Oligo Iron-DTPA 6% Liquid

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

1.1. Product identifier
Trade name: **Oligo Iron-DTPA 6% Liquid**
Identyficator: diammonium [N,N-bis[2-[bis(carboxymethyl)amino]ethyl]glycinato(5-)]ferrate(2-)
Reg. ECHA: 01-2119980791-27
UFI: 8470-S0NN-U005-KDM7
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.
Uses advised against: not identified.

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 SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation EU-GHS/CLP No 1272/2008.
Met. Corr. 1, H290 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). Does not included in the list established in accordance with Article 59(1) for having endocrine disrupting properties or identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

SECTION 3: Composition/information on ingredients

3.1. Substances

Name: FeDTPA$(NH_4)_2$ DTPA
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: $C_{14}H_{26}N_5O_{10}Fe$

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.

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.

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

Physical state	Liquid
Colour	Transparent red - brown
Odour	Specific
Melting point/freezing point	is expected to be between -20 and 0°C
Boiling point or initial boiling point and boiling range	100-110°C
Flammability (solid, gas)	Not applicable (liquid)
Upper and lower explosion limit	Not applicable
Flash point	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
pH value of warking solution	6.5 ± 1.0
Kinematic viscosity	11.8 mPas at 20 °C (53% solution)
Solubility	No data available
Partition coefficient: n-octanol/water (log value)	-13.88
Vapour pressure	No data available
Relative density	1.28 ± 0.01 g/cm3
Relative vapour density	No data available
Particle characteristics	Not applicable (liquid)

9.2 Other information

No data available

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.

11.2. Information on other hazards
Does not included in the list established in accordance with Article 59(1) for having endocrine disrupting properties or identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

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 Endocrine disrupting properties
Does not included in the list established in accordance with Article 59(1) for having endocrine disrupting properties or identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605.

12.7 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

Road & Rail: ADR / RID

14.1	UN number	1760	
14.2	UN proper shipping name	Corrosive liquids N.O.S. (Contains Diethylenetriaminepentaacetic acid, ferric-diammonium complex / Fe DTPA (NH4))	
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	Maritime transport in bulk according to IMO instruments		Not applicable

SECTION 15: Regulatory information

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

REACH – Restriction on the manufacture, placing on the market and use of certain dangerous substances, preparations and articles (Annex XVII)
Not applicable
REACH- Candidate List of Substances of Very High Concern for Authorisation (Article 59)
Not applicable
REACH – list of substances subject to authorisation (Annex XIV)
Not applicable
Regulation (EC) No 1005/2009 on substances that deplete the ozone layer
Not applicable
Regulation (EU) 2019/1021 on persisten organic pollutants
Not applicable
Regulation (EC) No 649/2012 of the European Parliament and the Council concerning the export and import of dangerous chemicals
Not applicable
Sevesco III: Directive 2012/18/EU of the European Parliament and the Council on the control of major-accident hazards involving dangerous substances
Not applicable

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) 2020/878 of 18 June 2020 amending Annex II to Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning 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. 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.
5. 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.
6. European Agreement Concerning The International Carriage Of Dangerous Goods By Road (ADR).
7. REGULATION (EU) 2019/1148 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL

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 1.3 – change in company's name: from PPC ADOB Sp. z o.o. Sp. jawna on PPC ADOB Sp. z o.o.
Section 9 – update of pH and conductivity values

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.