

Ethylenediaminetetraacetate (EDTA) disodium dihydrate

E0511

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878

Reference number: E0511

Issue date: 28/11/2023 Revision date: 13/11/2023 Supersedes version of: 14/04/2017 Version: 3.0

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

1.1. Product identifier

Product form	: Substance
Trade name	: Ethylenediaminetetraacetate (EDTA) disodium dihydrate
EC-No.	: 205-358-3
CAS-No.	: 6381-92-6
REACH registration No.	: 01-2119486775-20-XXXX
Product code	: E0511
Formula	: $C_{10}H_{14}N_2O_2Na_2 \cdot 2H_2O$
Synonyms	: EDTA · Na ₂ salt dihydrate / EDTA disodium salt / Edetate disodium salt dihydrate
Product group	: Raw material
Other means of identification	: disodium dihydrogen ethylenediaminetetraacetate

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

1.2.1. Relevant identified uses

Main use category	: Professional use
Industrial/Professional use spec	: For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Distributor

Duchefa Biochemie B.V.
A. Hofmanweg 71
2031 BH Haarlem
The Netherlands
T +31(0)23-5319093 - F +31(0)23-5318027
info@duchefa.nl

1.4. Emergency telephone number

Emergency number	: Supplier contact information: +31(0)23-5319093 (M-F 09:00-17:00) +31(0)6-30008100 (outside office hours)
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Country	Organisation/Company	Address	Emergency number	Comment
	World Health Organization world directory of poison centres	http://apps.who.int/poisoncentres/		Consult website for a local poison centre

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (inhal.), Category 4

H332

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Specific target organ toxicity – Repeated exposure, Category 2 H373

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

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

Hazard pictograms (CLP)



Signal word (CLP)

: Warning

Hazard statements (CLP)

: H332 - Harmful if inhaled.
H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (CLP)

: P261 - Avoid breathing dust.
P312 - Call a POISON CENTRE or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Substance type : Mono-constituent

Name	Product identifier	%
Ethylenediaminetetraacetate (EDTA) disodium dihydrate	CAS-No.: 6381-92-6 EC-No.: 205-358-3 REACH-no: 01-2119486775-20-XXXX	≥ 99

3.2. Mixtures

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Move to fresh air. Get medical advice/attention if you feel unwell.
First-aid measures after skin contact : Wash with plenty of water/...
First-aid measures after eye contact : Rinse with plenty of water.
First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Seek medical attention if ill effect or irritation develops.

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

No additional information available

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

No additional information available

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Carbon dioxide (CO₂), dry chemical powder, foam.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Under fire conditions, hazardous fumes will be present: - CO_x. - NO_x.

5.3. Advice for firefighters

Precautionary measures fire : Wear proper protective equipment.
Firefighting instructions : Prevent fire fighting water from entering the environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Measures in case of dust release : Use good housekeeping practices to avoid rendering dust airborne.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Sweep up dry powder and dispose properly.

6.4. Reference to other sections

No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Open only in well ventilated area.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, well-ventilated area. Store at room temperature.

7.3. Specific end use(s)

For professional use only. Duchefa Biochemie B.V. products are intended only for "in vitro laboratory" research purposes.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

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8.1.4. DNEL and PNEC

Ethylenediaminetetraacetate (EDTA) disodium dihydrate (6381-92-6)	
DNEL/DMEL (Workers)	
Acute - systemic effects, inhalation	3 mg/m ³
Acute - local effects, inhalation	3 mg/m ³
Long-term - systemic effects, inhalation	1,5 mg/m ³
Long-term - local effects, inhalation	1,5 mg/m ³
DNEL/DMEL (General population)	
Acute - local effects, inhalation	1,2 mg/m ³
Long-term - systemic effects, oral	25 mg/kg bodyweight/day
Long-term - local effects, inhalation	0,6 mg/m ³
PNEC (Water)	
PNEC aqua (freshwater)	2,2 mg/l
PNEC aqua (marine water)	0,22 mg/l
PNEC aqua (intermittent, freshwater)	1,2 mg/l
PNEC (Soil)	
PNEC soil	0,72 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	43 mg/l

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No additional information available

