

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

## Rexolin Mn13

Version 1

Revision Date 07.12.2021

Print Date 04.05.2022

GR / EN

### SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

#### 1.1 Product identifier

Trade name : Rexolin Mn13

REACH Registration Number : 01-2119493600-40-0000

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

Use of the Substance/Mixture : Specific use(s): Chelating agent  
Plant nutrient

#### 1.3 Details of the supplier of the safety data sheet

Company : Nouryon  
Functional Chemicals B.V.  
Velperweg 76  
NL 6824 BM Arnhem  
Netherlands

Telephone : +31263664433  
Telefax :  
E-mail address : sds\_chelates@nouryon.com

#### 1.4 Emergency telephone number

Emergency telephone number : 24 hours:+31 57 06 79211, CHEMTREC-USA:1-800-424-9300, CHEMTREC outside USA +1-703-527-3887, CANUTEC-CANADA:1-613-996-6666,  
化学事故应急咨询电话：国家化学事故应急响应中心 +86 532 8388 9090

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### SECTION 2: HAZARDS IDENTIFICATION

#### 2.1 Classification of the substance or mixture

**Classification (REGULATION (EC) No 1272/2008)**

Not a hazardous substance or mixture.

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## 2.2 Label elements

### Labelling (REGULATION (EC) No 1272/2008)

Not a hazardous substance or mixture.

## 2.3 Other hazards

Risk of dust explosion.  
No further data available.

PBT and vPvB assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1 Substances

Common Name : Ethylenediaminetetraacetic acid, manganese disodium complex  
Pure substance/mixture : Substance

#### Hazardous substance

Chemical name	PBT vPvB OEL	CAS-No. EC-No. REACH No.	Classification (REGULATION (EC) No 1272/2008)	Concentration [%]
Ethylenediaminetetraacetic acid, manganese disodium complex		15375-84-5 239-407-5 01-2119493600-40		>= 90 - <= 100

Remarks : Substances with a workplace exposure limit

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## SECTION 4: FIRST AID MEASURES

### 4.1 Description of first aid measures

General advice : No hazards which require special first aid measures.

If inhaled : Remove to fresh air.  
Keep patient warm and at rest.  
Rinse nose and mouth with water.

In case of skin contact : Remove contaminated clothing and shoes.  
Rinse with water.

In case of eye contact : Rinse with plenty of water.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.

If swallowed : Clean mouth with water and drink afterwards plenty of water.  
Never give anything by mouth to an unconscious person.

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

Symptoms : The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.

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

Treatment : Treat symptomatically.

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## SECTION 5: FIREFIGHTING MEASURES

### 5.1 Extinguishing media

Suitable extinguishing media : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

### 5.2 Special hazards arising from the substance or mixture

Specific hazards during firefighting / Specific hazards arising from the chemical : Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges.

Combustion products : Fire will produce smoke containing hazardous combustion products (see section 10).

### 5.3 Advice for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.

Further information : Standard procedure for chemical fires.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Avoid dust formation.

Emergency measures on accidental release : Follow safe handling advice and personal protective equipment recommendations.

### 6.2 Environmental precautions

Environmental precautions : No special environmental precautions required.

### 6.3 Methods and materials for containment and cleaning up

Methods for cleaning up / : Sweep up and shovel.

Methods for containment : Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

For disposal considerations see section 13.

For personal protection see section 8.

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## SECTION 7: HANDLING AND STORAGE

### 7.1 Precautions for safe handling

Advice on safe handling : For personal protection see section 8.  
Avoid creating dust.  
Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.  
No special handling advice required.

Advice on protection against fire and explosion : Provide appropriate exhaust ventilation at places where dust is formed.  
No sparking tools should be used.

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## 7.2 Conditions for safe storage, including any incompatibilities

- Requirements for storage areas and containers : Keep in a dry place.  
Store at room temperature in the original container.  
Keep container tightly closed.
- Advice on common storage : No special restrictions on storage with other products.
- Other data : No decomposition if stored and applied as directed.

