will cause irritation.

Ingestion: May irritate and cause malaise.

Specific effects: Frequent inhalation of dust over a long period of time increases the risk of developing lung diseases. The product does not contain any carcinogenic substances in amounts to be declared.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

The harmful effects of the product in the environment are considered to be limited.

12.2 Persistence and degradability

The product is expected to be biodegradable.

12.3 Bioaccumulative potential

Bioaccumulation: Is not expected to be bio-accumulable.

12.4 Mobility in soil

The product is water soluble and may spread in water systems.

12.6 Other adverse effects

None known.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations.

14. TRANSPORT INFORMATION

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DOT).

14.1 UN number -

Air (ICAO/IATA):

14.3 Transport hazard class(es) -

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14.4 Packing group -

Sea (IMDG):

14.3 Transport hazard class(es) -

14.4 Packing group -

EmS -

MFAG -

Land (TDG):

14.3 Transport hazard class(es) -

14.4 Packing group -

14.5 Environmental hazards

Marine pollutant (IMDG): -

14.6 Special precautions for user

None known.

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant.

15. REGULATORY INFORMATION

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

NFPA: Health: 1 Fire: 3 Reactivity: 0 Other: -

All chemicals are listed on DSL.

National regulation: SOR/88-66. Controlled Products Regulations with amendments.

16. OTHER INFORMATION

The user must be instructed in the proper work procedure and be familiar with the contents of these instructions.

The information in this Safety Data Sheet has been obtained from current and reliable sources. However, the data is provided without warranty, express or implied, regarding its correctness or accuracy. It is the user's responsibility to determine safe conditions for use of this product and to assume liability for loss injury, damage, or expense resulting from improper use of this product.