

SAFETY DATA SHEET

according to the Hazardous Products Regulations

Dissolvine E-Cu-15

Version	Revision Date:	CA / EN	Date of last issue: 2023/07/18
2.6	2024/10/29		Date of first issue: 2015/01/24

SECTION 1. IDENTIFICATION

Product name : Dissolvine E-Cu-15
 Other means of identification : No data available

Manufacturer or supplier's details

Company name of supplier : Nouryon Functional Chemicals LLC
 100 Matsonford Road, Building 1, Suite 500
 Radnor PA 19087
 United States

Telephone : (800) 906-7979
 Telefax : (312) 544-7167
 E-mail address : sds_chelates@nouryon.com
 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.

Recommended use of the chemical and restrictions on use


Recommended use : Plant nutrient
 Fertilizers

SECTION 2. HAZARDS IDENTIFICATION

GHS classification in accordance with the Hazardous Products Regulations

Combustible dust : Category 1
 Acute toxicity (Oral) : Category 4
 Eye irritation : Category 2A

GHS label elements

Hazard pictograms : 

Signal word : Warning

Hazard statements : May form combustible dust concentrations in air.
 H302 Harmful if swallowed.
 H319 Causes serious eye irritation.

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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.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 If eye irritation persists: Get medical advice/ attention.

Disposal:
P501 Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Dust can form an explosive mixture in air.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Substance
Substance name : Ethylenediaminetetraacetic acid, copper disodium complex

CAS-No. : 14025-15-1

Common Name/Synonym : Ethylenediaminetetraacetic acid, copper disodium complex

Components

Chemical name	Common Name/Synonym	CAS-No.	Concentration (% w/w)
Ethylenediaminetetraacetic acid, copper disodium complex	Ethylenediaminetetraacetic acid, copper disodium complex	14025-15-1	>= 80 - <= 100 *

* Actual concentration or concentration range is withheld as a trade secret

SECTION 4. FIRST AID MEASURES

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

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- | | | |
|---|---|---|
| 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. |
| Most important symptoms and effects, both acute and delayed | : | The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known. |
| Notes to physician | : | Treat symptomatically. |
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SECTION 5. FIREFIGHTING MEASURES

- | | | |
|---|---|---|
| Suitable extinguishing media | : | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Specific hazards during fire-fighting | : | Risks of ignition followed by flame propagation or secondary explosions shall be prevented by avoiding accumulation of dust, e.g. on floors and ledges. |
| Hazardous combustion products | : | Fire will produce smoke containing hazardous combustion products (see section 10). |
| Further information | : | Standard procedure for chemical fires. |
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus. |
-

SECTION 6. ACCIDENTAL RELEASE MEASURES

- | | | |
|---|---|---|
| Personal precautions, protective equipment and emergency procedures | : | Use personal protective equipment.
Avoid dust formation.
Avoid breathing dust.
Ensure adequate ventilation.
Evacuate personnel to safe areas.
Only qualified personnel equipped with suitable protective equipment may intervene.
Prevent unauthorised persons entering the zone. |
| Environmental precautions | : | Try to prevent the material from entering drains or water courses. |

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Methods and materials for containment and cleaning up : Pick up and arrange disposal without creating dust.
Sweep up and shovel.
Keep in suitable, closed containers for disposal.

SECTION 7. HANDLING AND STORAGE

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.

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.

Conditions for safe storage : Keep in a dry place.
Store at room temperature in the original container.
Keep container tightly closed.

Further information on storage stability : No decomposition if stored and applied as directed.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Contains no substances with occupational exposure limit values.

Engineering measures : 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
Material : For prolonged or repeated contact use protective gloves.

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.

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Wash hands before breaks and at the end of workday.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	granular
Colour	:	blue
Odour	:	odourless
Odour Threshold	:	Not applicable
pH	:	6 - 7 Concentration: 1 % In water
Melting point	:	Decomposes before melting.
Boiling point/boiling range	:	Not applicable
Flash point	:	Not applicable
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
Upper explosion limit / Upper flammability limit	:	No data available
Lower explosion limit / Lower flammability limit	:	≥ 40 g/m ³
Vapour pressure	:	Not applicable
Relative vapour density	:	Not applicable
Relative density	:	Not applicable
Bulk density	:	600 - 800 kg/m ³
Solubility(ies)	:	
Water solubility	:	680 g/l (0 °C)
Solubility in other solvents	:	No data available

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Partition coefficient: n-octanol/water	:	log Pow: < 0
Auto-ignition temperature	:	340 °C Method: Auto-ignition of a 5mm dust layer according to EN 50281-2-1
Decomposition temperature	:	263 °C
Viscosity	:	
Viscosity, kinematic	:	No data available
Explosive properties	:	Not explosive
Oxidizing properties	:	Not classified as oxidising.