## 7.3 Specific end use(s)

- Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Occupational Exposure Limits

Components	CAS-No.	Value type (Form of exposure)	Control parameters	Basis
Ethylenediaminetetraacetic acid, manganese disodium complex	15375-84-5	TWA (Inhalable fraction)	0,2 mg/m <sup>3</sup> (Manganese)	GR OEL
		TWA (Respirable fraction)	0,05 mg/m <sup>3</sup> (Manganese)	GR OEL

#### Further occupational exposure limits

Description	Value type	Control parameters	Basis	Form of exposure
Dust	TWA	5 mg/m <sup>3</sup>	GR OEL	Total dust

#### Derived No Effect Level (DNEL) according to Regulation (EC) No. 1907/2006:

Substance name	End Use	Exposure routes	Potential health effects	Value
Ethylenediaminetetraacetic acid, manganese disodium complex	Workers	Skin contact	Long-term systemic effects	25000 mg/kg
	Workers	Inhalation	Long-term systemic effects	12 mg/m <sup>3</sup>
	Workers	Inhalation	Acute local effects	69 mg/m <sup>3</sup>
	Consumers	Inhalation	Long-term systemic effects	3 mg/m <sup>3</sup>
	Consumers	Ingestion	Long-term systemic effects	2,5 mg/kg
	Consumers	Skin contact	Long-term systemic effects	12500 mg/kg

#### Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Substance name	Environmental Compartment	Value
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Ethylenediaminetetraacetic acid, manganese disodium complex	Fresh water	4,88 mg/l
	Intermittent water	6,49 mg/l
	Marine water	0,49 mg/l
	Sewage treatment plant	64 mg/l

## 8.2 Exposure controls

### Engineering measures

Provide appropriate exhaust ventilation at places where dust is formed.

### Personal protective equipment

Eye protection : Safety glasses

Hand protection  
Material : Nitrile rubber

Respiratory protection : No personal respiratory protective equipment normally required.  
In the case of dust, vapour or aerosol formation use a respirator with an approved filter.  
Half mask with a particle filter P2 (EN 143)

Hygiene measures : General industrial hygiene practice.

### Environmental exposure controls

General advice : No special environmental precautions required.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### 9.1 Information on basic physical and chemical properties

Physical state : granular

Colour : off-white

Odour : odourless

Odour Threshold : Not applicable

Melting point : Decomposes before melting.

Boiling point/boiling range : Not applicable

Flammability (solid, gas) : Not classified as a flammability hazard, May form combustible dust concentrations in air during processing, handling or other means.

Upper explosion limit / Upper flammability limit : Not applicable

Lower explosion limit / Lower flammability limit :  $\geq 40$  g/m<sup>3</sup>

Flash point : Not applicable

Auto-ignition temperature :  $\geq 200$  °C

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Method: Auto-ignition of a 5mm dust layer according to EN 50281-2-1

Decomposition temperature  
Decomposition temperature : No data available

pH : 6 - 7  
1% (water)

Viscosity  
Viscosity, dynamic : Not applicable

Viscosity, kinematic : Not applicable

Solubility(ies)  
Water solubility : ca. 800 g/l

Solubility in other solvents : No data available

Partition coefficient: n-octanol/water : log Pow: < 0  
GLP: no

Vapour pressure : Not applicable

Relative density : No data available

Bulk density : 600 - 800 kg/m<sup>3</sup>

Relative vapour density : Not applicable

## 9.2 Other information

Explosives : Not explosive

Oxidizing properties : Not classified as oxidising.

Flammability (liquids) : Not applicable

Evaporation rate : Not applicable

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

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## SECTION 10: STABILITY AND REACTIVITY

### 10.1 Reactivity

Stable under normal conditions.

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Dust may form explosive mixture in air.

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## 10.4 Conditions to avoid

Conditions to avoid : None known.

## 10.5 Incompatible materials

Materials to avoid : None known.

