

SAFETY DATA SHEET

according to 1907/2006/EC, Article 31

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Root +

Revision 1

Revision date 01-12-15

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

1.1. Product identifier	
Product name	Root +

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

1.3. Details of the supplier of the safety data sheet

Company Address	Metrop Agrotechniek Edisonweg 32 3404LC IJsselstein Netherlands
Web	www.metrop.net
Telephone	+31 (0)30 6877274
Fax	+31 (0)30 6877423
Email	info@metrop.nl
Local Supplier	
Company Address	
Web	
Telephone	
Fax	
Email	

1.4. Emergency telephone number	
Emergency telephone number	+31 (0)30 6877274 09:00-17:00 GMT

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture	
Main hazards	No Significant Hazard

2.2. Label elements	
Risk phrases	No Significant Hazard.

2.3. Other hazards	
Other hazards	None.

SECTION 3: Composition/information on ingredients

Further information

67/548/EEC / 1999/45/EC

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classifi- cation
Amino acid mixture		NA (mixture)			850 mg/l	
Nitrogen		NA (mixture)			0,76%	
Phosphoric acid		7664-38-2			1.20%	
Ingredients	This product does not contain any substances classified as hazardous to health.					

SECTION 4: First aid measures**4.1. Description of first aid measures**

Inhalation	May cause irritation to mucous membranes. Move the exposed person to fresh air.
Eye contact	May cause irritation to eyes. Rinse immediately with plenty of water for 15 minutes holding the eyelids open. Seek medical attention if irritation or symptoms persist.
Skin contact	May cause irritation to skin. Wash off immediately with plenty of soap and water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.
Ingestion	May cause irritation to mucous membranes. DO NOT INDUCE VOMITING. Seek medical attention if irritation or symptoms persist

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

Inhalation	May cause irritation to respiratory system.
Eye contact	May cause irritation to eyes.
Skin contact	May cause irritation to skin.
Ingestion	May cause irritation to mucous membranes.

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

Inhalation	Inhalation of vapour may cause shortness of breath. Seek medical attention if irritation or symptoms persist.
Eye contact	Rinse immediately with plenty of water.
Skin contact	No sensitization effects reported. Wash with soap and water.
Ingestion	May cause irritation to mucous membranes.

SECTION 5: Firefighting measures**5.1. Extinguishing media**

	Use extinguishing media appropriate to the surrounding fire conditions.
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5.2. Special hazards arising from the substance or mixture

	Burning produces irritating, toxic and obnoxious fumes.
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5.3. Advice for firefighters

	Wear suitable respiratory equipment when necessary.
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SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures**

	Ensure adequate ventilation of the working area.
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6.2. Environmental precautions

	Do not allow product to enter drains. Prevent further spillage if safe.
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6.3. Methods and material for containment and cleaning up

	Absorb with inert, absorbent material. Sweep up. Transfer to suitable, labelled containers for disposal. Clean spillage area thoroughly with plenty of water.
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6.4. Reference to other sections

	See section 2, 8, 13 for further information.
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SECTION 7: Handling and storage**7.1. Precautions for safe handling**

	Avoid contact with eyes and skin. Ensure adequate ventilation of the working area. Adopt best Manual Handling considerations when handling, carrying and
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7.2. Conditions for safe storage, including any incompatibilities

	Keep in a cool, dry, well ventilated area. Keep containers tightly closed. Store in correctly labelled containers.
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7.3. Specific end use(s)

	Fertiliser.
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SECTION 8: Exposure controls/personal protection**8.1. Control parameters - 8.1.1. Exposure Limit Values**

Potassium Nitrate	WEL 8-hr limit ppm:	WEL 8-hr limit mg/m ³ : 20.8
	WEL 15 min limit ppm:	WEL 15 min limit mg/m ³ : 10

8.2. Exposure controls

	  
8.2.1. Appropriate engineering controls	Ensure adequate ventilation of the working area.
8.2.2. Individual protection measures	Wear protective clothing.
Eye / face protection	In case of splashing, wear: Approved safety goggles.
Skin protection - Handprotection	Chemical resistant gloves (PVC).

