ANAFER 13

Safety Data Sheet

According to Regulation (EU) 2015/830, 2020/878 (REACH Annex II)
Issue date: 10/31/2016 Revision date: 12/19/2022 Supersedes version of: 3/10/2022 Version: 3.0

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

1.1. Product identifier

Product form	:	Substance
Trade name	:	ANAFER 13
Chemical name	:	ethylenediaminetetraacetic acid, ferric-sodium complex
EC-No.	:	239-802-2
CAS-No.	:	15708-41-5
REACH registration No	:	05-2114597175-38
Type of product	:	Pure substance
Formula	:	C10H12FeN2NaO8
Synonyms	:	(ethylenedinitrilo)tetraacetic acid, sodium salt, iron complex, anhydrous / acetic acid, (ethylenedinitrilo)tetra-, sodium salt, iron complex, anhydrous / CALMOSINE, anhydrous / edathamil monosodium ferric salt, anhydrous / EDTA iron(III)sodium salt, anhydrous / FERISAN, anhydrous hydrous / ferrate(1-), [[N,N'-1,2-ethanediylbis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',O(N)-,O(N')-]-, sodium, (OC-6-21)- / ferric sodium edetate, anhydrous / ferric sodium EDTA, anhydrous / ferric sodium ethylenediaminetetraacetate, anhydrous / iron monosodium EDTA, anhydrous / iron sodium ethylenediaminetetraacetate, anhydrous / monosodium ferric EDTA, anhydrous / sequestrene NaFe, anhydrous / sodium ((ethylenedinitrilo)tetraacetato)ferrate (1-), anhydrous / sodium (ethylenediaminetetraacetato) ferrate(1-), anhydrous / sodium (N,N,N',N'-ethylenediaminetetraacetato) ferrate(1-), anhydrous / sodium [(ethylenedinitrilo) tetraacetato] ferrate(III), anhydrous / sodium feredetate / sodium ferric EDTA, anhydrous / sodium ferric ethylene diamine tetraacetate, anhydrous / sodium iron EDTA, anhydrous / sodium iron(III) ethylenediaminetetraacetate, anhydrous / sodiumferedetate, anhydrous / SYTRON, anhydrous
BIG No	:	44491

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category	:	Fertilisers
Industrial/Professional use spec	:	For professional use only
Use of the substance/mixture	:	Agriculture, forestry, fishery
Function or use category	:	Fertilisers

1.2.2. Uses advised against

Restrictions on use	:	None known

1.3. Details of the supplier of the safety data sheet

Anorel NV N.V.
Lintsesteenweg 632
2540 Hove – Belgium
T +3234880233
anorel@anorel.net - www.anorel.net

1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
Israel	Israel Poison Information Center Rambam Health Care Campus	6 Ha'Aliya Street 31096	+972 4 854 1900	

Country	Organisation/Company	Address	Emergency number	Comment
Malta	Medicines & Poisons Info Office	Mater Dei Hospital MSD 2090	+356 2545 6508	
United Kingdom	National Poisons Information Service (Cardiff Centre) University Hospital Llandough	Penlan Road CF64 2XX	0344 892 0111	Only for healthcare professionals

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII
This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
Contains no PBT/vPvB substances ≥ 0.1% assessed in accordance with REACH Annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%
Fe-EDTA13%	CAS-No.: 15708-41-5 EC-No.: 239-802-2 REACH-no: 05-2114597175-38	100

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Unconscious: maintain adequate airway and respiration. Check the vital functions. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Call a poison center or a doctor if you feel unwell.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Respiratory problems: consult a doctor/medical service. Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact	:	Rinse with water. Soap may be used. If skin irritation or rash occurs: Get medical advice/attention. Wash skin with plenty of water.
First-aid measures after eye contact	:	Rinse eyes with water as a precaution. Consult an ophtalmologist if irritation persists.
First-aid measures after ingestion	:	Rinse mouth out with water. Victim is fully conscious: immediately induce vomiting. Call a POISON CENTER/doctor if you feel unwell. Ingestion of large quantities: immediately to hospital. Call a poison center or a doctor if you feel unwell.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/effects after inhalation	:	Slight irritation. Cough.
Symptoms/effects after skin contact	:	Slight irritation. Red skin.
Symptoms/effects after eye contact	:	Slight irritation.
Symptoms/effects after ingestion	:	On ingestion in large quantities: Gastrointestinal pain. Abdominal pain, nausea. Irritation of the gastric/intestinal mucosa.
Chronic symptoms	:	Repeated contact. Skin rash/inflammation. Cardiac and blood circulation effects.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	:	Water spray. Foam. Dry powder. Carbon dioxide.
Unsuitable extinguishing media	:	None known.