## 10.6 Hazardous decomposition products

Hazardous decomposition products : Carbon oxides  
nitrogen oxides (NOx)

Thermal decomposition : No data available

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## SECTION 11: TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Product information:

Acute toxicity : Not classified based on available information.

Skin corrosion/irritation : Not classified based on available information.

Serious eye damage/eye irritation : Not classified based on available information.

Respiratory or skin sensitisation : Respiratory sensitisation: Not classified based on available information.  
Skin sensitisation: Not classified based on available information.

Germ cell mutagenicity : Not classified based on available information.

Carcinogenicity : Not classified based on available information.

Reproductive toxicity : Not classified based on available information.

STOT - single exposure : Not classified based on available information.

STOT - repeated exposure : Not classified based on available information.

Aspiration hazard : Not classified based on available information.

Further information : No further data available.

#### Test result

Acute oral toxicity : LD50: > 5 000 mg/kg  
Species: Rat  
Method: OECD Test Guideline 423

#### Toxicology data for the components:

##### Ethylenediaminetetraacetic acid, manganese disodium complex

#### Acute toxicity:

Acute oral toxicity : LD50: > 5 000 mg/kg  
Species: Rat  
Method: OECD Test Guideline 423



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Skin corrosion/irritation	: Result: No skin irritation
Serious eye damage/eye irritation	: Result: No eye irritation Method: OECD Test Guideline 437
Respiratory or skin sensitisation	: Classification: Does not cause skin sensitisation. Read-across (Analogy)
Repeated dose toxicity	: NOAEL: 500 mg/kg Application Route: Oral Exposure time: 728 d Method: OECD Test Guideline 422
Germ cell mutagenicity	
Genotoxicity in vitro	: Ames test Result: negative Method: OECD Test Guideline 471
Genotoxicity in vivo	: Result: Not mutagenic.
Carcinogenicity	: Not classified due to data which are conclusive although insufficient for classification.
Reproductive toxicity	: Not classified due to data which are conclusive although insufficient for classification.
STOT - single exposure	: Exposure routes: Inhalation Target Organs: Respiratory system The substance or mixture is not classified as specific target organ toxicant, single exposure.
STOT - repeated exposure	: Exposure routes: Ingestion The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration hazard	: No aspiration toxicity classification

## 11.2 Information on other hazards

### Endocrine disrupting properties

#### Product:

Assessment	: The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
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## SECTION 12: ECOLOGICAL INFORMATION

### Product information: Ecotoxicology Assessment

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Additional ecological information : None known.

## 12.1 Toxicity

### Test result

Toxicity to fish : LC50: > 1 000 mg/l  
Exposure time: 96 h  
Species: Danio rerio (zebra fish)  
Test Type: static test  
Read-across from supporting substance (structural analogue or surrogate).

### Components:

#### Test result

#### Ethylenediaminetetraacetic acid, manganese disodium complex

Toxicity to fish : LC50: > 1 000 mg/l  
Exposure time: 96 h  
Species: Danio rerio (zebra fish)  
Test Type: static test  
Read-across from supporting substance (structural analogue or surrogate).

Toxicity to algae : ErC50: 649,3 mg/l  
Exposure time: 72 h  
Species: Pseudokirchneriella subcapitata (green algae)  
Test Type: Growth inhibition  
Method: OECD Test Guideline 201  
Read-across from supporting substance (structural analogue or surrogate).

NOEC: 15 mg/l  
Exposure time: 72 h  
Species: Pseudokirchneriella subcapitata (green algae)  
Test Type: Growth inhibition  
Method: OECD Test Guideline 201  
Read-across from supporting substance (structural analogue or surrogate).

Toxicity to bacteria : NOEC: 640 mg/l  
Exposure time: 3 h  
Species: activated sludge  
Test Type: Respiration inhibition  
Method: Domestic OECD Guideline 209

Toxicity to fish (Chronic toxicity) : NOEC: 28,9 mg/l  
Exposure time: 35 d  
Species: Danio rerio (zebra fish)  
Test Type: flow-through test  
Method: OECD Test Guideline 210  
Read-across from supporting substance (structural analogue or surrogate).

