

1. Substance/preparation and company identification

Product name: Cerall

Biological seed treatment for fungal disease control
Isolate *Pseudomonas chlororaphis* MA342

Manufacturer/supplier

Lantmännen BioAgri AB
Box 914
S-751 09 Uppsala
Sweden
Telephone no.: + 46 18 67 49 00

2. Composition/information on ingredients

Chemical characterisation of the product:

The product consists of bacteria in a oil emulsion.
Vegetable oil, Isolate *Pseudomonas chlororaphis* MA342,
blue dye and emulgator.

3. Hazards identification

Not a hazardous product according to EU Directive 91-414

4. First aid measures

After inhalation

Not applicable (not volatile)

After skin contact

Rinse with water and soap

After eye contact

Rinse carefully with water for at least 15 minutes

After swallowing

Seek medical advice in case of adverse symptoms

5. Fire-fighting measures

Suitable extinguishing media

Carbon dioxide; Foams; Dry powder

Unsuitable extinguishing media

Water

Special exposure hazards

Fine oil mists may be hazardous.

Special protective equipment for firefighters

Standard

6. Accidental release measures

Personal precautions

Wear gloves when collecting spillage.

Environmental precautions

Handle as organic waste.

Procedures for cleaning

Collect spillage using an adsorbing substance and dispose in accordance with local regulations for organic waste. Store in container for deposit at approved site.

7. Handling and storage

Handling

No special precautions are necessary.

Storage

Store the container closed under cool (+ 4°C to + 8°C) and well ventilated conditions and use the product before the best before date shown at a separate label at the package.

8. Exposure controls and personal protection

Exposure limit values

None set for *Pseudomonas chlororaphis* MA342

Exposure controls

Only for use as a seed treatment.

Occupational exposure controls

Only for use in closed seed treatment systems. Wear suitable protective clothing and gloves

9. Physical and chemical properties

Appearance	Blue liquid
Odour	Weakly sweet with a scent of butyric acid
pH	Near 7
Melting point	<0°C
Flash point	≤150°C,
Explosion hazards	Not applicable.
Oxidising properties	Not applicable
Density	1020 g/L
Solubility	Not soluble in water.
Viscosity	2.5 mPas at 25°C

10. Stability and reactivity

Conditions to avoid	High temperatures
Materials to avoid	Strong oxidising agents
Stability	Stable under normal storage and normal conditions of use
Hazardous decomposition products	None
Hazardous reactions	None

11. Toxicological information

Acute oral toxicity	Acute oral LD ₅₀ : 2 x 10 ¹⁰ cells/kg (<i>P.chlororaphis</i>)
Acute dermal toxicity	No data available
Acute inhalation toxicity	<i>P.chlororaphis</i> is cleared from the lungs within three days of treatment
Irritation (eye, skin, respiratory tract)	Non irritating to eyes and skin
Sensitisation (skin, respiratory)	Non sensitiser (Buehler method)
Repeat dose toxicity	No data available
Mutagenicity	No data available
Carcinogenicity	No data available
Reproductive toxicity	No data available

12. Ecological information

Ecotoxicology	
Fish LC ₅₀	187.2 mg/l (<i>Oncorhynchus mykiss</i>)
Daphnia EC ₅₀	No data available
Algae	No data available
Mobility	Not mobile degrades quickly
Biodegradation	> 90 % after 21 days according to the OECD guidelines (CEC test)

13. Disposal considerations

Product:

There are no uniform regulations concerning disposal of chemicals or unused materials in the EU. Unused chemicals usually count as special waste. Disposal is regulated by national laws or regulations of the individual EU member states. Please contact the relevant agency (state authority or waste disposal company) for information about disposal.

Packaging:

Dispose of in accordance with official regulations. Contaminated packaging must be treated like the substance. Contaminated packaging must be handled in the same way as the product. Unless regulations state otherwise, uncontaminated packaging may be treated as domestic waste or recycled.

14. Transport information

Not classified in RID/ADR, IMDG, ICAO/IATA

15. Regulatory Information

Cerall does not meet the criteria for classification under Council Directives 67/548/EEC, 78/631/EEC and 1999/45/EC.

Xn Harmful

R42	May cause sensitisation by inhalation
R 43	May cause sensitization by skin contact
S2	Keep out of the reach of children
S13	Keep away from food, drink and animal feedingstuffs
S20/21	When using do not eat, drink or smoke
S 22	Do not breathe dust
S 23	Do not breathe spray
S 24	Avoid contact with skin
S36/37	Wear suitable protective clothing and gloves
S45	In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)

16. Other Information

Product for biocontrol.

Used as a seed treatment against seed-borne fungal diseases in field-grown monocotyledonous crops. *Pseudomonas chlororaphis* is classified as a Group 1 biological agent (one that is unlikely to cause human disease) according to Directive 2000/54/EC.

This information is based on our present state of knowledge. It should not be construed as guaranteeing specific properties of the product.