5.2. Special hazards arising from the substance or mixture

Fire hazard	:	Not combustible.
Explosion hazard	:	No direct explosion hazard.
Hazardous decomposition products in case of fire	:	On burning: release of toxic and corrosive gases/vapours (nitrous vapours, carbon monoxide - carbon dioxide).

5.3. Advice for firefighters

Precautionary measures fire	:	Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to heat: have neighbourhood close doors and windows.
Firefighting instructions	:	Prevent fire fighting water from entering the environment. Dilute toxic gases with water spray.
Protection during firefighting	:	Heat/fire exposure: compressed air/oxygen apparatus. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	:	Gloves. Protective clothing. Dust cloud production: compressed air/oxygen apparatus.
Emergency procedures	:	Ventilate spillage area. Mark the danger area. Wash contaminated clothes. No naked flames. Prevent dust cloud formation, e.g. by wetting.
Measures in case of dust release	:	In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. For emergency responders

Protective equipment	:	Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment. Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

For containment : Dam up the liquid spill. Contain leaking substance, pump over in suitable containers. Knock down/dilute dust cloud with water spray. Plug the leak, cut off the supply. Consult "Material-handling" to select material of containers.

Methods for cleaning up : Mechanically recover the product. Clean contaminated surfaces with an excess of water. Collect spillage. Scoop solid spill into closing containers. Wash clothing and equipment after handling.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Keep away from naked flames/heat. Do not discharge the waste into the drain. Avoid dust formation. Keep container tight closed. Observe normal hygiene standards. Comply with applicable regulations. Carry out operations in the open/under local exhaust/ventilation or with respiratory protection.

Hygiene measures : Observe very strict hygiene - avoid contact.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

Heat and ignition sources : Keep away from. Heat sources.

Information on mixed storage : oxidizing materials. Keep away from.

Storage area : meet the legal requirements. Store in a well-ventilated place. Store in a dry area.

Special rules on packaging : meet the legal requirements. correctly labelled. closing. Secure fragile packagings in solid containers.

Packaging materials : Suitable packing materials. plastics. PVC. Polyethylene.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

ANAFER 13 (15708-41-5)	
Belgium - Occupational Exposure Limits	
OEL TWA	1 mg/m³
United Kingdom - Occupational Exposure Limits	
WEL TWA (OEL TWA) [1]	1 mg/m³
WEL STEL (OEL STEL)	2 mg/m³
USA - ACGIH - Occupational Exposure Limits	
ACGIH OEL TWA	1 mg/m³

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

ANAFER 13 (15708-41-5)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	74 mg/m³
Long-term - systemic effects, dermal	4200 mg/kg bw/day
Long-term - systemic effects, inhalation	2 mg/m³
Long-term - local effects, inhalation	74 mg/m³
DNEL/DMEL (General population)	
Long-term - systemic effects,oral	0.42 mg/kg bw/day
Long-term - systemic effects, inhalation	0.5 mg/m³
Long-term - systemic effects, dermal	2100 mg/kg bw/day
PNEC (Water)	
PNEC aqua (freshwater)	3.1 mg/l
PNEC aqua (marine water)	0.31 mg/l
PNEC (STP)	
PNEC sewage treatment plant	64 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:
Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):

