Actinovate® SP

Safety Data Sheet

according to the federal final rule of hazard communication revised on 2012 (HazCom 2012)

Date of issue: 05/24/2017 Version: 1.0

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

1.1. Product identifier

Trade name : Actinovate® SP Biological Fungicide

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

Use of the substance/mixture : Biofungicide

1.3. Details of the supplier of the safety data sheet

Novozymes BioAg
3101 W. Custer Ave

Milwaukee WI

53209
Telephone 1-888-744-5662

1.4. Emergency telephone number

Emergency number : 1-888-744-5662
Available 24 hours a day 7 days a week from April 1st to June 15th, otherwise available from 8:00am to 4:30pm CST, Monday to Friday.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

GHS-US classification

Comb. Dust

Full text of H-statements: see section 16

2.2. Label elements

GHS-US labelling

Signal word (GHS-US) : Warning

Hazard statements (GHS-US) : May form combustible dust concentrations in air

2.3. Other hazards

No additional information available

2.4. Unknown acute toxicity (GHS-US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Active ingredients:
Streptomyces lydicus WYEC 108 0.037% w/w

This mixture does not contain any substances to be mentioned according to the criteria of Appendix D to Regulations 29 CFR 1910.1200.

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Allow breathing of fresh air. Allow the victim to rest. If not breathing, give artificial respiration, preferably mouth to mouth. Immediately get medical attention.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse. If skin irritation occurs: Get medical advice/attention.

First-aid measures after eye contact : Rinse immediately and thoroughly, pulling the eyelids well away from the eye (15 minutes minimum). Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Rinse mouth. Give water to drink if victim completely conscious/alert. Obtain emergency medical attention. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

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

Symptoms/injuries	:	Not expected to present a significant hazard under anticipated conditions of normal use. This product contains beneficial microorganisms. Novozymes exclusively uses non-pathogenic beneficial microorganisms that are considered to be non-allergenic, non-irritating and non-sensitizing when used as directed. Exposure to very high levels of airborne microbial spores may result in very rare respiratory impairments or cause an allergic reaction in sensitized individuals. This product may cause adverse effects to individuals allergic to molds and/or fungi and should not be used by immunocompromised and/or immunosuppressed individuals.
Symptoms/injuries after inhalation	:	Possible respiratory damage following repeated or prolonged inhalation.
Symptoms/injuries after eye contact	:	May cause slight irritation.
Symptoms/injuries after ingestion	:	Irritation of mucous membranes.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Foam. Dry powder. Carbon dioxide. Water spray. Sand. Use extinguishing media appropriate for surrounding fire.
Unsuitable extinguishing media	:	Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Explosion hazard	:	Accumulation of airborne dusts may present an explosion hazard in the presence of an ignition source. Avoid static electricity discharges.
Reactivity	:	Thermal decomposition generates : Carbon dioxide. Carbon monoxide. hydrocarbons.

5.3. Advice for firefighters

Firefighting instructions	:	Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.
Protective equipment for firefighters	:	As in any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures	:	Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment	:	Equip cleanup crew with proper protection.
Emergency procedures	:	Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	:	On land, sweep or shovel into suitable containers. Minimize generation of dust. Store away from other materials. Collect all waste in suitable and labelled containers and dispose according to local legislation. Wash contaminated area with large amounts of water.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling	:	Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Ensure adequate ventilation. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Use before expiration date printed on package.
Hygiene measures	:	Handle in accordance with good industrial hygiene and safety practices. Wash hands thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions	:	Keep only in the original container in a cool, well ventilated place away from: Direct sunlight, Heat sources. Keep from overheating or freezing. Keep away from food, drink and animal feeding stuffs. Keep container tightly closed.

Incompatible materials	:	Acids. Bases. Oxidizing agents. Reducing agents. Disinfectants, fungicides, and/or biocides may inactivate.
Storage temperature	:	40 – 85 °F (4-29 °C)

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls	:	Ensure adequate ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Personal protective equipment	:	Avoid all unnecessary exposure. Protective goggles. Gloves. Protective clothing. Insufficient ventilation: wear respiratory protection.

