Safety Data Sheet
according to Regulation (EC) No. 453/2010

Oligo Copper-EDTA 15%

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

1.1. Product identifier
Trade name: Oligo Copper-EDTA 15%
Identifier: disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-)
ECHA No: 01-2119963944-23-0002
CAS No: 14025-15-1
IUPAC name: Copper(2+) ion disodium 2-({2-[bis(carboxylatomethyl)amino]ethyl} (carboxylatomethyl)amino) acetate
Other name: Ethylenediaminetetraacetic acid, cooper-disodium complex

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: fertilizer.

1.3. Details of the supplier of the safety data sheet
Van Iperen International BV
Smidsweg 24
3273 LK Westmaas - Nederland
T +31 (0) 186 578 888 - F +31 (0) 186 573 452
info@iperen.com - www.vaniperen.com

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number
Ireland (Republic of)	National Poisons Information Centre Beaumont Hospital	Beaumont Hospital Beaumont Road 9 Dublin	: +353 1 8379964
United Kingdom	Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Guy's & St Thomas' Hospital Trust	Avonley Road SE14 5ER London	0870 243 2241

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Directive 67/548/EEC or Directive 1999/45/UE
Xn harmful; R22 Harmful if swallowed
Xi irritant; R36 Irritating to eyes.

Classification according to Regulation EU-GHS/CLP No 1272/2008.
Acute Tox 4, H302 Harmful if swallowed.
Eye Irrit. 2, H319 Causes serious eye irritation.

2.2. Label elements

Labelling according to Regulation EU-GHS/CLP No 1272/2008
Hazard pictogram:

Warrning

H302	Harmful if swallowed.
H319	Causes serious eye irritation.

P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
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.
P501	Dispose of contents/ container according to local legislation.

2.3. Other hazards
The substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of the REACH Regulation. (see section 12).

SECTION 3: Composition/information on ingredients

3.1. Substances
Name: Cu EDTA
Identifier: disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-)
Molecular formula: $C_{10}H_{12}N_2O_8Na_2Cu$
ECHA No: 01-2119963944-23-0002
CAS No: 14025-15-1
EC No: 237-864-5
Index No: not available
IUPAC name: Copper(2+) ion disodium 2-({2-[bis(carboxylatomethyl)amino]ethyl} (carboxylatomethyl)amino) acetate

SECTION 4: First aid measures

4.1. Description of first aid measures
General advice: The first step is to put the injured person from a contaminated environment.

If swallowed:	
1.	Rinse mouth, give 2-3 glasses of water to drink. Seek medical attention. Never give anything by mouth to an unconscious person.
2.	Until transporting the patient to the hospital to ensure peace, lying and warm.
In case of eye contact:	
1.	Rinse thoroughly with plenty of cold water.
2.	Seek medical attention.
In case of skin contact:	
1.	Wash thoroughly with soap and water. Remove contaminated cloths.
2.	If symptoms persist, seek medical attention.
If inhaled	
1.	Unlikely route of exposure due to the form of the product - a non-dusting microgranules.
2.	Move to fresh air. If needed, seek medical attention.

4.2. Most important symptoms and effects, both acute and delayed
The most important known symptoms and effects are described in section 2.

4.3 Indication of any immediate medical attention and special treatment needed
Treat according to symptoms (decontamination, vital functions), no known specific antidote.

SECTION 5: Firefighting measures

5.1. Extinguishing media	Depending on the materials stored in the neighbourhood use following extinguishing media: foam, water spray, dry chemical powder, CO_2. Unsuitable extinguishing media: water jet.
5.2. Special hazards arising from the substance or mixture	Hazardous decomposition / combustion products: carbon oxides and nitrogen oxides (N_yO_x)
5.3. Advice for firefighters	Fire-fighters should wear suitable protective clothing such as boots, overalls, gloves, eye and face protection and breathing apparatus. Do not allow to enter fire-fighting water to surface water or groundwater.

