

SAFETY DATA SHEET for Co-Pack

Revision date: 2022/11/28

Version No: 3

Compliant with 29 CFR §1910.1200 HCS 2012

Compliant with HPR WHMIS 2015

Optimize® FXC-DS

Product Name Optimize® FXC-DS

The above-mentioned Novozymes' co-pack product contains the following Novozymes' products. This document contains their safety data sheets.

LCO Liquid Additive (Component A)

Liquid Bladder (Component B)

SAFETY DATA SHEET

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LCO Liquid Additive (Component A)

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	LCO Liquid Additive (Component A)
Chemical Name.	Lipo-chitooligosaccharide (LCO)
Use of the substance/preparation	Fertilizer
Contact Manufacturer	Novozymes BioAg 3101 W. Custer Ave Milwaukee WI 53209 Telephone 1-888-744-5662
Information Telephone 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.
Emergency Telephone Number	1-800-424-9300 (Chemtrec) 24 hours every day

2. HAZARDS IDENTIFICATION

Classification

Classification of the chemical in accordance with 29CFR §1910.1200

WHMIS Classification

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Label elements

Hazards not otherwise classified (HNOC)

Not Applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Sodium polynaphthalenesulfonate	9084-06-4	1 - 5

The product contains no substances which at their given concentration, are considered to be hazardous to health

4. FIRST AID MEASURES

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water.
Inhalation	Move to fresh air.
Ingestion	Clean mouth with water and afterwards drink plenty of water.

Notes to Physician

Treat symptomatically

5. FIRE-FIGHTING MEASURES

Flammable Properties	Slightly flammable according to HMIS criteria.
Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable Extinguishing Media	None.
Hazardous Combustion Products	None.
Specific Hazards Arising from the Chemical	No information available.
Protective Equipment and Precautions for Firefighters	Self-contained breathing apparatus and standard turn-out apparel.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	For personal protection see section 8.
Environmental Precautions	Collect spillage.
Methods for cleaning up	Avoid formation of dust and aerosols. Sweep up or vacuum up spillage and collect in suitable container for disposal.
Other Information	For personal protection see section 8.

7. HANDLING AND STORAGE

Handling	Avoid formation of dust and aerosols. Ensure adequate ventilation
Storage	Keep container tightly closed. To maintain product quality, do not store in heat or direct sunlight. Keep in a dry, cool and well-ventilated place.
Temperature	4-20°C (39-68°F).
Storage Conditions	In unbroken packaging - dry and protect from the sun. The product has been formulated for optimal stability. Extended storage or adverse conditions such as higher temperatures or higher humidity may lead to a higher dosage requirement.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure controls	
Engineering Controls	Ensure adequate ventilation, especially in confined areas Maintain good conditions of industrial hygiene. Some processes may require enclosures, local exhaust ventilation, or other engineering controls to control airborne levels. Additional handling and healthy/safety information is available upon request

Personal Protective Equipment

Respiratory protection

No special protective equipment required

Eye Protection

Wear safety glasses with side shields (or goggles)

Skin and body protection

No special technical protective measures are necessary

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	Liquid
Color	Light amber
Odor	Slight fermentation odor
Odor threshold	No information available
pH	7.0
Boiling Point/Range	No information available
Melting Point/Range	No information available
Flash Point	> 100 °C
Freezing point 1	No information available
Flammability (solid, gas)	No information available
Explosive Properties	No information available
Oxidizing Properties	No information available
Autoignition temperature	No information available
Vapor Pressure	No information available
Decomposition temperature	No information available
Vapor Density	No information available
Density (g/ml)	1.29
Evaporation rate	No information available
Solubility	No information available
Partition Coefficient (n-octanol/water)	No information available
Viscosity	No data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions

Conditions to Avoid

None

Materials to avoid

None

Hazardous Decomposition Products

None

Possibility of hazardous reactions

None

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

This product has no known adverse effect on human health.

Inhalation

May cause irritation of respiratory tract

Eye contact

May cause temporary eye irritation

Skin contact

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LCO Liquid Additive (Component A)

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Substance may cause slight skin irritation

Chemical name	Acute oral toxicity	Acute inhalation toxicity	Skin corrosion/irritation	Serious eye damage/eye irritation
Sodium polynaphthalenesulfonate	LD50: > 2000 mg/kg bw (OECD TG 401, 420)		Not irritating (OECD TG 404)	Not irritating (OECD TG 405)

Chemical name	Specific target organ toxicity (single exposure)	Specific target organ systemic toxicity (repeated exposure)	Genetic toxicity	Skin sensitization	Respiratory sensitization
Sodium polynaphthalenesulfonate					Sensitizer (Human experience)

12. ECOLOGICAL INFORMATION

Toxicity

Not a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Chemical name	Daphnia, acute	Algae, acute	Fish, acute
Sodium polynaphthalenesulfonate	EC50 (48 hours): 31.7 - 457 mg aep/l (OECD TG 202)	ErC50 (72 hours): >= 5.2 mg aep/l (OECD TG 201)	LC50 (96 hours): 58.3 - 326.7 mg aep/l (OECD TG 203)

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Sodium polynaphthalenesulfonate	-	-	-	-

Persistence/Degradability

Inherently biodegradable

Chemical name	Persistence and degradability	Partition coefficient (n-octanol/water)
Sodium polynaphthalenesulfonate	Readily biodegradable (OECD 301)	LogPow: <0

Bioaccumulative Potential

Bioaccumulation is unlikely

Chemical name	Bioaccumulative Potential
Sodium polynaphthalenesulfonate	Does not bioaccumulate

Mobility in soil

Not relevant

13. DISPOSAL CONSIDERATIONS

Disposal of wastes

Dispose of in accordance with local regulations.