8.2.2.1. Eye and face protection

Eye protection:
Safety glasses. In case of dust production: protective goggles

8.2.2.2. Skin protection

Skin and body protection:
Wear suitable protective clothing

Hand protection:
protective gloves

Other skin protection

Materials for protective clothing:
No data available

8.2.2.3. Respiratory protection

Respiratory protection:
Dust production: dust mask with filter type P2

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:
Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Solid
Appearance	:	Granular powder.
Molecular mass	:	367.08 g/mol
Colour	:	light brown. Yellow.
Odour	:	odourless.
Odour threshold	:	No data available
pH	:	≥ 5.2 1% solution
Relative evaporation rate (butylacetate=1)	:	No data available
Melting point	:	Not applicable (decomposes)
Freezing point	:	Not applicable
Boiling point	:	No data available
Flash point	:	Not applicable (solid)
Auto-ignition temperature	:	Not applicable
Decomposition temperature	:	211 °C (Hydrate form, Equivalent or similar to OECD 102)
Flammability (solid, gas)	:	Non flammable.
Vapour pressure	:	Not applicable
Relative vapour density at 20 °C	:	Not applicable
Relative density	:	No data available
Density	:	1000 kg/m³
Solubility	:	Soluble in water. Water: < 40 g/100ml
Partition coefficient n-octanol/water (Log Pow)	:	-8.84 (Calculated)
Viscosity, kinematic	:	Not applicable
Viscosity, dynamic	:	No data available
Explosive properties	:	No data available
Oxidising properties	:	No data available
Explosive limits	:	Not applicable

9.2. Other information

VOC content	:	0 %
Other properties	:	Substance has acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions. On burning: release of toxic and corrosive gases/vapours hydrogen chloride carbon monoxide - carbon dioxide.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified
Skin corrosion/irritation : Not classified
pH: ≥ 5.2 1% solution

Fe-EDTA13% (15708-41-5)	
pH	≥ 5.2 1% solution

Serious eye damage/irritation : Not classified
pH: ≥ 5.2 1% solution

Fe-EDTA13% (15708-41-5)	
pH	≥ 5.2 1% solution

Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified
Reproductive toxicity : Not classified
STOT-single exposure : Not classified
STOT-repeated exposure : Not classified
Aspiration hazard : Not classified

ANAFER 13 (15708-41-5)	
Viscosity, kinematic	Not applicable

Fe-EDTA13% (15708-41-5)	
Viscosity, kinematic	Not applicable

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air : Not dangerous for the ozone layer.
Ecology - water : Water pollutant (surface water). Not harmful to fish. Harmful to algae.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Not classified

Fe-EDTA13% (15708-41-5)	
LC50 - Fish [1]	> 100 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Oncorhynchus mykiss, Static system, Fresh water, Experimental value)
EC50 - Crustacea [1]	100.9 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 48 h, Daphnia magna, Static system, Fresh water, Experimental value)
EC50 - Other aquatic organisms [1]	> 100 mg/l Daphnia

Fe-EDTA13% (15708-41-5)	
EC50 72h - Algae [1]	> 100 mg/l

12.2. Persistence and degradability

Fe-EDTA13% (15708-41-5)	
Persistence and degradability	Not readily biodegradable.

12.3. Bioaccumulative potential

Fe-EDTA13% (15708-41-5)	
Partition coefficient n-octanol/water (Log Pow)	-8.84 (Calculated)
Bioaccumulative potential	Not applicable.

12.4. Mobility in soil

Fe-EDTA13% (15708-41-5)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	-2.32 – 1 (log Koc, Calculated value)
Ecology - soil	Highly mobile in soil.

12.5. Results of PBT and vPvB assessment

Component	
Fe-EDTA13% (15708-41-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Regional legislation (waste) : Dispose in a safe manner in accordance with local/national regulations.
Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.
Product/Packaging disposal recommendations : Recycle the material as far as possible.
Additional information : Non-hazardous waste.
European List of Waste (LoW) code : 16 05 09 - discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable

ADR	IMDG	IATA	ADN	RID
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Dangerous for the environment: No	Dangerous for the environment: No Marine pollutant: No	Dangerous for the environment: No	Dangerous for the environment: No	Dangerous for the environment: No
No supplementary information available				

14.6. Special precautions for user

Overland transport
Transport regulations (ADR) : Not subject

Transport by sea
Transport regulations (IMDG) : Not subject

Air transport
Transport regulations (IATA) : Not subject

Inland waterway transport
Transport regulations (ADN) : Not subject

Rail transport
Transport regulations (RID) : Not subject

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

No REACH Annex XVII restrictions

REACH Annex XIV (Authorisation List)

ANAFER 13 is not on the REACH Annex XIV List

REACH Candidate List (SVHC)

ANAFER 13 is not on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

ANAFER 13 is not subject to 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.

