

According to Regulation (EC) No. 1907/2006

Rexolin APN

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

Product label name Diethylenetriaminepentaacetic acid (DTPA) complex of iron plus ethylenediaminetetraacetic acid (EDTA) complex of copper, manganese and zinc plus unchelated boron and molybdenum	
Supplier Akzo Nobel Functional Chemicals bv Stationsstraat 77 PO Box 247 NL-3800 AE Amersfoort Tel.: +31 334676767	
E-mail address of person responsible for safety data sheet SDS_chelates@AkzoNobel.com	
Emergency telephone T +31570679211 F +31570679801 AkzoNobel Chemicals-Deventer-NL	
Intended use plant nutrient	
Date of last issue / Revision number 2009/08/25 / 1.04	

2. HAZARDS IDENTIFICATION

Non-hazardous according to Worksafe Australia criteria
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Information on hazardous ingredients			
Chemical description Diethylenetriaminepentaacetic acid (DTPA) complex of iron plus ethylenediaminetetraacetic acid (EDTA) complex of copper, manganese and zinc plus unchelated boron and molybdenum			
Composition / information on ingredients			
Number	% w/w	CAS-number	Chemical name
1	1 - 2	014025-15-1	Ethylenediaminetetraacetic acid, copper-disodium complex
2	3 - 5.4	010043-35-3	Boric acid

	Index-No.	EC-number	Symbol(s) (EU classification)	Risk-phrase(s)
1		237-864-5	Xn	R22
2		233-139-2	T	R60 R61

Other information Balance: non-hazardous ingredients. Typical metal content (As water-soluble complex): - B: 0.85% - Cu: 0.25% - Fe: 6.0% - Mn: 2.4% - Mo: 0.25% - Zn: 1.3%
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4. FIRST AID MEASURES

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Symptoms and effects No typical symptoms and effects known.	
First aid	
General	In all cases of doubt, or when symptoms persist, seek medical attention.
Inhalation	Dust may be irritating to the respiratory tract and cause symptoms of bronchitis. Move to fresh air. If symptoms persist, seek medical advice
Skin	Wash off with soap and water.
Eye	Rinse thoroughly with plenty of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Seek medical advice if irritation develops.
Ingestion	Rinse mouth, give water to drink. Seek medical advice after significant exposure.
Advice to physician No additional information available	

5. FIRE-FIGHTING MEASURES

Extinguishing media waterspray, foam, Carbon dioxide, dry chemical powder
Unsuitable extinguishing media none known.
Hazardous decomposition / combustion products Nitrous gases may be produced
Protective equipment Use self-contained respiratory equipment.
Fire and explosion hazard In case of fire and/or explosion do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions Avoid dust generation. For personal protection see Section 8
Environmental precautions Do not flush into public water courses. Do not empty into drains.
Methods for cleaning up Collect as much as possible in a clean container for (preferable) reuse or disposal. See section 13 .

7. HANDLING AND STORAGE

Handling Avoid dust generation.
Fire and explosion prevention In certain concentrations the product may form an explosive dust-air mixture.
Storage requirements No specific recommendations
Other information Protect product from moisture and wet air. Keep container tightly closed and dry.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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Engineering controls Provide adequate ventilation.	
Personal protection	
Respiratory	In case of dust formation use dust mask. Dust exposure limits have to be respected.
Hand	For permanent (>480 minutes), full contact use, 100% nitrile gloves conforming to EN 374, e.g. KCL Dermatril 740 are recommended. If used under conditions other than given above it is recommended that a supplier of CE approved gloves is contacted. These recommendations are only applicable to the chemical as supplied by Akzo Nobel; if mixed with or dissolved in other substances please contact a supplier of CE approved gloves (e.g. KCL International +49 66 59870, fax +49 6659 87155).
Eye	The usual precautions for handling chemicals should be observed.
Skin and body	The usual precautions for handling chemicals should be observed.