Hand protection	:	Wear protective gloves.
Eye protection	:	Chemical goggles or safety glasses.
Skin and body protection	:	Wear suitable protective clothing.
Respiratory protection	:	Where exposure through inhalation may occur from use, approved respiratory protection equipment is recommended.
Other information	:	Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Pale white powder.
Colour	:	Pale white
Odour	:	Slight odour of rich soil
Odour threshold	:	No data available
pH	:	8.3
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	Not applicable
Flash point	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Explosive limits	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Vapour pressure	:	Not applicable
Relative density	:	No data available
Relative vapour density at 20 °C	:	Not applicable
Density	:	5.5
Solubility	:	Water: Soluble
Log Pow	:	No data available
Log Kow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	Not applicable
Viscosity, kinematic	:	Not applicable

Viscosity, dynamic	:	Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable.

10.2. Chemical stability

Stable under normal conditions of handling and storage for up to 6 months from the date of manufacture.

10.3. Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4. Conditions to avoid

Heat sources. Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Acids. Bases. oxidizing agents. Reducing agents. Disinfectants, fungicides, and/or biocides may inactivate.

10.6. Hazardous decomposition products

Thermal decomposition generates : Carbon monoxide. Carbon dioxide. hydrocarbons.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	:	Not classified (Based on available data, the classification criteria are not met)
Skin corrosion/irritation	:	Not classified (Based on available data, the classification criteria are not met) pH: 8.3
Serious eye damage/irritation	:	Not classified (Based on available data, the classification criteria are not met) pH: 8.3
Respiratory or skin sensitisation	:	Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	:	Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	:	Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	:	Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity (single exposure)	:	Not classified (Based on available data, the classification criteria are not met)
Specific target organ toxicity (repeated exposure)	:	Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	:	Not classified (Based on available data, the classification criteria are not met)
Symptoms/injuries after inhalation	:	Possible respiratory damage following repeated or prolonged inhalation.
Symptoms/injuries after eye contact	:	May cause slight irritation.
Symptoms/injuries after ingestion	:	Irritation of mucous membranes.

SECTION 12 : Ecological information

12.1. Toxicity

No additional information available

12.2. Persistence and degradability

Actinovate® SP	
Persistence and degradability	Not established.

12.3. Bioaccumulative potential

Actinovate® SP	
Bioaccumulative potential	Not established.

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on ozone layer : No additional information available

Effect on the global warming : No additional information available

Other information : Avoid release to the environment. For terrestrial uses: Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment wash waters or rinsate.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, offer remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR

No additional information available

Transport by sea

No additional information available

Air transport

No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory except for:

Clinoptilolite	CAS No 12173-10-3	0.2078%

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

15.2. International regulations

No additional information available

National regulations

Actinovate® SP
This material is considered hazardous according to the criteria of the US OSHA Hazard Communication Standard (29 CFR 1910.1200). This product is regulated by the US Environmental Protection Agency under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and its Amendments.

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer and/or reproductive harm

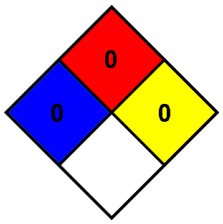
SECTION 16: Other information

Abbreviations and acronyms	:	CAS - Chemical Abstracts Service. GHS - Globally Harmonised System. HCS - Hazard Communication Standard. OSHA - Occupational Safety and Health Administration.
Date of SDS preparation	:	2015/06/12
Other information	:	None.

Full text of H-statements:

Comb. Dust	Combustible Dust
H232	May form combustible dust concentrations in air

NFPA health hazard	:	0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.
NFPA fire hazard	:	0 - Materials that will not burn.
NFPA reactivity	:	0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



SDS US (GHS HazCom 2012)

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.

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