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC: 156 mg/l  
Exposure time: 21 d  
reproduction rate  
Species: Daphnia magna (Water flea)

Method: OECD Test Guideline 211

## 12.2 Persistence and degradability

### Product information:

Biodegradability : Result: Not readily biodegradable.

### Components:

#### Ethylenediaminetetraacetic acid, manganese disodium complex

Biodegradability : Result: Not readily biodegradable.

## 12.3 Bioaccumulative potential

### Product information:

Bioaccumulation : Not expected considering the low log Pow value.

### Components:

#### Ethylenediaminetetraacetic acid, manganese disodium complex

Bioaccumulation : Not expected considering the low log Pow value.

## 12.4 Mobility in soil

Product information : No information available.

### Components:

#### Ethylenediaminetetraacetic acid, manganese disodium complex

Mobility : No data available

## 12.5 Results of PBT and vPvB assessment

### Product information:

PBT and vPvB assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### Components:

#### Ethylenediaminetetraacetic acid, manganese disodium complex

PBT and vPvB assessment : This substance is not considered to be a PBT (Persistent, Bioaccumulation, Toxic)  
This substance is not considered to be vPvB (very Persistent nor very Bioaccumulating)

## 12.6 Endocrine disrupting properties

### Product information:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

## 12.7 Other adverse effects

Product information : No information available.

### Components:

#### Ethylenediaminetetraacetic acid, manganese disodium complex

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Biochemical Oxygen Demand (BOD) : No data available

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## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1 Waste treatment methods

Contaminated packaging : Empty remaining contents.  
Empty containers should be taken to an approved waste handling site for recycling or disposal.

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## SECTION 14: TRANSPORT INFORMATION

### 14.1 UN number

Not regulated as a dangerous good

### 14.2 Proper shipping name

Not regulated as a dangerous good

### 14.3 Transport hazard class

Not regulated as a dangerous good

### 14.4 Packing group

Not regulated as a dangerous good

### 14.5 Environmental hazards

Not regulated as a dangerous good

### 14.6 Special precautions for user

Remarks : Not classified as dangerous in the meaning of transport regulations.

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

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## SECTION 15: REGULATORY INFORMATION

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII) : Not applicable

REACH - Candidate List of Substances of Very High Concern for Authorisation (Article 59). : Not applicable

REACH - List of substances subject to authorisation (Annex XIV) : Not applicable

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer : Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast) : Not applicable

Regulation (EC) No 649/2012 of the European : Not applicable

Parliament and the Council concerning the export and import of dangerous chemicals

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.

Not applicable

## Notification status

TCSI	: YES. On the inventory, or in compliance with the inventory
TSCA	: YES. All substances listed as active on the TSCA inventory
AIIC	: YES. On the inventory, or in compliance with the inventory
DSL	: YES. All components of this product are on the Canadian DSL
ENCS	: YES. On the inventory, or in compliance with the inventory
ISHL	: YES. On the inventory, or in compliance with the inventory
KECI	: YES. On the inventory, or in compliance with the inventory
PICCS	: NO. Not in compliance with the inventory
IECSC	: YES. On the inventory, or in compliance with the inventory
NZIoC	: YES. On the inventory, or in compliance with the inventory
TECI	: NO. Not in compliance with the inventory

For explanation of abbreviation see section 16.

## 15.2 Chemical safety assessment

Product information	: A Chemical Safety Assessment has been carried out for this substance.
Ethylenediaminetetraacetic acid, manganese disodium complex	: A Chemical Safety Assessment has been carried out for this substance.

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## SECTION 16: OTHER INFORMATION

### Full text of other abbreviations

GR OEL	: Greece. Hellenic Institute for Occupational Health and Safety - List of Limit Values
GR OEL	: Greece. Exposure limit values
GR OEL / TWA	: Time weighted average
GR OEL / TWA	: Long term exposure limit

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA -

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International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Substance Inventory; TECI - Thailand Existing Chemicals Inventory; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

## Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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