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Appearance	Liquid
Colour	Clear yellow to brown
odour	Characteristic
pH	2.0 - 3.0
Melting point	No data available
Initial boiling point	100°C
Flash point	Not applicable
Evaporation rate	No data available
Flammability limits	Not applicable
Vapour Flammability	No data available
Vapour pressure	No data available
Vapour density	No data available
Relative density	1.51 - 1.55 (Water = 20 °C)
Partition coefficient	Not applicable
Autoignition temperature	Not applicable
Viscosity	No data available
Explosive	Not applicable
Oxidising	Not applicable
Solubility	Soluble in water

9.2. Other information

Conductivity	no data available
Surface tension	no data available
Gas group	no data available
Benzene Content	no data available
Lead content	no data available
VOC (Volatile organic compounds)	no data available

Water solubility

	Soluble in water.
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SECTION 10: Stability and reactivity**10.1. Reactivity**

	Avoid contact with: Strong bases.
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10.2. Chemical stability

	Stable under normal conditions.
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10.3. Possibility of hazardous reactions

	No data is available on this product.
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10.4. Conditions to avoid

	Burning produces obnoxious and irritating fumes.
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10.5. Incompatible materials

Strong bases.

10.6. Hazardous decomposition products

No data available on this product.

SECTION 11: Toxicological information**11.1. Information on toxicological effects**

LD 50 oral (rat):	Not greater than 2000 mg/kg. Classified as "low oral toxicity". No death.
LD 50 oral (mouse):	> 2000 mg/Kg. No death.
Oral to CD rats 4 weeks:	Up to 4000 mg/kg/day did not elicit any evidence of toxicity. No death. No LD.50 found.
Oral to dogs 4 weeks:	Up to 2500 mg/Kg/day did not elicit any evidence of toxicity. No death.
Mutagenicity:	Not mutagenic or neoplastic. No mutagenic activity in histidine auxotrophos of Salmonella T.
Carcinogenicity:	Not carcinogenic.
Teratogenicity:	Not teratogenic

SECTION 12: Ecological information**12.1. Toxicity**

Fish LC50/96h:	LC50 >3000 mg/L	LDO >2.344 mg/L	LD100 >3000 mg/L.
No data is available on this product.			

12.2. Persistence and degradability

Readily biodegradable.

12.3. Bioaccumulative potential

No data is available on this product.

12.4. Mobility in soil

Miscible in water.

12.5. Results of PBT and vPvB assessment

Caution - substance not yet fully tested.

12.6. Other adverse effects

May cause long-term adverse effects in the aquatic environment.

SECTION 13: Disposal considerations**General information**

Dispose of in compliance with all local and national regulations.

Disposal methods

Contact a licensed waste disposal company.

Disposal of packaging

Do NOT reuse empty containers. Empty containers can be sent for disposal or recycling.

SECTION 14: Transport information**ADR/RID**

The product is not classified as dangerous for carriage.

IMDG

The product is not classified as dangerous for carriage.

IATA

The product is not classified as dangerous for carriage.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Regulations	REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC. COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.
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15.2. Chemical safety assessment

	No data is available on this product.
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SECTION 16: Other information**Other information**

Revision	This document differs from the previous version in the following areas: 3 - Ingredients.
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Further information

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Other information

Text of risk phrases in Section 3	9 - 9.1. Information on basic physical and chemical properties (Solubility). 9 - 9.2. Other information (Conductivity). 9 - 9.2. Other information (Partition coefficient). 9 - 9.2. Other information (Gas group). 9 - 9.2. Other information (Surface tension). 9 - 9.2. Other information (Benzene Content). 9 - 9.2. Other information (Product Subcategory). 9 - 9.2. Other information (Lead content). 16 - Maximum content of VOC.
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