SECTION 10. STABILITY AND REACTIVITY

Reactivity	:	Stable under normal conditions.
Chemical stability	:	Stable under recommended storage conditions.
Possibility of hazardous reactions	:	May form combustible dust concentrations in air. May form explosive dust-air mixture under confinement. If small particles are generated during further processing, handling or by other means, may form combustible dust concentrations in air.
Conditions to avoid	:	None known.
Incompatible materials	:	None known.
Hazardous decomposition products	:	No decomposition if stored and applied as directed.
Hazardous decomposition products	:	Carbon oxides nitrogen oxides (NOx)
Thermal decomposition	:	263 °C

SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Eye contact

Acute toxicity

Product:

Acute oral toxicity	:	LD50 (Rat): 890 mg/kg
Acute inhalation toxicity	:	LD50: > 5.3 mg/l

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Exposure time: 4 h
 Test atmosphere: aerosol
 Method: OECD Test Guideline 436
 Assessment: The substance or mixture has no acute inhalation toxicity

Acute dermal toxicity : LD50: > 2,000 mg/kg
 Method: OECD Test Guideline 402
 Assessment: The substance or mixture has no acute dermal toxicity
 Remarks: Read-across from supporting substance (structural analogue or surrogate).

Components:

Ethylenediaminetetraacetic acid, copper disodium complex:

Acute oral toxicity : LD50 (Rat): 890 mg/kg
 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

Product:

Species : Rabbit
 Assessment : No skin irritation
 Method : OECD Test Guideline 404
 Result : slight irritation
 Remarks : Based on available data, the classification criteria are not met.

Components:

Ethylenediaminetetraacetic acid, copper disodium complex:

Species : Rabbit
 Method : OECD Test Guideline 404
 Result : slight irritation
 Remarks : Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation

Product:

Species : Rabbit
 Result : Irritating to eyes.
 Assessment : Irritating to eyes.
 Method : OECD Test Guideline 405

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Components:

Ethylenediaminetetraacetic acid, copper disodium complex:

Species	: Rabbit
Result	: Irritating to eyes.
Assessment	: Irritating to eyes.
Method	: OECD Test Guideline 405

Respiratory or skin sensitisation

Product:

Species	: Mouse
Method	: OECD Test Guideline 429
Result	: Does not cause skin sensitisation.

Components:

Ethylenediaminetetraacetic acid, copper disodium complex:

Species	: Mouse
Method	: OECD Test Guideline 429
Result	: Does not cause skin sensitisation.

Germ cell mutagenicity

Product:

Genotoxicity in vitro	: Test Type: Ames test
	Method: OECD Test Guideline 471
	Result: negative
	Test Type: Micronucleus test
	Method: OECD Test Guideline 487
	Result: Does not induce structural chromosome aberrations.
	Test Type: In vitro gene mutation study in mammalian cells
	Method: OECD Test Guideline 476
	Result: Ambiguous results
	Remarks: Read-across from supporting substance (structural analogue or surrogate).
Germ cell mutagenicity - Assessment	: Weight of evidence does not support classification as a germ cell mutagen.

Components:

Ethylenediaminetetraacetic acid, copper disodium complex:

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Genotoxicity in vitro : Test Type: Ames test
 Method: OECD Test Guideline 471
 Result: negative

Test Type: Micronucleus test
 Method: OECD Test Guideline 487
 Result: Does not induce structural chromosome aberrations.

Test Type: In vitro gene mutation study in mammalian cells
 Method: OECD Test Guideline 476
 Result: Ambiguous results
 Remarks: Read-across from supporting substance (structural analogue or surrogate).

Carcinogenicity

Product:

Species : Rat
 Application Route : Oral
 Result : Not carcinogenic on laboratory animals.
 Remarks : Read-across from supporting substance (structural analogue or surrogate).

Carcinogenicity - Assessment : Not classifiable as a human carcinogen.

Components:

Ethylenediaminetetraacetic acid, copper disodium complex:

Species : Rat
 Application Route : Oral
 Result : Not carcinogenic on laboratory animals.
 Remarks : Read-across from supporting substance (structural analogue or surrogate).