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection			
Type	Field of application	Characteristics	Standard
Safety glasses	Dust	With side shields	EN 166

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

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Hand protection					
Type	Material	Permeation	Thickness (mm)	Penetration	Standard
Gloves	Nitrile rubber (NBR)	6 (> 480 minutes)	0,11		EN ISO 374

8.2.2.3. Respiratory protection

Respiratory protection			
Device	Filter type	Condition	Standard
Dust mask	Type P2	Dust protection	EN 143

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

No additional information available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Colour	: White.
Appearance	: Crystals. Powder.
Molecular mass	: 372,2 g/mol
Odour	: Characteristic.
Odour threshold	: Not available
Melting point	: 252 °C
Freezing point	: Not available
Boiling point	: Not available
Flammability	: Not available
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: > 400 °C (EU Method A.16)
Decomposition temperature	: > 200 °C
pH	: 4 – 5 (aqueous solution 1%, 20 °C)
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Water: 108 g/l at 20 °C
Partition coefficient n-octanol/water (Log Kow)	: -4,3 pH 4.5 25 °C
Partition coefficient n-octanol/water (Log Pow)	: -10,7 Source: EPISUITE
Vapour pressure	: 0 hPa Temp.: 25 °C
Vapour pressure at 50°C	: Not available
Density	: 1,77 g/cm ³ at 20 °C
Relative density	: Not available
Relative vapour density at 20°C	: Not applicable
Particle size	: Not available

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

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9.2.2. Other safety characteristics

Bulk density : 618 kg/m³

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions of storage, handling and use.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Stable under normal conditions of storage, handling and use.

10.4. Conditions to avoid

Direct sunlight. Avoid dust formation. Take precautionary measures against static discharges.

10.5. Incompatible materials

- Metals. Strong acids. Strong bases. Oxidising agents.

10.6. Hazardous decomposition products

Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Harmful if inhaled.

Ethylenediaminetetraacetate (EDTA) disodium dihydrate (6381-92-6)	
LD50 oral rat	2800 mg/kg bodyweight Animal: rat
LC50 Inhalation - Rat (Dust/Mist)	30000 mg/l/4h

Skin corrosion/irritation : Not classified
pH: 4 – 5 (aqueous solution 1%, 20 °C)
Serious eye damage/irritation : Not classified
pH: 4 – 5 (aqueous solution 1%, 20 °C)
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 : May cause damage to organs through prolonged or repeated exposure.

Ethylenediaminetetraacetate (EDTA) disodium dihydrate (6381-92-6)	
LOAEC (inhalation, rat, dust/mist/fume, 90 days)	0,015 mg/l air Animal: rat, Animal sex: female, Guideline: OECD Guideline 413 (Subchronic Inhalation Toxicity: 90-Day Study)
NOAEL (oral, rat, 90 days)	≥ 500 mg/kg bodyweight Animal: rat, Animal sex: male

Aspiration hazard : Not classified

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11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Adverse health effects caused by endocrine disrupting properties : The substance/mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not 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 at a concentration equal to or greater than 0,1 %

11.2.2. Other information

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Not classified

Ethylenediaminetetraacetate (EDTA) disodium dihydrate (6381-92-6)	
LC50 - Fish [1]	> 100 mg/l <i>Lepomis macrochirus</i> (Bluegill)
EC50 - Crustacea [1]	> 100 mg/l EC50 48h - <i>Daphnia magna</i> [mg/l]
EC50 72h - Algae [1]	> 100 mg/l (<i>scenedemus subspicatus</i>)
LOEC (chronic)	50 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
NOEC (chronic)	25 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d'
NOEC chronic fish	≥ 25,7 mg/l Test organisms (species): Duration: '35 d'

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

Ethylenediaminetetraacetate (EDTA) disodium dihydrate (6381-92-6)	
Bioconcentration factor (BCF REACH)	1,8
Partition coefficient n-octanol/water (Log Pow)	-10,7 Source: EPISUITE
Partition coefficient n-octanol/water (Log Kow)	-4,3 pH 4.5 25 °C

12.4. Mobility in soil

Ethylenediaminetetraacetate (EDTA) disodium dihydrate (6381-92-6)	
Mobility in soil	312,7 Source: EPISUITE
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2,49

12.5. Results of PBT and vPvB assessment

No additional information available

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12.6. Endocrine disrupting properties

Adverse effects on the environment caused by endocrine disrupting properties : The substance/mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not 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 at a concentration equal to or greater than 0,1 %.