SECTION 6: Accidental release measures

General advice:	Do not flush into public water courses. Do not empty into drains, ground or surface water and soil. If the product enters drains or water, immediately inform appropriate authorities.
6.1. Personal precautions, protective equipment and emergency procedures	Ensure adequate ventilation. Use personal protective equipment – see section 8.
6.2. Environmental precautions	Do not let product enter drains. If the product enters drains or water, immediately inform appropriate authorities.
6.3. **Methods and material for containment and cleaning up**	Sweep up shovel. Contain spillage and then collect by wet-brushing and place in container for disposal according to local regulations. After removal, wash the contaminated area with water.
6.4. Reference to other sections	For disposal see section 13. For personal protective equipment see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling	Avoid formation of dust. Handle in accordance with good industrial hygiene and safety practice. Use personal protective equipment according to section 8. Do not disposal to sewage system.

7.2. Conditions for safe storage, including any incompatibilities	Keep in original, tightly closed container in a dry place. Keep away from heat and source of ignition. Recommended storage temperature: -5ºC till + 30ºC.
7.3. Specific end use(s)	No data available.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
According to the country-specific regulations.

DNEL:
Workers - Hazard via inhalation route – 1,8 mg/m^3
Workers - Hazard via dermal route - 3750 mg/kg bw/day
General Population - Hazard via inhalation route – 0,45 mg/m^3
General Population - Hazard via dermal route - 1875 mg/kg bw/day
General Population - Hazard via oral route - 0.375 mg/kg bw/day

PNEC:
PNEC aqua (freshwater) **-** 2.95 mg/L
PNEC aqua (marine water) - 0.3 mg/L
PNEC aqua (intermittent releases) - 1.09 mg/L
PNEC STP - 65.4 mg/L
Sediment (freshwater) - No exposure of sediment expected
Sediment (marine water) - No exposure of sediment expected
AIR **-** No hazard identified
PNEC soil - 0.21 mg/kg soil dw

8.2. Exposure controls

Personal protective equipment:

Eye/face protection	Use safety goggles
Skin/hands protection	Handle with protective gloves (recommended nitrile gloves, layer thickness 0,11 mm and breakthrough time > 480 minutes). Use protective clothing.
Industrial hygiene:	Handle in accordance with good industrial hygiene and safety practice. Change contaminated clothing. Avoid contact with skin. Avoid breathing dust. Wash hands after working with substance. When using do not eat or drink. Immediately remove spilled substance.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance	Solid, blue microgranules
Odour	Odourless
Odour threshold	Not applicable
pH value 1,0 % (w/v) solution	7,0 ± 1,0
Melting point/freezing point	Not applicable (does not melt under the decomposition temperature of 219°C.
Initial boiling point	Not applicable (The substance decomposes before boiling, even before melting.)
Flash point	No data available
Evaporation rate	No data available
Flammability (solid, gas)	Not flammable
Upper/lower flammability or explosive limits;	Not applicable
Vapour pressure	No data available
Vapour density	No data available
Relative density	0,7 ± 0,10 g/cm^3
Solubility(ies)	Water: 689 g/L at 0ºC
Partition coefficient: n-octanol/water	≤ 4,5
Auto-ignition temperature	No data available
Decomposition temperature	219ºC
Viscosity	Not applicable

Explosive properties	Non explosive
Oxidizing properties	Has no oxidising properties

9.2 Other information

Coper (Cu)	15,0 % w/w

SECTION 10: Stability and reactivity

10.1 Reactivity - the substance has low chemical reactivity.
10.2 Chemical stability – stable under normal conditions of use and storage.
10.3 Possibility of hazardous reactions - no data available
10.4 Conditions to avoid – keep away from heat.
10.5 Incompatible materials – none.
10.6 Hazardous decomposition products – in the event of fire produces oxides of nitrogen N_yO_x

SECTION 11: Toxicological information

Acute toxicity:

Substance name	% w/w	Method	Result	Units
Cu EDTA	100	LD_{50} (oral, rat)	890	mg/kg
		LC50 (rat, inhal, 4 h, OECD 436):	> 5,32	mg/L

