Oligo Iron-DTPA 11%

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

1.1. Product identifier
Trade name: **Van Iperen Oligo Iron-DTPA 11%**
Indentifier: disodium [N,N-bis[2-[bis(carboxymethyl)amino]ethyl]glycinato(5-)]ferrate(2-) ECHA No: 17-21199556042-44-0000
CAS No: 19529-38-5
EC No: 243-136-8

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: inorganic 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
In case of emergency contact the national emergency telephone number: UK and Ireland: 112 or 999

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 Regulation EU-GHS/CLP No 1272/2008. Not classified.

2.2. Label elements
Labelling according to EU-GHS/CLP No 1272/2008 - not required.

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: Fe DTPA,
Formula: C14H18N3O10Fe Na2 CAS No: 19529-38-5
EC No: 243-136-8

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. Rinse off with plenty of 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
Treatment: Symptomatic treatment.

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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, CO2..
Unsuitable extinguishing media: none known.

5.2. Special hazards arising from the substance or mixture
Hazardous decomposition / combustion products: produces oxides of nitrogen on combustion: NyOx.

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 well-ventilated 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 (long term exposure, systemic effect) – 22 mg/m3
Workers - Hazard via inhalation route (acute/short term exposure, systemic effect) – No hazard identified Workers - Hazard via inhalation route (long term exposure, local effect) – 10 mg/m3
Workers - Hazard via inhalation route (acute/short term exposure, local effect) – No hazard identified Workers - Hazard via dermal route (long term exposure, systemic effect) - 62 mg/kg bw/day
Workers - Hazard via dermal route (acute/short term exposure, systemic effect) – No hazard identified
Workers - Hazard via dermal route (long term exposure, local effect) – Hazard unknown (No further information necessary)
Workers - Hazard via dermal route (acute/short term exposure, local effect) – Hazard unknown (No further information necessary)
Workers – Eyes (local effects) – No hazard identified
General population - Hazard via inhalation route (long term exposure, systemic effect) – 5,5 mg/m3
General population - Hazard via inhalation route (acute/short term exposure, systemic effect) – No hazard identified General population - Hazard via inhalation route (long term exposure, local effect) – 2,5 mg/m3
General population - Hazard via dermal route (long term exposure, systemic effect) - 31 250 mg/kg bw/day General population - Hazard via dermal route (acute/short term exposure, systemic effect) – No hazard identified General population - Hazard via dermal route (long term exposure, local effect) – Hazard unknown (No further information necessary)
General population - Hazard via dermal route (acute/short term exposure, local effect) – No hazard identified General population - Hazard via oral route (long term exposure, systemic effect) – 6,25 mg/kg bw/day General population - Hazard via oral route (acute/short term exposure, systemic effect) – No hazard identified General population – Eyes (local effects) – No hazard identified

PNEC:
PNEC aqua (freshwater) – 6,2 mg/L PNEC aqua (marine water) – 0,62 mg/L

PNEC aqua (intermittent releases) – 3,1 mg/L PNEC STP - 50 mg/L
Sediment (freshwater) – No exposure of sediment expected Sediment (marine water) - No exposure of sediment expected AIR - No hazard identified
PNEC soil – 1,23 mg/kg soil dw
PNEC secondary poisoning – No potential foe bioaccumulation

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, microgranules
Colour	Yellow
Odour	Odourless
pH value 1,0 % (w/v) solution	6,5 ± 0,5
Melting point/freezing point	decomposes (at 159oC) before melting (OECD 102/EU Method A.1.)
Initial boiling point	decomposes (at 159oC) before boiling (OECD 102/EU Method A.1.)
Flash point	No applicable
Evaporation rate	No data available
Flammability (solid, gas)	Not flammable (EU Method A.10)
Upper/lower flammability or explosive limits;	Not applicable
Vapour pressure	107 mbara (10.7 kPa) at 55°C (ASTM standard)
Vapour density	No data available
Relative density	0,7 ± 0,10 g/cm3
Solubility(ies)	Water: 700 g/L
Partition coefficient: n-octanol/water	-11.9 (calculated)
Auto-ignition temperature	327 °C (EU Method A.16)
Decomposition temperature	159oC
Viscosity	Not applicable (solid)
Explosive properties	Not explosive (EU Method A.14)
Oxidizing properties	No oxidizing properties (EU Method A.17)

