Oligo Iron-DTPA 6% Liquid

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

1.1. Product identifier
Trade name: **Van Iperen Oligo Iron-DTPA 6% Liquid**
Identyficator: diammonium [N,N-bis[2-[bis(carboxymethyl)amino]ethyl]glycinato(5-)]ferrate(2-)
Reg. ECHA: 01-2119980791-27-0001
CAS: 85959-68-8
EC: 289-064-0
IUPAC name: iron(3+) ino diammonium 2-[bis({2-[bis(carboxylatonethyl)amino] ethyl})amino]acetate

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/preparation: foliar, fertigation, soil.

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.
May be corrosive to metals.

2.2 Label elements

Signal word: Warning
H290 May cause corrosion of metals.

P234 Keep only in original package.
P390 Absorb spillage to prevent material damage.
P406 Store in corrosive resistant container.

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: FeDTPA(NH4)2
Identyficator: diammonium [N,N-bis[2-[bis(carboxymethyl)amino]ethyl]glycinato(5-)]ferrate(2-) Reg. ECHA: 01-2119980791-27-0001
CAS: 85959-68-8
EC: 289-064-0
Index No: Not available
IUPAC name: iron(3+) ino diammonium 2-[bis({2-[bis(carboxylatonethyl)amino] ethyl})amino]acetate Molecular formula: C14H26N5O10Fe

SECTION 4: First aid measures

4.1. Description of first aid measures
Health effects:
Hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Slightly hazardous in case of ingestion.
Inhalation:
1. Remove the victim to fresh air.
2. If symptoms persist, seek medical attention.

Ingestion:
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.

Eye contact:
1. Immediately flush eyes with running water for at least 15 minutes, keeping eyelids open. Cold water may be used.
2. Seek medical attention.

Skin contact:
1. Wash thoroughly with soap and water. Remove contaminated cloths.
2. If irritation persists, 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, CO2..
Unsuitable extinguishing media: water jet.

5.2. Special hazards arising from the substance or mixture
Hazardous decomposition / combustion products: carbon oxides and nitrogen oxides (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
Stop the leak. Collect into a suitable container using sorbent and pass for disposal. After removal, wash the spillage area with water.

6.4. Reference to other sections
For disposal see section 13.
For personal protective equipment see section 8.
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 mist/aerosol. 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: 0oC till + 30oC.

7.3. Specific end use(s)
No data available.

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

According to the country-specific regulations.
Selection of the DNEL(s) or other hazard conclusion for critical health effects Hazard conclusions for workers

Route	Type of effect	Hazard conclusion
Inhalation	Systemic effects - Long-term exposure	DNEL: 22 mg/m3
Inhalation	Local effects – Long term exposure	DNEL: 10 mg/ m3
Dermal	Systemic effects - Long-term	DNEL: 62500 mg/kg bw/day
Dermal	Systemic effects - Acute	No hazard identified
Dermal	Local effects - Acute	No hazard identified
Eyes	Local effects	No hazard identified

Hazard conclusions for the general population

Route	Type of effect	Hazard conclusion
Inhalation	Systemic effects - Acute	No hazard identified
Inhalation	Local effects - Acute	No hazard identified
Inhalation	Systemic effects - Long-term exposure	DNEL: 5,5 mg/m3
Inhalation	Local effects – Long term exposure	DNEL: 2,5 mg/m3
Dermal	Systemic effects - Long-term	DNEL: 31250 mg/kg bw/day
Dermal	Systemic effects - Acute	No hazard identified
Dermal	Local effects - Acute	No hazard identified
Oral	Systemic effects - Long-term	DNEL: 6.25 mg/kg bw/day
Oral	Systemic effects - Acute	No hazard identified
Eyes	Local effects	No hazard identified

PNEC:
PNEC aqua (freshwater) – 6,1 mg/L PNEC aqua (marine water) – 0,61 mg/L
PNEC aqua (intermittent releases) – 3,0 mg/L PNEC STP - 49 mg/L
Sediment (freshwater) - No exposure of sediment expected Sediment (marine water) - No exposure of sediment expected AIR - No hazard identified
PNEC soil – 1,21 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	Liquid
Colour	Transparent red - yellow
Odour	Specific
pH	6,0 - 8,0
Freezing point:	is expected to be between -20 and 0°C
Initial boiling point and boiling range	100-110°C
Solid/gas flammability	Not applicable (liquid)
Upper/lower flammability or explosive limits	No
Vapour density:	Not applicable
Flash point	Not applicable
Evaporation rate	Not applicable
Vapour pressure	Not applicable
Density	1,28+ 0,01g/cm3
Solubility in water	678 g/L
Lipid solubility: Not Relevant	Not applicable
Partition coefficient (n-octanol/water):	-13,88
Auto-ignition temperature	Non flammable
Decomposition temperature	No data
Viscosity	11.8 mPas at 20 °C (53% solution)
Explosive properties	Not explosive (EU Method A.14)
Oxidizing properties	No oxidising properties (EU Method A.17)

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9.2 Other information

Iron	Fe	6,0 ± 0,0 5% w/w
Nitrogen	N-NH4	3,0 ± 0,05 % w/w
Conductivity 1,0% sol		3,0±0,2 mS/cm at 20□C

SECTION 10: Stability and reactivity

10.1 Reactivity – may cause corrosion of metals.

10.2 Chemical stability – stable under normal conditions of use and storage.

10.3 Possibility of hazardous reactions - may cause corrosion of metals

10.4 Conditions to avoid – keep away from heat.

10.5 Incompatible materials – aluminium, nickel, zinc, copper.

10.6 Hazardous decomposition products – in the event of fire produces oxides of NOx, CO, CO2,

SECTION 11: Toxicological information

Acute toxicity:

Substance name	% w/w	Method	Result	Units
FeDTPA(NH4)2	100	LD50 (oral, rat)	>2000	mg/kg bw

Skin corrosion/irritation – not irritating according to OECD test No 439
Serious eye damage/eye irritation – not irritating according to OECD test No 405
Respiratory or skin sensitization – not sensitising (OECD 429)
Germ cell mutagenicity - conclusive but not sufficient for classification.
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
There no available eco-toxicological studies for substance as such. The assessment was made on the basis of similar substances (read-across assessment).

12.2 Persistence and degradability
Available data from screening tests do not allow concluding that the assessed substance is not a P / vP. Based on expected similar behavior and fate compared to EDTA (read across) and the lack of biodegradability, DTPA- Fe(NH4)2 is slowly biodegradable in surface water under specific environmental conditions. In addition, due to high water solubility and low adsorption, DTPA will eventually leach to ground- and surface waters and not accumulate in soil.

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 of DTPA-Fe(NH4)2 varied between 3 (MCI method) and -8.1 (Kow method). Due to high water solubility and low adsorption, DTPA will eventually leach to ground- and surface waters and not accumulate in soil.

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.

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SECTION 14: Transport information

Road & Rail: ADR / RID

14.1	UN number	1760
14.2	UN proper shipping name	Corrosive liquids N.O.S.
14.3	Transport hazard class(es)/ Classification code	8 / C9
14.4	Packing group	III
14.5	Environmental hazards	80
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 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
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.

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 is the level of exposure to a substance above which humans should not be exposed. PNEC - predicted no effect concentration is the concentration below which exposure to a substance is not expected to cause adverse effects to species in the environment.
PBT – Persistent Bioaccumulative Toxic
vPvB – very persistent and very bioaccumulative

Indication of changes:
Section 2 – update according to Annex II of Regulation 453/2010**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.