



SAFETY DATA SHEET
NutriSphere-NL
for Liquid Nitrogen Fertilisers
Date reviewed: 14/08/2018
Revision No.: 4

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

1.1: Product Identifier

Trade name: NutriSphere-NL for Liquid Nitrogen Fertilisers.
Aqueous solution of maleic-itaconic copolymer partial calcium salt.

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

Registered uses: Agronomic additive for liquid nitrogen fertilisers.
Uses advised against: None known.

1.3: Details of the supplier of the safety data sheet

Company name: Verdesian Life Sciences LLC
1001 Winstead Drive
Cary, North Carolina
NC-27513, USA

Telephone: +1 919 825 1901

European contact name: Verdesian Life Sciences Europe Ltd
Address: 7 Rotherbrook Court
Bedford Road, Petersfield
GU32 3QG, UK

Telephone: +44 (0)1730 720 100

Homepage: www.vlsci.com

1.4: Emergency telephone number

Emergency telephone: +44 (0)1235 239 670 (24 hour)

Section 2: Hazards Identification

2.1 Classification of the substance or mixture

Classification under CLP: Skin corrosive. 1/Eye damage 1: H314
Skin sensitiser 1: H317

2.2 Label Elements (In compliance with EC Regulation No. 1272/2008 (CLP), as amended)

Hazard pictograms:



Signal word:

Danger

SAFETY DATA SHEET
NutriSphere-NL
for Liquid Nitrogen Fertilisers

Page 2 of 8

H-Statements

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.

Precautionary-Statements

P260	Do not breathe spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P333 + P313	If skin irritation or rash occurs: Get medical advice.
P363	Wash contaminated clothing before reuse.

2.3 Other hazards

Further hazards were not determined with the current level of knowledge.

Section 3: Composition/information on ingredients

Product type: This product is a mixture.

CAS No.	EEC No.	Substance Name	Classification*	Range (%)
877469-38-0		Maleic-itaconic copolymer, partial calcium salt	-	30 - 50
110-16-7	203-742-5	Maleic acid	Acute Tox. 4: H302 Skin Irrit. 2: H315 Skin Sens. 1: H317 Eye Irrit. 2: H319 STOT SE 3: H335	< 1

*For full text of H statements see Section 16

Section 4: First Aid Measures

4.1 Description of first aid measures

Inhalation:	Remove casualty from exposure ensuring one's own safety whilst doing so. Ensure supply of fresh air. Consult a doctor.
Skin contact:	Remove all contaminated clothes and footwear immediately unless stuck to the skin. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Consult a doctor.
Eye contact:	Remove contact lenses, if present and easy to do so. Bathe the eye with running water for 15 minutes. Consult a doctor.
Ingestion:	Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation:	There may be irritation of the throat with a feeling of tightness in the chest.
Skin contact:	Causes severe skin burns.
Eye contact:	Causes eye damage.
Ingestion:	Causes soreness and redness of the mouth and throat and gastrointestinal tract irritation. Nausea and stomach pain may occur. There may be vomiting.

Delayed/immediate effects: Immediate effects can be expected after short-term exposure.

4.3 Indication of any immediate medical attention and treatment needed

Immediate/special treatment: Not applicable. Treat symptomatically.

Section 5: Firefighting Measures

5.1 Extinguishing media

Suitable:	Foam, dry powder, water spray jet, carbon dioxide.
Unsuitable:	Not determined

5.2 Special hazards arising from the substance or mixture

Exposure hazards:	Risk of formation of toxic pyrolysis products: Carbon oxides (COx), Nitrogen oxides (NOx).
--------------------------	--

5.3 Advice for firefighters

Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin or eyes. Fire residues and contaminated firefighting water must be disposed of in accordance with local regulations.

Section 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to Section 8 of the SDS. If outside do not approach from downwind and keep bystanders away from danger point. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent escape of liquid. High risk of slipping due to leakage/spillage of product. Use personal protective equipment.

6.2 Environmental Precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding to prevent spread over a wide area.

6.3 Methods for cleaning up

Clean-up procedures: Absorb into an absorbent material (e.g. sand, sawdust, universal absorbent, diatomaceous earth). Transfer to a closeable, labelled salvage container for disposal in accordance with local regulations.

6.4 Reference to other sections

Reference to other sections: Refer to Section 8 and 13 of the SDS.

Section 7: Handling and Storage

7.1 Precautions for safe handling

Handling: The normal safety precautions for handling chemicals must be observed. Avoid direct contact with the substance. Use only in well ventilated areas. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Use skin barrier cream.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions: Store in cool, dry, well ventilated area. Keep container tightly closed. Do not store together with animal feed/diet. Protect from frost. The floor of the storage area must be impermeable to prevent the escape of liquids.

Suitable packaging: Must only be kept in original packaging.

7.3 Specific end use(s)

Specific end use: See product use, Section 1.2.

Section 8: Exposure controls/personal protection

8.1 Control parameters

Workplace exposure limits: No data available.
DNEL/PNEC: No data available.

8.2 Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.
Environmental: Comply with applicable environmental regulations limiting discharge to air, water and soil. Prevent from entering public sewers.
Hand protection: Use impermeable gloves.
Eye protection: Safety glasses. Ensure eye bath is to hand.
Skin protection: Impermeable protective clothing.
Respiratory protection: Use self-contained breathing apparatus in the event of aerosol or mist formation.
Thermal hazards: Not applicable.