9.2 Other information

Conductivity 1% solution	3,0 ± 0,2 mS/cm in 20□C
Iron (Fe)	11,0 ± 0,4 % m/m

SECTION 10: Stability and reactivity

10.1 Reactivity –
the substance has low chemical reactivity. Aqueous solutions may be corrosive to metals.

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 NyOx

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SECTION 11: Toxicological information

Acute toxicity – not harmful
LD50 (oral, rat, OECD Guideline 423) > 2000 mg/kg bw
LC50 (inhalation, rat, 4h, OECD Guideline 436) > 5.08 mg/L (based on study for read-across substance DTPA- FeNaH,)
LD50 (dermal, rat, OECD 402/EU Method B.3) > 2 000 mg/kg bw (based on study for read-across substance FeNaEDTA and EDTA-Fe(NH4)NH4OH)
Skin corrosion/irritation - no irritating (OECD Guideline 439 (In Vitro Skin Irritation)
Serious eye damage/eye irritation - no irritating (OECD Guideline 437)
Respiratory or skin sensitization - no skin or respiratory sensitization (OECD Guideline 429 (Skin Sensitisation: Local Lymph Node Assay)
Germ cell mutagenicity - no data available (OECD 487, based on study for read-across substance DTPA-FeNaH)
Carcinogenicity – not carcinogenic based on the data for the read-across substance NOAEL (rat) ≥ 500 mg/kg bw/day (study for EDTANa3H)
Reproductive toxicity - no data available for the substance as such. The assessment was based on data for read- across substance DTPA-FeNaH (OECD Guideline 422):
NOAEL (rat, parents) ≥ 500 mg/kg bw/day NOAEL (F1 male/female) ≥ 1500 mg/kg bw/day
Specific target organ toxicity (STOT) - single exposure - no data available
Specific target organ toxicity (STOT)- repeated exposure - no data available
NOAEL 500 mg/kg bw/day (OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents), based on study for read-across substance DTPA-FeNaH
Aspiration hazard - no data available

Potential health effects
No data available.

Signs and Symptoms of Exposure
No data available.

SECTION 12: Ecological information

12.1. Toxicity
Acute toxicity for aquatic organisms:
LC50 (96h)> 100 mg/L (fish - danio renio, OECD Guideline 203, read-across with FeNa-DTPA) EC50 (48h) > 100 mg/L (daphnia manga, OECD 202, read-across with FeNa-DTPA)
EC50 (72h) > 9.4 mg/L growth rate (algae, OECD Guideline 201, read-across with FeNa-DTPA)
EC50 (3h) > 1280 mg/L, (activated sludge, OECD Guideline 209 (Respiration Inhibition Test), read-across with FeNa-DTPA)
Long-term toxicity for aquatic organisms:
Fish: NOEC 100 mg/L, 28 days (publication, read-across with DTPA)
Daphnia manga: NOEC 67 mg/L, 18 days, (OECD Guideline 211, read-across with FeNa-DTPA) Soil macroorganisms
Eisenia fetida EC50 (14 days) 156.46 mg/kg soil dw (OECD Guideline 207 (Earthworm, Acute Toxicity Tests)), read-across with EDTA

12.2 Persistence and degradability - no data available.
DTPA (acid form) and its (metal) salts are not readily biodegradable according to OECD criteria.

12.3 Bioaccumulative potential - no data available
The Log Kow for the assessed substance is <= 4.5 indicating that the substance is not a B / vB.

12.4 Mobility in soil - no data available
The estimated log Koc values are less than the threshold value of 3 indicating no adsorbing potential for this compound.

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 was 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.

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

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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. 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
2. 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)
3. REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THECOUNCIL

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

4. European Agreement concerning the International Carriage of Dangerous Goods by Road
5. 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.
6. 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.
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.

Abbreviations:
DNEL: Derived No-Effect Level

PNEC: Predicted No-Effect Concentration **NOAEL:** No Observed Adverse Effect Level **NOEC:** No observed effect concentration.
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

Indication of changes:
Section 2 – update according to Annex II of Regulation 453/2010 Section 8 – DNEL and PNEC values added
Section 11 – added toxicological data Section 12 – added eco-toxicilogical data

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.