SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Rexolin Cu15

Version 1 Revision Date 30.01.2020 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 Cu15
Substance name	:	Ethylenediaminetetraacetic acid, copper disodium complex
REACH Registration Number	:	01-2119963944-23-0000

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

Use of the Substance/Mixture	:	Industry category: Specific use(s):	Agriculture, forestry, fishery Plant nutrient
		Specific use(s):	Chelating agent
		Specific use(s):	Refer to attached exposure scenario Annex.

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

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)
Acute toxicity, 4, H302
Eye irritation, 2, H319

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Pictogram :

Signal word : Warning

Hazard statements :	H302	Harmful if swallowed.
	H319	Causes serious eye irritation.
Precautionary statements :	**Prevention:**	
	P264	Wash skin thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	P280	Wear eye protection/ face protection.
	Response:	
	P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
	P337 + P313	If eye irritation persists: Get medical advice/ attention.
	Disposal:	
	P501	Dispose of contents/ container to an approved waste disposal plant.

Hazardous components which must be listed on the label:

Ethylenediaminetetraacetic acid, copper disodium complex	14025-15-1

2.3 Other hazards

No further data available.
Risk of dust explosion.

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.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Common Name : Ethylenediaminetetraacetic acid, copper 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, copper disodium complex		14025-15-1 237-864-5 01-2119963944-23	Acute Tox. 4; H302 Eye Irrit. 2; H319	>= 90 - <= 100

For the full text of the H-Statements mentioned in this Section, see Section 16.

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

SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

General advice : Move out of dangerous area.
Consult a physician.
Show this safety data sheet to the doctor in attendance.

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

In case of skin contact : Take off contaminated clothing and shoes immediately.

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

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

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.

Risks : Harmful if swallowed.
Causes serious eye irritation.

4.3 Indication of any immediate medical attention and special treatment needed

Treatment : Treat symptomatically.

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.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions : Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.
Ensure adequate ventilation.

Emergency measures on accidental release : Evacuate personnel to safe areas.
Only qualified personnel equipped with suitable protective equipment may intervene.
Prevent unauthorised persons entering the zone.

6.2 Environmental precautions

Environmental precautions : Try to prevent the material from entering drains or water courses.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up / Methods for containment : Pick up and arrange disposal without creating dust.
Sweep up and shovel.
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.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Advice on safe handling	:	For personal protection see section 8. Avoid formation of respirable particles. Avoid contact with skin, eyes and clothing. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Smoking, eating and drinking should be prohibited in the application area.
Advice on protection against fire and explosion	:	Provide appropriate exhaust ventilation at places where dust is formed.
	:	Provide appropriate exhaust ventilation at places where dust is formed. No sparking tools should be used.

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.
Other data	:	No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s)	:	Refer to attached exposure scenario Annex.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

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

Substance name	End Use	Exposure routes	Potential health effects	Value
Ethylenediaminetetraacetic acid, copper disodium complex	Workers	Inhalation	Long-term systemic effects	1,8 mg/m3
	Workers	Skin contact	Long-term systemic effects	3750 mg/kg bw/day
	Consumers	Inhalation	Long-term systemic effects	0,45 mg/m3
	Consumers	Skin contact	Long-term systemic effects	1875 mg/kg bw/day
	Consumers	Ingestion	Long-term systemic effects	0,375 mg/kg bw/day

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

Substance name	Environmental Compartment	Value
Ethylenediaminetetraacetic acid, copper disodium complex	Fresh water	2,95 mg/l
	Marine water	0,3 mg/l
	Sewage treatment plant	65,4 mg/l
	Soil	0,21 mg/kg dry weight

8.2 Exposure controls

Engineering controls
Provide appropriate exhaust ventilation at places where dust is formed.
Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Respiratory protection : Half mask with a particle filter P2 (EN 143)

Hand protection : For prolonged or repeated contact use protective gloves.

Protective gloves complying with EN 374.

Eye protection : Tightly fitting safety goggles

Skin and body protection : Protective suit

Hygiene measures : Handle in accordance with good industrial hygiene and safety practice.
When using do not eat or drink.
When using do not smoke.
Wash hands before breaks and at the end of workday.

Environmental exposure controls

General advice : Try to prevent the material from entering drains or water courses.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance

Form : granular

Colour : blue

Odour : odourless

Odour Threshold : Not applicable

Safety data

pH : 6 - 7 1% (water)

Melting point : Decomposes before melting.

Boiling point/boiling range	:	Not applicable
Flash point	:	Not applicable
Ignition temperature	:	>= 200 °C Method: Auto-ignition of a 5mm dust layer according to EN 50281-2-1
Evaporation rate	:	Not applicable
Flammability (solid, gas)	:	Not classified as a flammability hazard May form combustible dust concentrations in air during processing, handling or other means.
Flammability (liquids)	:	Not applicable
Lower explosion limit	:	>= 40 g/m3
Upper explosion limit	:	No data available
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Relative density	:	Not applicable
Bulk density	:	600 - 800 kg/m3
Water solubility	:	680 g/l at 0 °C
Solubility in other solvents	:	No data available
Partition coefficient: n-octanol/water	:	log Pow: < 0
Auto-ignition temperature	:	No data available
Decomposition temperature	:	263 °C
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Not classified as oxidising.

9.2 Other information

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

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.

