

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture
Product name. : Amase

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

Use of the substance/mixture : Soil amendment

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Lantmännen BioAgri AB
Fågelbacksvägen 3
SE-756 51 Uppsala, SWEDEN
T + 46 (0)18 67 49 00
info@bioagri.se

1.4. Emergency telephone number

Emergency number : + 46 105 561 875

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

The classification corresponds with Directives 67/548/EEC, 99/45/EC and 2001/58/EC

2.2. Label elements

Micro-organisms may have the potential to provoke sensitising reactions. Wear suitable protective clothing (coveralls), suitable protective gloves and suitable respiratory protective equipment when handling the concentrate or applying the product.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixture

Name	Concentration in Colony Forming Units per unit volume
<i>Pseudomonas azotoformans</i> , strain MS100	10 ⁹ -10 ¹⁰ CFU/mL

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact : If irritation occurs, flush skin with plenty of water. Get medical attention if irritation persists.
First-aid measures after eye contact : In case of contact, immediately flush eyes with plenty of water. Remove contact lenses, if worn. If irritation persists, get medical attention.
First-aid measures after ingestion : If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical advice/attention if you feel unwell.

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

Symptoms/injuries : Micro-organisms may have the potential to provoke sensitising reactions.
Symptoms/injuries after inhalation : See above.
Symptoms/injuries after skin contact : See above.
Symptoms/injuries after eye contact : See above.
Symptoms/injuries after ingestion : See above.

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

Symptoms may not appear immediately. In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

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according to Regulation (EC) No. 453/2010

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Carbon dioxide, alcohol foam, dry chemical powder.
Unsuitable extinguishing media : Not available.

5.2. Special hazards arising from the substance or mixture

Reactivity : No dangerous reaction known under conditions of normal use.

5.3. Advice for firefighters

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Use personal protection recommended in Section 8.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

6.2. Environmental precautions

Handle as organic waste.

6.3. Methods and material for containment and cleaning up

For containment : Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container.

Methods for cleaning up : Soak into absorbent material.

6.4. Reference to other sections

See section 8 for further information on protective clothing and equipment and section 13 for advice on waste disposal.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid contact with skin and eyes. Do not swallow. Handle and open container with care. When using do not eat, drink or smoke. When applying the product use disposable filtering facepiece respirator to at least EN149 FFP3 or equivalent.

7.2. Conditions for safe storage, including any incompatibilities

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

Incompatible materials : None known.

7.3. Specific end use(s)

Amase is a soil amendment product based on microorganisms

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls : Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear suitable protective gloves.

Eye protection : Safety glasses or goggles are recommended when using product.

Skin and body protection : Wear suitable protective clothing and suitable respiratory protective equipment.

Environmental exposure controls : Maintain levels below Community environmental protection thresholds.

Other information : Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking. Handle according to established industrial hygiene and safety practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Olive green liquid.

Appearance : Liquid.

Colour : Olive green.

Odour : Mild scent of soil.

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Odour threshold	: No data available.
pH	: 6.29
Relative evaporation rate (butylacetate=1)	: No data available.
Melting point	: < 0 °C
Freezing point	: No data available.
Boiling point	: No data available.
Flash point	: ≤ 150 °C
Self ignition temperature	: No data available.
Decomposition temperature	: No data available.
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available.
Relative vapour density at 20 °C	: No data available.
Relative density	: 1020 g/L
Solubility	: Not soluble in water.
Log Pow	: No data available.
Log Kow	: No data available.
Viscosity, kinematic	: Ca 1.2 cSt at 20°C (Method OECD 114) Ca 0.78 cSt at 40°C (Method OECD 114).
Viscosity, dynamic	: No data available.
Explosive properties	: No explosive properties.
Oxidising properties	: No oxidising properties.
Explosive limits	: No data available.

9.2. Other information

No additional information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No dangerous reaction known under conditions of normal use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reaction known under conditions of normal use.

10.4. Conditions to avoid

Heat.

10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

Not applicable.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

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

Summary of acute toxicity studies		
Study type	Test item	Findings
Acute oral toxicity (rats)	<i>Pseudomonas azotoformans strain MS100</i>	LD ₅₀ > 2000 mg/kg bw

Skin corrosion/irritation : Based on available data, the classification criteria are not met.

Summary of Dermal irritation studies		
Study type	Test item	Findings
Dermal irritation (rabbits)	<i>Pseudomonas azotoformans strain MS100</i>	Non-irritating

Serious eye damage/irritation : Based on available data, the classification criteria are not met.

Summary of eye irritation/corrosion studies		
Study type	Test item	Findings
Eye irritation/corrosion (rabbits)	<i>Pseudomonas azotoformans strain MS100</i>	Non-irritating

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Germ cell mutagenicity	: Not tested
Carcinogenicity	: Not tested
Reproductive toxicity	: Not tested
Specific target organ toxicity (single exposure)	: Not tested
Specific target organ toxicity (repeated exposure)	: Not tested

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Does not raise any concerns for the environment

12.2. Persistence and degradability

Amase	
Persistence and degradability	Not established.
Biodegradation	Not established.

12.3. Bioaccumulative potential

Amase	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available.

12.5. Results of PBT and vPvB assessment

No additional information available.

12.6. Other adverse effects

No additional information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in accordance with local, state, provincial, and federal regulations.

SECTION 14: Transport information

Not classified in regard to transportation by ADR/RID, IMDG, IMO and IATA.

14.1. UN number

No dangerous good in sense of transport regulations.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

Not applicable.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Special precautions for user

Special transport precautions : Do not handle until all safety precautions have been read and understood.

14.6.1. Overland transport

No additional information available.

14.6.2. Transport by sea

No additional information available.

14.6.3. Air transport

No additional information available

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

Not applicable

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according to Regulation (EC) No. 453/2010

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

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15.1.2. National regulations

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15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Other information : None.

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.