Copper		
Short Term Exposure Limit (STEL)	0.6 mg/m ³	fume
Short Term Exposure Limit (STEL)	2 mg/m ³	dust and mist
Time Weighted Average (TWA)	0.2 mg/m ³	fume
Time Weighted Average (TWA)	1 mg/m ³	dust and mist
Disodium molybdate dihydrate		
Short Term Exposure Limit (STEL)	10 mg/m ³	Expressed as Mo.
Short Term Exposure Limit (STEL)	20 mg/m ³	Expressed as Mo.
Time Weighted Average (TWA)	10 mg/m ³	Expressed as Mo.
Time Weighted Average (TWA)	5 mg/m ³	Expressed as Mo.
Dust (general)		
Time Weighted Average (TWA)	10 mg/m ³	inhalable dust.
Time Weighted Average (TWA)	4 mg/m ³	respirable dust.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance microgranular (25 °C)
Colour yellow brown
Odour odourless
Boiling point/range not applicable
Melting point/range Decomposes prior to melting
Flash point not applicable

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Flammability no
Explosive properties no
Oxidizing properties no
Vapour pressure not applicable
Density not applicable
Bulk density 550-750 kg/m ³
Solubility in water >100 g/l
Solubility in other solvents not determined
pH value 5-7 (1% solution)
Partition coefficient n-octanol/water Log Pow < 0
Relative vapour density (air=1) not applicable
Viscosity not applicable
Autoignition temperature >200 °C (glowing temperature of 5 mm product layer)
Explosion limits Lower Explosion Limit ≥ 40 g/m ³

10. STABILITY AND REACTIVITY

Conditions to avoid Reaction with strong oxidizing agents. Product layer on hot surface might cause glowing or autoignition .
Stability Stable under recommended storage and handling conditions (see section 7)
Incompatibles none known
Hazardous decomposition products Emits toxic fumes under fire conditions (nitrous gases (NO _x)).

11. TOXICOLOGICAL INFORMATION

No experimental toxicological data of the product as such available. From structurally related products the following may be expected;
Ethylenediaminetetraacetic acid, tetrasodium salt
Acute toxicity
Oral LD50 rat: >1740 mg/kg (Akzo Nobel E-file)

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Irritation
Skin Non-irritating (39%, Akzo Nobel E-file)
Eye Mildly irritating (40%, Akzo Nobel E-file)

12. ECOLOGICAL INFORMATION

No experimental ecological data are available on the preparation as such. From structurally related products the following may be expected;

Ethylenediaminetetraacetic acid, tetrasodium salt

Ecotoxicity

fish 96h-LC50: > 100 mg/l (Under standard test conditions)
daphnia 24h-EC50: >500 mg/l
algae The use of strong chelating agents invalidates the test conditions for the Algae Growth Inhibition Test
Fate
Degradation Biotic Not readily biodegradable (Under standard test conditions) Inherently biodegradable Rapid biodegradation can be obtained under slightly alkaline conditions
Bioaccumulation Not expected to bioaccumulate

13. DISPOSAL CONSIDERATIONS

Product According to local regulations.
Contaminated packaging No specific recommendations.

14. TRANSPORT INFORMATION

Land transport
Class not restricted
Classification Code not relevant / not relevant
RID class not restricted
Hazard Identification No. none
Substance Identification No. none
UN number not relevant
Proper shipping name not relevant

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Sea transport (IMO/IMDG-code)
Class not restricted
Packing group none
UN number none
EMS not relevant
Marine pollutant no
Proper shipping name not relevant

Air transport (ICAO-TI / IATA-DGR)
UN number none
Class not restricted
Packing group none
Proper shipping name not relevant
Other information Keep away from: aluminium + humidity / water

15. REGULATORY INFORMATION

Product label name Diethylenetriaminepentaacetic acid (DTPA) complex of iron plus ethylenediaminetetraacetic acid (EDTA) complex of copper, manganese and zinc plus unchelated boron and molybdenum
Labelling according to EC directives
EC-number See section 3

R(isk) phrase(s) (EU classification)	
Code	Description
none	none

S(afety) phrase(s) (EU classification)	
Code	Description
none	none

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German Water Hazard Class (WGK)
2 (Internal assessment)

16. OTHER INFORMATION

R-pharse information		
Chemical name	R(isk) phrase(s) (EU classification)	
Ethylenediaminetetraacetic acid, copper-disodium complex	R22	Harmful if swallowed
Boric acid	R60 R61	May impair fertility May cause harm to the unborn child

History

Other information

The R phrases as described in this chapter relate to the substances of the product and not to the final product. Classification of the final product is given in chapter 15 .
According to European legislation the borderline concentration of boric acid leading to classification of a mixture as R60, R61 is 5.5%. .

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Revision

1.04

Composed by

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Changes were made in section

14, Land transport

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is to our best present knowledge correct and complete and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product.