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	:	263 °C

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Product information:

Acute toxicity	:	Harmful if swallowed.
Skin corrosion/irritation	:	Not classified based on available information.
Serious eye damage/eye irritation	:	Causes serious eye irritation.
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	:	Acute toxicity estimate: 956,99 mg/kg Method: Calculation method

Toxicology data for the components:
Ethylenediaminetetraacetic acid, copper disodium complex

Acute toxicity:

Acute oral toxicity	:	LD50: 890 mg/kg Species: Rat
Acute inhalation toxicity	:	LC50 (Rat): 5,30 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 436
Skin corrosion/irritation	:	Species: Rabbit Result: slight irritation Method: OECD Test Guideline 404 Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation	:	Species: Rabbit Result: Irritating to eyes. Classification: Irritating to eyes. Method: OECD Test Guideline 405
Respiratory or skin sensitisation	:	Species: Mouse Result: Does not cause skin sensitisation. Method: OECD Test Guideline 429
Germ cell mutagenicity		
Genotoxicity in vitro	:	Ames test Result: negative Method: OECD Test Guideline 471 Micronucleus test Result: Does not induce structural chromosome aberrations. Method: OECD Test Guideline 487 In vitro gene mutation study in mammalian cells Result: Ambiguous results Method: OECD Test Guideline 476 Read-across from supporting substance (structural analogue or surrogate).
Genotoxicity in vivo	:	Not classified due to data which are conclusive although insufficient for classification.
Carcinogenicity	:	Species: Rat Application Route: Oral Result: Not carcinogenic on laboratory animals. Read-across from supporting substance (structural analogue or surrogate).
Reproductive toxicity	:	Species: Rat Method: OECD Test Guideline 422 Not classified due to data which are conclusive although insufficient for classification.
Reproductive toxicity/Fertility	:	Species: Rat Fertility: No observed adverse effect level: 500 mg/kg bw/day

Method: OECD Test Guideline 422

Reproductive toxicity/Development/Teratogenicity	:	Species: Rat Teratogenicity: No observed adverse effect level: 500 mg/kg bw/day Method: OECD Test Guideline 422
STOT - single exposure	:	Not classified due to data which are conclusive although insufficient for classification.
STOT - repeated exposure	:	Not classified due to data which are conclusive although insufficient for classification.
Aspiration hazard	:	Not classified due to data which are conclusive although insufficient for classification.

SECTION 12: ECOLOGICAL INFORMATION

Product information:
Ecotoxicology Assessment

Additional ecological information	:	None known.

12.1 Toxicity

Components:
Test result
Ethylenediaminetetraacetic acid, copper disodium complex

Toxicity to fish	:	LC50: 555 mg/l Exposure time: 96 h Species: Lepomis macrochirus (Bluegill sunfish) Test Type: Fresh water
Toxicity to daphnia and other aquatic invertebrates	:	EC50: 109,2 mg/l Exposure time: 48 h Species: Daphnia magna (Water flea) Test Type: Fresh water Method: OECD Test Guideline 202 Read-across (Analogy)
Toxicity to algae	:	EC50: 662,6 mg/l Exposure time: 72 h Species: Pseudokirchneriella subcapitata (green algae) Test Type: Fresh water Method: OECD Test Guideline 201 Read-across (Analogy)
Toxicity to bacteria	:	NOEC: > 654 mg/l Exposure time: 3 h Species: activated sludge Test Type: static test Method: OECD Test Guideline 209 Read-across (Analogy)
Toxicity to fish (Chronic toxicity)	:	NOEC: 37,2 mg/l Exposure time: 35 d

Species: Danio rerio (zebra fish)
Test Type: flow-through test
Method: OECD Test Guideline 210
Read-across (Analogy)

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity)	:	NOEC: 29,5 mg/l Exposure time: 21 d reproduction rate Species: Daphnia magna (Water flea) Test Type: semi-static test Method: OECD Test Guideline 211 Read-across (Analogy)

12.2 Persistence and degradability

Product information:

Biodegradability	:	Not readily biodegradable, but will degrade after a longer period.

Components:
Ethylenediaminetetraacetic acid, copper disodium complex

Biodegradability	:	Not readily biodegradable, but will degrade after a longer period.

12.3 Bioaccumulative potential

Product information:

Bioaccumulation	:	Not expected considering the low log Pow value.

Components:
Ethylenediaminetetraacetic acid, copper disodium complex

Bioaccumulation	:	Not expected considering the low log Pow value.

12.4 Mobility in soil

Product information:

Mobility	:	Adsorption to the solid soil particles is not expected.

Components:
Ethylenediaminetetraacetic acid, copper disodium complex

Mobility	:	Adsorption to the solid soil particles is not expected.

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, copper 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 Other adverse effects

Product information:

Biochemical Oxygen Demand (BOD) : No data available

Components:

Ethylenediaminetetraacetic acid, copper disodium complex

Biochemical Oxygen Demand (BOD) : No data available

SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product : Do not dispose of waste into sewer.
Do not contaminate ponds, waterways or ditches with chemical or used container.
Hazardous waste
Dispose of contents/container in accordance with local regulation.

Contaminated packaging : Empty remaining contents.
Dispose of as unused product.

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.

SECTION 15: REGULATORY INFORMATION

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

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

DSL : YES. All components of this product are on the Canadian DSL

AICS	:	YES. On the inventory, or in compliance with the inventory
NZIoC	:	YES. On the inventory, or in compliance with the inventory
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	:	YES. On the inventory, or in compliance with the inventory
IECSC	:	YES. On the inventory, or in compliance with the inventory
TCSI	:	YES. On the inventory, or in compliance with the inventory
TSCA	:	YES. All substances listed as active on the TSCA inventory

For explanation of abbreviation see section 16.

15.2 Chemical safety assessment

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

SECTION 16: OTHER INFORMATION

Full text of H-Statements referred to under sections 2 and 3.

H302	:	Harmful if swallowed.
H319	:	Causes serious eye irritation.

Full text of other abbreviations

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; AICS - Australian Inventory of Chemical Substances; 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 - 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; 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.