Contaminated Packaging

Dispose of wastes in an approved waste disposal facility.

14. TRANSPORT INFORMATION

Transport Regulations

Not regulated as Dangerous goods by DOT and TDG.

No special precautions required

Transport hazard class(es)

not applicable

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Compliant with 29 CFR §1910.1200 HCS 2012

Compliant with HPR WHMIS 2015

Liquid Bladder (Component B)

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Liquid Bladder (Component B)
Chemical Name.	Microbial inoculant
Use of the substance/preparation	Fertilizer
Contact Manufacturer	Novozymes BioAg 3101 W. Custer Ave Milwaukee WI 53209 Telephone 1-888-744-5662
Information Telephone 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.
Emergency Telephone Number	1-800-424-9300 (Chemtrec) 24 hours every day

2. HAZARDS IDENTIFICATION

Classification

Classification of the chemical in accordance with 29CFR §1910.1200

WHMIS Classification

Label elements

This product is not classified as hazardous according to the UN GHS guideline and labeling is not required

Hazards not otherwise classified (HNOC)

Not Applicable

3. COMPOSITION/INFORMATION ON INGREDIENTS

Microorganism blend on a natural carrier; none of the ingredients of the mixture are hazardous.

The product contains no substances which at their given concentration, are considered to be hazardous to health

4. FIRST AID MEASURES

Eye Contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
Skin Contact	Wash off immediately with soap and plenty of water.
Inhalation	Move to fresh air.
Ingestion	Clean mouth with water and afterwards drink plenty of water.
Notes to Physician	No information available

5. FIRE-FIGHTING MEASURES

Flammable Properties	Slightly flammable according to HMIS criteria.
Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable Extinguishing Media	None.
Hazardous Combustion Products	None.
Specific Hazards Arising from the Chemical	No information available.
Protective Equipment and Precautions for Firefighters	Self-contained breathing apparatus and standard turn-out apparel.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions	For personal protection see section 8.
Environmental Precautions	None known.
Methods for cleaning up	Avoid formation of dust and aerosols. Sweep up or vacuum up spillage and collect in suitable container for disposal.
Other Information	For personal protection see section 8.

7. HANDLING AND STORAGE

Handling	Avoid formation of dust and aerosols. Ensure adequate ventilation
Storage	Keep container tightly closed. To maintain product quality, do not store in heat or direct sunlight. Keep in a dry, cool and well-ventilated place.
Temperature Storage Conditions	0-25 °C (32-77 °F). In unbroken packaging - dry and protect from the sun. The product has been formulated for optimal stability. Extended storage or adverse conditions such as higher temperatures or higher humidity may lead to a higher dosage requirement.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure controls Engineering Controls	Ensure adequate ventilation, especially in confined areas Maintain good conditions of industrial hygiene. Some processes may require enclosures, local exhaust ventilation, or other engineering controls to control airborne levels. Additional handling and healthy/safety information is available upon request
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Personal Protective Equipment

Respiratory protection

No special protective equipment required

Eye Protection

Wear safety glasses with side shields (or goggles)

Skin and body protection

No special technical protective measures are necessary

General Hygiene Considerations

Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls

Local authorities should be advised if significant spillages cannot be contained

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state

Liquid

Color

Beige to brown

Odor

Slight fermentation odor

Odor threshold

No information available

pH

No information available

Boiling Point/Range

No information available

Melting Point/Range

No information available

Flash Point

No data available

Freezing point 1

No information available

Flammability (solid, gas)

No information available

Explosive Properties

No information available

Oxidizing Properties

No information available

Autoignition temperature

No information available

Vapor Pressure

No information available

Decomposition temperature

No information available

Vapor Density

No information available

Density (g/ml)

1

Evaporation rate

No information available

Solubility

No information available

Partition Coefficient (n-octanol/water)

No information available

Viscosity

No data available

10. STABILITY AND REACTIVITY

Chemical stability

Stable under recommended storage conditions

Conditions to Avoid

None

Materials to avoid

None

Hazardous Decomposition Products

None

Possibility of hazardous reactions

None

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

This product has no known adverse effect on human health.

12. ECOLOGICAL INFORMATION

Toxicity

Contains no hazardous ingredients according to GHS

Persistence/Degradability

Inherently biodegradable

Bioaccumulative Potential

Bioaccumulation is unlikely

Mobility in soil

Not relevant

13. DISPOSAL CONSIDERATIONS

Disposal of wastes

Waste water should be discharged to sewage treatment plant.

Contaminated Packaging

Dispose of wastes in an approved waste disposal facility.

14. TRANSPORT INFORMATION

Transport Regulations

Not regulated as Dangerous goods by DOT and TDG.

No special precautions required

Transport hazard class(es)

not applicable

Packing group

not applicable

Environmental hazards

not applicable

15. REGULATORY INFORMATION

USA, Federal Regulations

TSCA Inventory

All ingredients are listed on TSCA inventory

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and 40 CFR Part 372.

SARA 311/312 Hazardous Categorization

Acute health hazard	No
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Chronic Health Hazard	No
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Fire hazard	No
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Sudden Release of Pressure Hazard	No
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Reactive Hazard	No
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USA, State Regulations

California Proposition 65

This product does not contain any intentionally added Proposition 65 chemicals.

Canada

DSL/NDSL

Does not Comply

WHMIS Statement

This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by WHMIS 2015.

16. OTHER INFORMATION

Training advice No information available

GHS-Classification The GHS calculation method has been used for classification of this mixture.

Disclaimer The information provided on this SDS is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text. Furthermore, as the conditions of use are beyond the control of Novozymes, it is the responsibility of the customer to determine the conditions of safe use of these products.

End of Safety Data Sheet

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End of Safety Data Sheet