POP Regulation (Persistent Organic Pollutants)

ANAFER 13 is not subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

Ozone Regulation (1005/2009)

Fe-EDTA13% is not subject to REGULATION (EU) No 1005/2009 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 September 2009 on substances that deplete the ozone layer.

VOC Directive (2004/42)

VOC content : 0 %

Explosives Precursors Regulation (2019/1148)

Contains no substance subject to Regulation (EU) 2019/1148 of the European Parliament and of the Council of 20 June 2019 on the marketing and use of explosives precursors.

Drug Precursors Regulation (273/2004)

Contains no substance subject to Regulation (EC) 273/2004 of the European Parliament and of the Council of 11 February 2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances.

15.1.2. National regulations

Germany

Water hazard class (WGK)	:	WGK 2, Significantly hazardous to water (Classification according to AwSV).
Hazardous Incident Ordinance (12. BImSchV)	:	Is not subject of the Hazardous Incident Ordinance (12. BImSchV)
Technical Instructions on Air Quality Control (TA Luft)	:	5.2.1 Total Dust, including Micro Dust.

Netherlands

SZW-lijst van kankerverwekkende stoffen	:	The substance is not listed
SZW-lijst van mutagene stoffen	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Borstvoeding	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Vruchtbaarheid	:	The substance is not listed
SZW-lijst van reprotoxische stoffen – Ontwikkeling	:	The substance is not listed

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes

Section	Changed item	Change	Comments
	Revision date	Added	
	Flammability (solid, gas)	Added	
2.1	Adverse physicochemical, human health and environmental effects	Added	
2.2	R-phrases	Removed	
4.1	First-aid measures after ingestion	Modified	
4.1	First-aid measures after skin contact	Modified	
4.1	First-aid measures after inhalation	Modified	
4.3	Other medical advice or treatment	Added	
5.2	Hazardous decomposition products in case of fire	Added	
5.3	Protection during firefighting	Modified	
6.1	Protective equipment	Added	
6.1	Emergency procedures	Modified	
6.3	Other information	Added	
6.3	Methods for cleaning up	Modified	
6.4	Reference to other sections (8, 13)	Added	
7.1	Precautions for safe handling	Modified	
7.1	Hygiene measures	Added	

Indication of changes			
Section	**Changed item**	**Change**	**Comments**
7.2	Storage conditions	Added	
8.1	WEL STEL (mg/m³)	Modified	
8.1	WEL TWA (mg/m³)	Modified	
8.1	ACGIH TWA (mg/m³)	Modified	
8.1	Limit value [mg/m³]	Modified	
8.2	Environmental exposure controls	Added	
8.2	Appropriate engineering controls	Added	
9.1	Viscosity, kinematic	Added	
9.1	Freezing point	Added	
9.1	Explosive limits (vol %)	Added	
9.1	Auto-ignition temperature	Added	
9.1	Relative vapour density at 20 °C	Added	
10.3	Possibility of hazardous reactions	Added	
10.4	Conditions to avoid	Added	
10.6	Hazardous decomposition products	Added	
11.1	Potential adverse human health effects and symptoms	Added	
11.1	LD50 oral rat	Removed	
12.1	LC50 fish 1	Removed	
12.1	Ecology - general	Added	
12.1	Threshold limit algae 1	Removed	
13.1	Waste treatment methods	Added	
14.6	Transport regulations (ADN)	Added	
15.1	WGK remark	Removed	
15.2	Chemical safety assessment	Added	

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BLV	Biological limit value
CAS-No.	Chemical Abstract Service number
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
EN	European Standard

Abbreviations and acronyms:	
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.