

ROOTS® Concentrate

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Version 2

Date: 2008/09/04

Supersedes version from 2005-04-04

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

- 1.1 Identification of the Substance or Preparation:** **Roots® Concentrate**
- 1.2 Intended use of the Substance/Preparation:** Liquid formulation containing natural organic materials and biostimulants, used for turf grass and plant cultivation
- 1.3 Company/Undertaking Identification:** NOVOZYMES BIOLOGICALS FRANCE S.A.
Parc des Grillons
Bâtiment 6
60 Route de Sartrouville
78230 LE PECQ
FRANCE
Tel: +33 (0)1 30 15 28 40
Fax: +33 (0)1 30 15 15 45
ordersnzb@novozymes.com
- 1.4 Emergency Telephone Number:** +33 (0)1 30 15 28 40

2. HAZARDS IDENTIFICATION

Most Important Hazards: The preparation is classified as dangerous according to the criteria laid down in Council Directive 1999/45/EC:

Most Important Adverse Human Effects:

Xi

R43 May cause sensitization by skin contact

Environmental effects: The preparation is not classified as dangerous according to the criteria laid down in Council Directive 1999/45/EC.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical/trade name	Quantity %	Symbols	R phrase	CAS No.	EINECS, ELINCS
Humic acid, potassium salt	1-5	Xi	36/38	68514-28-3	271-030-1
Benzothiazolin-3-one	<0.5	Xn N	22,38,41,43, 50	2634-33-5	220-120-9
Sodium hydroxide	<0.05	C	35	1310-73-2	215-185-5

Other raw materials used have no associated hazards or their concentrations are < 1%

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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.

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.

Environmental Precautions: It is not anticipated to be hazardous for environment.

Methods for Cleaning Up: Stop the leak or release at source. 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.

7. HANDLING AND STORAGE

7.1 Handling:

Precautions: The substance should be handled under conditions of good occupational safety and 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.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Dark brown liquid
Odour:	Mild, organic/earthy
pH:	5.2 – 5.5
Boiling Point/Boiling Range:	100°C
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
Bulk Density:	approx 1.02 - 1.05 g/cm ³
Solubility	- Water solubility: 100%
	- 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 and strong oxidising agents.
Hazardous Decomposition Products:	None anticipated

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
11.1.4	Eye irritation	Not determined

11.2 Chronic toxic effects

11.2.1	Sensitisation	May cause sensitization by skin contact
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12. ECOLOGICAL INFORMATION

Mobility: This preparation is water soluble. Therefore it is likely to distribute predominantly to the aqueous 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 not anticipated to pose any environmental hazard.
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.

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.

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15. REGULATORY INFORMATION

EC Regulations: The preparation is classified as "sensitizing" and therefore the following labels according to the requirements of Council Directives 2001/59/EC and 1999/45/EC are necessary:

Symbols: Xi

R-phrases: R43 May cause sensitization by skin contact

S-phrases: S24 Avoid contact with skin

Local Regulations: Any relevant local regulations should be observed.

16. OTHER INFORMATION

R phrases

R22 Harmful if swallowed

R34 Causes burns

R 36 Irritating to eyes

R 38 Irritating to skin

R41 Risk of serious damage to eyes

R43 May cause sensitization by skin contact

R50 Very toxic to aquatic organisms.

Sources

Detailed composition,

SDS of ingredients.

ECB website <http://ecb.jrc.it/classification-labelling/search-classlab/>

ChemExpertwebsite: <http://www.chemexper.com/index.shtml?main=http://www.chemexper.com/search/cas/3844-45-9.html>

Miscellaneous

Safety/Classification: <http://biosafety.ihe.be/RA/Class/ClassMain.html>

http://www.baua.de/prax/abas/trba_466.pdf

Occupational Exposure: http://europa.eu.int/eur-lex/pri/en/oj/dat/2000/l_262/l_26220001017en00210045.pdf

LEV: Local Exhaust Ventilation