IARC No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

NTP No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

Reproductive toxicity

Product:

Effects on fertility : Species: Rat

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Fertility: NOAEL: 500 mg/kg bw/day
Method: OECD Test Guideline 422

Effects on foetal development : Species: Rat
Teratogenicity: NOAEL: 500 mg/kg bw/day
Method: OECD Test Guideline 422

Reproductive toxicity - Assessment : Weight of evidence does not support classification for reproductive toxicity
No effects on or via lactation

Components:

Ethylenediaminetetraacetic acid, copper disodium complex:

Effects on fertility : Species: Rat
Fertility: NOAEL: 500 mg/kg bw/day
Method: OECD Test Guideline 422

Effects on foetal development : Species: Rat
Teratogenicity: NOAEL: 500 mg/kg bw/day
Method: OECD Test Guideline 422

STOT - single exposure

Product:

Assessment : The substance or mixture is not classified as specific target organ toxicant, single exposure.
Remarks : Read-across from supporting substance (structural analogue or surrogate).

STOT - repeated exposure

Product:

Assessment : The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Aspiration toxicity

Product:

No aspiration toxicity classification

Further information

Product:

Remarks : Delayed and immediate effects and also chronic effects from short and long term exposure

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As stated above in the summary of toxicological information.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity

Components:

Ethylenediaminetetraacetic acid, copper disodium complex:

- | | | |
|--|---|---|
| Toxicity to fish | : | LC50 (Lepomis macrochirus (Bluegill sunfish)): 555 mg/l
Exposure time: 96 h
Test Type: Fresh water |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): 109.2 mg/l
Exposure time: 48 h
Test Type: Fresh water
Method: OECD Test Guideline 202
Remarks: Read-across (Analogy) |
| Toxicity to algae/aquatic plants | : | EC50 (Pseudokirchneriella subcapitata (green algae)): 662.6 mg/l
Exposure time: 72 h
Test Type: Fresh water
Method: OECD Test Guideline 201
Remarks: Read-across (Analogy) |
| Toxicity to fish (Chronic toxicity) | : | NOEC (Danio rerio (zebra fish)): 37.2 mg/l
Exposure time: 35 d
Test Type: flow-through test
Method: OECD Test Guideline 210
Remarks: Read-across (Analogy) |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC (Daphnia magna (Water flea)): 29.5 mg/l
End point: reproduction rate
Exposure time: 21 d
Test Type: semi-static test
Method: OECD Test Guideline 211
Remarks: Read-across (Analogy) |
| Toxicity to microorganisms | : | NOEC (activated sludge): > 654 mg/l
Exposure time: 3 h
Test Type: static test
Method: OECD Test Guideline 209
Remarks: Read-across (Analogy) |

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Persistence and degradability

Product:

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

Biochemical Oxygen Demand (BOD) : Remarks: No data available

Components:

Ethylenediaminetetraacetic acid, copper disodium complex:

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

Biochemical Oxygen Demand (BOD) : Remarks: No data available

Bioaccumulative potential

Product:

Bioaccumulation : Remarks: Not expected considering the low log Pow value.

Components:

Ethylenediaminetetraacetic acid, copper disodium complex:

Bioaccumulation : Remarks: Not expected considering the low log Pow value.

Partition coefficient: n-octanol/water : log Pow: -10.416

Mobility in soil

Product:

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

Components:

Ethylenediaminetetraacetic acid, copper disodium complex:

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

Other adverse effects

Product:

Additional ecological information : None known.

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Components:

Ethylenediaminetetraacetic acid, copper disodium complex:

Results of 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)

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal methods

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

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

SECTION 14. TRANSPORT INFORMATION

International Regulations

UNRTDG

Not regulated as a dangerous good

IATA-DGR

Not regulated as a dangerous good

IMDG-Code

Not regulated as a dangerous good

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

Not applicable for product as supplied.

National Regulations

TDG

Not regulated as a dangerous good

Special precautions for user

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

SECTION 15. REGULATORY INFORMATION

NPRI Components : Ethylenediaminetetraacetic acid, copper disodium complex
Nitrilotriacetic acid, disodium salt

The components of this product are reported in the following inventories:

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TCSI	:	On the inventory, or in compliance with the inventory
TSCA	:	All substances listed as active on the TSCA inventory
AIIIC	:	On the inventory, or in compliance with the inventory
DSL	:	All components of this product are on the Canadian DSL
ENCS	:	On the inventory, or in compliance with the inventory
ISHL	:	On the inventory, or in compliance with the inventory
KECI	:	On the inventory, or in compliance with the inventory
PICCS	:	On the inventory, or in compliance with the inventory
IECSC	:	On the inventory, or in compliance with the inventory
NZIoC	:	Not in compliance with the inventory
TECI	:	On the inventory, or in compliance with the inventory

Canadian lists

No substances are subject to a Significant New Activity Notification.

SECTION 16. OTHER INFORMATION

Full text of other abbreviations

AIIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); 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; ERG - Emergency Response Guide; 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; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect

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Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; 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; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

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

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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