Section 9: Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Form/state	Liquid	Explosion limit	No data available
Colour	Tan to brown	Vapour pressure	No data available
Odour	No data available	Vapour density	No data available
Odour threshold	No data available	Relative density	1.888 – 1.155 g/ml

SAFETY DATA SHEET
NutriSphere-NL
for Liquid Nitrogen Fertilisers

Page 5 of 8

pH	1.15-1.45	Solubility in water	Miscible
Melting point	No data available	Part. Coeff. N-octanol/water	No data available
Freezing point	No data available	Auto-ignition temperature	No data available
Initial boiling point	No data available	Decomposition temperature	No data available
Boiling range	No data available	Viscosity	< 50 cP
Flash point	No data available	Explosive properties	No data available
Evaporation rate	No data available	Oxidizing properties	No data available
Flammability	No data available		

9.2 Other information

Other information: No data available.

Section 10: Stability and Reactivity

10.1 Reactivity

Reactivity: Not reactive under normal conditions.

10.2 Chemical stability

Chemical stability: Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Hazardous reactions: Exposure to excessively high pH may lead to ammonia gas evolution. Can react with metals to give off hydrogen, heat and/or steam. Can react with bases and metal oxides with high evolution of heat and/or steam. Can react with carbonates to give off carbon dioxides, heat and/or steam

10.4 Conditions to avoid

Conditions to avoid: Incompatible materials.

10.5 Incompatible materials

Materials to avoid: Strong oxidising agents. Strong reducing agents. Materials incompatible with water. Materials incompatible with calcium salts. Materials incompatible with carboxylates.

10.6 Hazardous decomposition products

Carbon oxides. Nitrogen oxides (NOx).

Section 11: Toxicological Information

11.1 Acute toxicity

Acute Toxicity	Oral LD ₅₀ > 2000 mg/kg
Eye damage/irritation:	Eye damage 1
Skin corrosion/irritation:	Skin corrosive 1
Respiratory or Skin sensitisation:	Skin sensitiser 1
STOT (single exposure):	Not determined
STOT (repeated):	Not determined

SAFETY DATA SHEET
NutriSphere-NL
for Liquid Nitrogen Fertilisers

Page 6 of 8

Germ cell mutagenicity:	Not determined
Carcinogenicity:	Not determined
Reproductive and lactation toxicity:	Not determined
Aspiration hazard:	Not determined

General remarks

May cause respiratory tract irritation.

The skin corrosive 1 and eye damage 1 classification is based upon the $\text{pH} \leq 2$. The product was classified on the basis of calculation procedure of the CLP Regulation. Toxicological data of complete product are not available.

Section 12: Ecological Information

12.1 Toxicity

General remarks

The product was classified on the basis of calculation procedure of the CLP Regulation. Ecological data of complete product are not available.

12.2 Persistence and degradability

Persistence/biodegradability: No data available.

12.3 Bio accumulative potential

Bioaccumulative potential: No data available.

12.4 Mobility in soil

Mobility: No data available.

12.5 Results of PBT and vPvB assessment

PBT identification: This product has not been evaluated for PBT/vPvB characteristics.

12.6 Other adverse effects

Ecological data of complete product are not available. Based on the calculation procedure of the CLP Regulation no ecological classification is required.

Section 13: Disposal Considerations

13.1 Waste treatment methods

Disposal procedure: Transfer to a suitable container and arrange for collection by specialised disposal company.

Recovery operations: Not applicable.

Disposal of packaging: Dispose of as normal industrial waste at an approved site.

N.B.: The users attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport Information

14.1 UN Number

UN number: UN 1760

14.2 UN proper shipping name

Shipping name: Corrosive Liquid n.o.s (Maleic-itaconic copolymer, partial calcium salt)

14.3 Transport hazard classes

Transport class: 8

14.4 Packing group

Packing group: III

14.5 Environmental hazards

Environmentally hazardous: No

14.6 Special precautions for user

Special precautions: No special precautions. See relevant information in Sections 6 to 8.

Section 15: Regulatory Information

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

Specific regulations: Not applicable.

15.2 Chemical Safety Assessment

A chemical safety assessment has not been carried out for the substances in this mixture.

Section 16: Other Information

Phrases in Sections 2-3:

- H302 Harmful if swallowed.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H335 May cause respiratory irritation.

Other information: This safety data sheet is prepared in accordance with Regulation (EC) No. 1907/2006 (REACH) and 1272/2008 (CLP) as amended in each case.

Abbreviations:

- CLP: Classification, Labelling and Packaging.
- DNEL: Derived No Effect Level.
- LC50: Lethal concentration, 50%.
- LD50: Median lethal dose.

SAFETY DATA SHEET
NutriSphere-NL
for Liquid Nitrogen Fertilisers

Page **8** of **8**

OECD: Organisation for Economic Co-operation and Development.

PBT: Persistent, Bioaccumulative and Toxic substance.

PNEC: Predicted No-Effect Concentration.

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals.

VOC: Volatile Organic Compound.

vPvB: Very Persistent and very Bioaccumulative.

Legal disclaimer:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The company shall not be held liable for any damage resulting from handling or from contact with the above product.