

MYCOspikes

Version 2

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Date: 2007-05-03

Supersedes version from 2006-05-12

1. IDENTIFICATION OF THE SUBSTANCE/PRODUCT AND OF THE COMPANY/UNDERTAKING

- 1.1 Identification of the Substance or Preparation:** **MYCOspikes 6-10-10**
- 1.2 Intended use of the Substance/Preparation:** Formulation of macro and micro nutrients, biostimulants and beneficial micro-organisms use in the cultivation of trees and shrubs.
- 1.3 Company/Undertaking Identification:** NOVOZYMES BIOLOGICALS FRANCE S.A.
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Stephanie REDONDI srdo@novozymes.com
- 1.4 Emergency Telephone Number:** +33 (0)1 30 15 28 40 (workhours)

2. HAZARDS IDENTIFICATION

- Most Important Hazards:** The preparation is classified as dangerous according to the criteria laid down in Council Directives 67/548/EEC (Annexe VI of directive 2001/59/EC) and 1999/45/EC
Xn, R22 "Harmful if swallowed"
Xi, R36/37/38 "Irritating to eyes, respiratory system and skin"
R 52/53 Harmful to aquatic organism. May cause long-term adverse effects in the aquatic environment
- Most Important Adverse Human Effects:** The preparation has been classified as potentially harmful if swallowed and an irritant to eyes, skin and respiratory system.
- Environmental hazards** Harmful to aquatic organism. May cause long-term adverse effects in the aquatic environment

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical/trade name	Quantity %	Symbols	R phrase	CAS No.	EINECS, ELINCS
Ammonium sulphate	10-25	Xn	22, 36/37/38	7783-20-2	231-984-1
Ammonium phosphate	10-25	Xn	36/37/38	7722-76-1	231-764-5
Potassium sulphate	10-25	Xn	22	7778-80-5	231-915-5
Iron oxy-sulphate (50%)	5-10	Xn	22	N/A	N/A
Manganese sulphate	2.5-25	Xn, N	20/22, 48, 51/53	7785-87-7	232-089-9

Other raw materials are either non-hazardous, or carry a 'hazard' label but are present at <0.5%

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4. FIRST-AID MEASURES

- Exposure by inhalation: Remove victim to fresh air. Seek medical attention if symptoms occur.
- Exposure by skin and eye contact: Skin - Immediately wash affected area thoroughly with water. Seek medical attention if irritation develops.
Eyes: Immediately flush eyes with plenty of water and seek medical attention if irritation develops.
- Exposure by ingestion: Do not induce vomiting. Drink fluids to dilute. Seek medical attention.

5. FIRE FIGHTING MEASURES

- Suitable Extinguishing Media: Water, foam, dry chemical or carbon dioxide extinguishers may be used.
- Extinguishing media not to be used: None
- Specific Exposure Hazards: If the substance is involved in a fire, oxides of carbon and nitrogen may be evolved.
- Protective Equipment for firefighters: Full protective clothing and self-contained breathing apparatus should be worn.

6. ACCIDENTAL RELEASE MEASURES

- Personal Precautions: Evacuate personnel from immediate vicinity. Wear appropriate protection clothing (goggles, gloves, mask). Refer to section 8.
- Environmental Precautions: Avoid excessive release to drains. Harmful for aquatic organisms.
- Methods for Cleaning Up: Stop the leak or release at source. Absorb spillages with a suitable inert material (e.g. sand or soil) or vacuum pump. Transfer the spillage to waste containers labelled in the same way as the original containers. Clean the spillage area with water and detergent. Small releases should not pose any hazard to the local environment.
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7. HANDLING AND STORAGE

7.1 Handling:

Precautions: The substance should be handled under conditions of good industrial hygiene and in accordance with any local regulations in order to avoid unnecessary exposure.

Technical Measures: The use of gloves is recommended to reduce exposure to the preparation.

Specific Requirements: None.

7.2 Storage:

Specific design for Storage rooms or vessels: None

Incompatible Materials: Strong acids or alkali compounds may inactivate biological cultures. Strong oxidising agents. Do not store in metallic containers

Conditions of Storage: Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Avoid freezing temperatures and above 45 °C.

Quantity Limits: None

Packaging Materials: Empty packaging can be recycled or reused.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure limit value

VME 8h dusts =10 mg/m³ (particles of a diameter < 100µ) and 5 mg/m³ (particle of a diameter < 5µ)

8.2 Professional exposure control

Engineering Measures: Engineering controls such as LEV are recommended to reduce exposure to the preparation

Specific Control Parameters: None

Personal Protective Equipment: The provision of personal protective equipment and the need to provide engineering control measures should be decided upon by the user as part of a formal exposure risk assessment. Based upon the available toxicological information the protective measures described below should be regarded as a minimum.

Respiratory Protection: If operating conditions create high airborne concentrations of this material, based upon available information and in the absence of occupational exposure limits the use of a vapour mask to a minimum standard of EN405 FFA1P1 is recommended.

Hand Protection: Avoid skin contact. Protective gloves to a Standard EN374 should be provided. Usage periods should not exceed the breakthrough times for the chemical stated by the

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manufacturer of the glove.

Eye Protection: Care should be used to prevent eye exposure and eye protection should be used when handling the preparation. The protection should be capable of giving chemical protection as classified in BS2092 or EN166.