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations. Avoid release to the environment.
Sewage disposal recommendations : Do not discharge into drains or the environment.
Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

ADR	IMDG	IATA
14.1. UN number or ID number		
Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name		
Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)		
Not applicable	Not applicable	Not applicable
14.4. Packing group		
Not applicable	Not applicable	Not applicable
14.5. Environmental hazards		
Not applicable	Not applicable	Not applicable
No supplementary information available		

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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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)

Not listed on REACH Annex XVII

REACH Annex XIV (Authorisation List)

Not listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Not listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Not listed on the PIC list (Regulation EU 649/2012)

POP Regulation (Persistent Organic Pollutants)

Not listed on the POP list (Regulation EU 2019/1021)

Ozone Regulation (1005/2009)

Not listed on the Ozone Depletion list (Regulation EU 1005/2009)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 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

Ensure all national/local regulations are observed.

Germany

Water hazard class (WGK) : WGK 2, Significantly hazardous to water (KBwS-Beschluss; ID No. 104).

Hazardous Incident Ordinance (12. BImSchV) : Is not subject of the Hazardous Incident Ordinance (12. BImSchV)

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

SZW-lijst van reprotoxische stoffen –

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen –

Ontwikkeling

Denmark

Danish National Regulations : Young people below the age of 18 years are not allowed to use the product
Pregnant/breastfeeding women working with the product must not be in direct contact with the product

15.2. Chemical safety assessment

No additional information available

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SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Adverse health effects caused by endocrine disrupting properties	Added	
	Substance type	Added	
	Revision date	Modified	
	Supersedes	Added	
	Issue date	Modified	
1.1	Other means of identification	Added	
1.1	Trade name	Added	
1.1	Product group	Added	
1.1	Formula	Modified	
2.2	Precautionary statements (CLP)	Modified	
3	Composition/information on ingredients	Modified	
8.1	Acute - local effects, inhalation	Added	
8.1	Acute - systemic effects, inhalation	Added	
8.1	Long-term - local effects, inhalation	Added	
8.1	Long-term - systemic effects, inhalation	Added	
8.1	Long-term - systemic effects,oral	Added	
9.1	pH	Modified	
9.1	Log Kow	Added	
9.1	Log Pow	Added	
9.1	Vapour pressure	Added	
11.1	LD50 oral rat	Modified	
11.1	ATE CLP (oral)	Added	
11.1	LOAEC (inhalation, rat, dust/mist/fume, 90 days)	Added	
11.1	NOAEL (oral, rat, 90 days)	Added	
12.1	LC50 Inhalation - Rat (Dust/Mist)	Added	
12.1	LOEC (chronic)	Added	
12.1	NOEC (chronic)	Added	
12.1	NOEC chronic fish	Added	
12.3	Log Kow	Added	
12.3	Log Pow	Added	
12.4	Organic Carbon Normalized Adsorption Coefficient (Log Koc)	Added	
12.4	Mobility in soil	Added	

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Indication of changes			
Section	Changed item	Change	Comments
12.6	Adverse effects on the environment caused by endocrine disrupting properties	Added	
13.1	Sewage disposal recommendations	Added	
13.1	Product/Packaging disposal recommendations	Added	

Abbreviations and acronyms:	
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
LD50	Median lethal dose
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	Safety Data Sheet
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
PBT	Persistent Bioaccumulative Toxic
EC50	Median effective concentration
LC50	Median lethal concentration
NOAEL	No-Observed Adverse Effect Level
LOAEL	Lowest Observed Adverse Effect Level
BCF	Bioconcentration factor

Data sources : Supplier. Manufacturer. 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.

Full text of H- and EUH-statements:	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
H332	Harmful if inhaled.
H373	May cause damage to organs through prolonged or repeated exposure.
STOT RE 2	Specific target organ toxicity – Repeated exposure, Category 2

Safety Data Sheet (SDS), EU Duchefa 2023

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.