

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 with amendments



Oligo Iron-EDTA 13%

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

1.1. Product identifier

Trade name: Van Iperen Oligo Iron-EDTA 13%

CAS No: 54959-35-2

EC No: 259-411-0

REACH No: 01-2120085738-40-0000

IUPAC name: potassium;2-[2-[bis(carboxylatomethyl)amino]ethyl-(carboxylatomethyl) amino]acetate;iron(3+)

Other name: EDTA-FeK, Potassium ferric ethylenediaminetetraacetate, Ethylenediaminetetraacetic acid, ferricpotassium 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

No hazardous product as specified in EU-GHS/CLP No 1272/2008

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

Trade name: Van Iperen Oligo Iron-EDTA 13%

CAS No: 54959-35-2

EC No: 259-411-0

IUPAC name: potassium;2-[2-[bis(carboxylatomethyl)amino]ethyl-(carboxylatomethyl) amino]acetate;iron(3+)

Other name: EDTA-FeK, Potassium ferric ethylenediaminetetraacetate

Molecular formula: C₁₀H₁₂FeKN₂O₈

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. Induce vomiting. 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 contaminatedcloths. |
| 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. |

Oligo Iron-EDTA 13%

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.

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, eyes 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: -10°C till + 30°C.

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) – 3,95 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) – No hazard identified
Workers - Hazard via inhalation route (acute/short term exposure, local effect) – No hazard identified

Workers - Hazard via dermal route (long term exposure, systemic effect) - 2800 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) – No hazard identified
Workers - Hazard via dermal route (acute/short term exposure, local effect) – No hazard identified
Workers – Hazard for eye - No hazard identified

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 with amendments



Oligo Iron-EDTA 13%

General Population - Hazard via inhalation route (long term exposure, systemic effect) – 0,97 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) – No hazard identified

General Population - Hazard via inhalation route (acute/short term exposure, local effect) – No hazard identified

General Population - Hazard via dermal route (long term exposure, systemic effect) - 1400 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) – No hazard identified

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) - 0.28 mg/kg bw/day

General Population - Hazard via oral route (acute/short term exposure, systemic effect) - No hazard identified

General Population - Hazard for eye - No hazard identified

PNEC:

PNEC aqua (freshwater) – 2,5 mg/L

PNEC aqua (marine water) - 0.25 mg/L

PNEC aqua (intermittent releases) - 1.009 mg/L

PNEC STP - 64 mg/L

Sediment (freshwater) – 87.175 mg/kg sediment dw

Sediment (marine water) – 8.7175 mg/kg sediment dw

AIR - No hazard identified

PNEC soil – 15,92 mg/kg soil dw

Secondary poisoning – No potential for 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 product. When using do not eat or drink. Immediately remove spilled product.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | |
|---|--|
| Appearance | Solid, micro-granular |
| Colour | Light brown |
| Odour | Odourless |
| pH value 1,0 % (w/v) solution | 6,0 ± 1,0 |
| Melting point/freezing point | Decomposition > 225,4°C |
| Initial boiling point | Decomposes before boiling |
| Flash point | Not applicable (relevant only for liquids) |
| Evaporation rate | No data available |
| Flammability (solid, gas) | Not flammable (EU Method. A.10) |
| Upper/lower flammability or explosive limits; | Not applicable |
| Vapour pressure | 1.14· 10 ⁻⁴ Pa at 20 °C; 1.77· 10 ⁻⁴ Pa at 25 °C |
| Vapour density | No data available |
| Relative/bulk density | 0,7 ± 0,10 g/cm ³ |
| Solubility(ies) | water: 558,16 g/L at 20°C |
| Partition coefficient: n-octanol/water | -4,6 |
| Auto-ignition temperature | 362°C (EU Method A.16) |
| Decomposition temperature | > 225,4°C |
| Viscosity | Not applicable |
| Explosive properties | No explosive (EU Method A.14) |
| Oxidizing properties | No oxidizing properties (EU Method A.17) |

9.2 Other information

| | |
|-------------------------------|------------------------|
| Iron (Fe) | 13.0 ± 0.4% w/w |
| Potassium (K ₂ O) | 11.0% w/w |
| Conductivity of 0,1% solution | 320 ± 20 mS/cm at 20°C |

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 with amendments



Oligo Iron-EDTA 13%

SECTION 10: Stability and reactivity

10.1 Reactivity

the mixture 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 NyOx

SECTION 11: Toxicological information

There no available toxicological studies for the mixture as such. The assessment was made on the basis of read- across substance – FeNa-EDTA

| Substance name | % w/w | Method | Result | Units |
|----------------|-------|-----------------------------------|--------|----------|
| FeNa EDTA | 100 | LD50 (oral, rat, OECD 423) | >2000 | mg/kg |
| | | LC50 (rat, inhal, 4 h, OECD 403): | > 2,75 | mg/L |
| | | LD50 (dermal, rat, OECD 402) | >2000 | mg/kg bw |

Skin corrosion/irritation - no irritating (OECD Guideline 404)

Serious eye damage/eye irritation - no irritating (OECD Guideline 405)

Respiratory or skin sensitization - no skin or respiratory sensitization (OECD Guideline 429)

Germ cell mutagenicity - no mutagenic; negative without metabolic activation; bacterial reverse mutation assay (e.g. Ames test) (gene mutation)

Carcinogenicity – not classified, no data

Reproductive toxicity – does not cause reproductive toxicity

NOAEL 500 mg/kg bw/day (estimated based on study with Mn-EDTA acc. To OECD422)

Specific target organ toxicity (STOT) - single exposure – not harmful

Specific target organ toxicity (STOT)- repeated exposure - notharmful

NOAEL (P): 500 mg/kg bw/day (actual dose received) (male/female) based on: test mat.

OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

Aspiration hazard – not applicable (solidsubstance)

Potential health effects

No data available.

Signs and Symptoms of Exposure

No data available.

SECTION 12: Ecological information

12.1. Toxicity

There no available ecotoxicological studies for the mixture as such. The assessment was made on the basis of the read-across substance – EDTA -FeNa .

| Substance name | % w/w. | Method | Result | Units |
|----------------|--------|-------------------------------|--------|-------|
| EDTA - FeNa | 100 | LC50(96h, fish) (OECD 203) | >100 | mg/l |
| | | EC50 (48h, daphnia, OECD 202) | 100,9 | mg/l |
| | | EC50 (alga, 72h, OECD 201) | > 87,3 | mg/l |

12.2 Persistence and degradability

FeKEDTA is not readily biodegradable. Therefore, the available data from screening tests do not allow concluding that the assessed substance is not a P / vP.

12.3 Bioaccumulative potential

Log Kow = -4,6. The log Kow is less than the bioconcentration threshold (log Kow =3) indicating that FeK EDTA is not Bioaccumulative (not B).

Oligo Iron-EDTA 13%

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. Additionally, since this compound is mostly negatively charged at relevant environmental pH values, reducing its chances of being adsorbed to soil minerals/humic acids.

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 must be disposed of in compliance with the country-specific regulations or must 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

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 PARLIAMENT AND 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

The chemical safety assessment was not carried out.

Safety Data Sheet

According to REACH Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 with amendments



Oligo Iron-EDTA 13%

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 Bioaccumulative

Indication of changes:

Section 1 – REACH registration no added

Section 2 – update according to Annex II of Regulation 453/2010

Section 8 – DNEL and PNEC values added

Section 11 – update of toxicological data

Section 12 – update of ecotoxicological 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.