Skin Protection: Avoid skin contact. In case of prolonged/frequent direct handling of the material it is recommended to wear protective clothing as classified by Standard NF EN 13982-1 (type 5).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brown solid
Odour:	Mild, organic
pH (10% dispersion):	6.0 – 7.5
Boiling Point/Boiling Range:	Not applicable
Melting Point/Melting Range:	Not applicable
Flash Point:	Not determined
Flammability (Solid, Gas):	Not applicable
Autoflammability:	Not determined
Explosive Properties:	Predicted not explosive based on chemical structure.
Oxidising Properties:	Not determined
Vapour Pressure:	Not applicable
Relative Density:	0.8 @ 25 °C
Solubility	- Water solubility: <15% (dry product)
	- Fat solubility: Not determined
Partition coefficient n-octanol/water:	Not determined
Other Data:	None available

10. STABILITY AND REACTIVITY

Conditions to Avoid: Excessive temperature variations, below 0°C or above 45 °C

Materials to Avoid: Strong acids or alkali compounds may inactivate biological cultures. Avoid contact with oxidising agents.

Hazardous Decomposition Products: None anticipated

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11. TOXICOLOGICAL INFORMATION

11.1 Acute toxic effects

11.1.1	Ingestion, LD50 Rat oral (mg/kg):	Not determined
11.1.2	Inhalation, LC50 Rat inhalation (mg/l/4h):	Not determined
11.1.3	Skin, LD50 Rat dermal (mg/kg)	Not determined

11.2 Local effects

11.2.2	Skin irritation	Not determined
11.2.2	Eye irritation	Not determined

11.3 Sensitization

11.3.1	By skin contact	Not determined
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Potentially harmful if swallowed.

Contact with eyes, skin and respiratory tract may cause irritation.

The product is formulated using a range of micro-organisms specially selected from the natural environment and that are known to be non-pathogenic to humans, animals or plants. It is advised to cover open wounds when in use.

12. ECOLOGICAL INFORMATION

Mobility: Components of this preparation are largely miscible or insoluble in water. Therefore, it is likely to distribute predominantly to the terrestrial environment.

Biodegradability: The preparation is expected to biodegrade rapidly. However no information on anaerobic biodegradation is available.

Accumulation: Not anticipated to bioaccumulate due to high water solubility and hence, biomagnification is not likely.

Ecotoxicity: The preparation is classified as harmful to aquatic organisms.
No data on toxicity specifically to soil organisms, plants and terrestrial animals are available.

Other adverse effects: There is no ozone depletion, photochemical ozone creation or global warming potential. Adverse effects in the sewage treatment plant are not anticipated.

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13. DISPOSAL CONSIDERATIONS

Waste from Residues: Dispose of by incineration, landfill or to drain in accordance with local regulations.
Stack gases should be scrubbed.

Contaminated Packaging: Dispose of by incineration or landfill in accordance with local regulations.
Empty packaging can be recycled or reused.

14. TRANSPORT INFORMATION

International Regulations Land: Not applicable.
 Inland waterways: Not applicable.
 Sea: Not applicable.
 Air: Not applicable.

UN classification number: None

Local Regulations: Any relevant local regulations concerning transport should be observed.

15. REGULATORY INFORMATION

EC Regulations: The preparation is classified as " Harmful if swallowed, Irritating to eyes, respiratory system and skin " according to the requirements of Council Directives 2001/59/EC and 1999/45/EC. It is Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment.

Classification proposal

Symbols: Xn

R-phrases: R22 'Harmful if swallowed'
 R36/37/38 'Irritating to eyes, respiratory system and skin'
 R 52/53 Harmful to aquatic organisms. May cause long-term adverse effects in the aquatic environment

S-phrases: S2 Keep out of reach of children
 S24/25/26/28 Avoid contact with eye and skin. In case of contact with eyes or skin , rinse immediately with plenty of water and seek medical advice.
 S36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
 S 29 Do not empty into drains
 S 35 This product and its container must be disposed in a safe way
 S 46 If swallowed, seek medical advice immediately and show this container or label.

Microbial classification

The preparation is not deemed 'hazardous' according to the requirements of Council Directive 2000/54/EC. All bacteria contained in this preparation are designated Class 1 according to Council Directive 90/679/EEC (as amended by Council Directive 93/88/EEC) and all other recognised classification systems for micro-organisms.

Local Regulations: Any relevant local regulations should be observed.

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16. OTHER INFORMATION

R phrases

- R 20 Harmful by inhalation
- R 22 Harmful if swallowed
- R 36 Irritating to eyes
- R 37 Irritating to the respiratory system
- R 38 Irritating to skin
- R 48 Danger of serious damage to health by prolonged exposure
- R 51 Toxic to aquatic organisms
- R 52 Harmful to aquatic organisms
- R 53 may cause long-term adverse effects in the aquatic environment

Miscellaneous

LEV: Local Exhaust Ventilation

The information contained is based on our knowledge of the product at the date of publishing. It applies to the product as such . In case of formulation or mixture make sure no new danger appear. Users are advised of possible additional danger when the product is used in applications for which it is not intended to.

Version 2: revised points: 1-16 (2007-05-03)