Skin corrosion/irritation – slight irritated, but no classification and labeling was considered to be needed based on the results of this study.
Serious eye damage/eye irritation – irritating according to OECD test No 405
Respiratory or skin sensitization – not sensitising (OECD 429)
Germ cell mutagenicity - The test substance EDTA-$CuNa_2$ is not mutagenic in the Ames test under the experimental conditions used (OECD 471).
Carcinogenicity - conclusive but not sufficient for classification

Reproductive toxicity – conclusive but not sufficient for classification
Specific target organ toxicity (STOT) - single exposure – conclusive but not sufficient for classification
Specific target organ toxicity (STOT)- repeated exposure – conclusive but not sufficient for classification
Aspiration hazard – not applicable (solid substance)

Potential health effects
No data available.

Signs and Symptoms of Exposure
No data available.

SECTION 12: Ecological information

12.1. Toxicity

Substance name	% w/w.	Method	Result	Units
Cu EDTA	100	(fish, 96h)	555	mg/l

12.2 Persistence and degradability
Cu EDTA is not readily biodegradable according to OECD criteria, but ultimately biodegradable under special environmental conditions (slightly alkaline pH). No biodegradation observed in activated sludge simulation test (OECD TG 303 A).
12.3 Bioaccumulative potential
The substance has a low potential for bioaccumulation (the log Kow is ≤ 4,5).
12.4 Mobility in soil
The estimated log Koc values are less than the threshold value of 3 indicating no adsorbing potential for this compound. The estimated log Koc for EDTA-$CuNa_2$ is 1 (worst case, MCI method).
12.5 Results of PBT and vPvB assessment
The substance does not meet the criteria for PBT or vPvB in accordance with Annex XIII of the REACH Regulation. Chemical safety assessment not required/not conducted.
12.6 Other adverse effects - no data available

SECTION 13: Disposal considerations

Packaging mast be disposed of in compliance with the country-specific regulations or mast be passed to a packaging return system

Oligo Copper-EDTA 15%

SECTION 14: Transport information

14.1	**UN number**	Not applicable
14.2	**UN proper shipping name**	Not applicable
14.3	**Transport hazard class(es)**	Not applicable
14.4	**Packing group**	Not applicable
14.5	**Environmental hazards**	Not applicable
14.6	**Special precautions for user**	Not applicable
14.7	**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**	Not applicable

SECTION 15: Regulatory information

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

1 Directive 67/548/EEC

2. REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENTAND 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 with amendments

3. 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)
4. REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL
of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006; with amendments

5. European Agreement concerning the International Carriage of Dangerous Goods by Road

6. Regulation (EU) No 649/2012 Of The European Parliament and of The Council of 4 July 2012 concerning the export and import of hazardous chemicals.
7. Regulation (EC) No 850/2004 Of The European Parliament and of The Council Of 29 April 2004 On Persistent Organic Pollutants And Amending Directive 79/117/EEC.

15.2. Chemical Safety Assessment

For this substance a chemical safety assessment was carried out.

SECTION 16: Other information

Other information:

To develop this MSDS used results obtained in accordance with the requirements of REACH regulation.

Abbreviation:

DNEL: Derived No-Effect Level

PNEC: Predicted No-Effect Concentration

NOAEL: No Observed Adverse Effect Level

LD50: Lethal Dose 50%. The LD50 corresponds to the dose of a tested substance causing 50% lethality during a specified time interval.

LC50: Lethal Concentration 50%. The LC50 corresponds to the concentration of a tested substance causing 50% lethality during a specified time interval.

EC50: Effective Concentration 50%. The EC50 corresponds to the concentration of a tested substance causing 50% changes in response (e.g. on growth) during a specified time interval.

BCF: Bioconcentration factor

PBT: Persistent, bioaccumulative and toxic

vPvB: Very Persistent and very Bioccumulative

Company disclaimer

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 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 proceed, unless specified in the text.