

Safety Data Sheet

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

Reference number: T1508

Issue date: 09/10/2024 Revision date: 09/10/2024 Supersedes version of: 24/10/2018 Version: 4.0

SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

Product form : Mixture
Trade name : TE-buffer
Product code : T1508
Product group : Blend

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**Manufacturer**

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)

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
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals-24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification according to Regulation (EC) No. 1272/2008 [CLP]**

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

May cause damage to organs through prolonged or repeated exposure.

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2.2. Label elements

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

Hazard pictograms (CLP) :



GHS08

Signal word (CLP) :

Warning

Contains :

Ethylenediaminetetraacetate (EDTA) disodium dihydrate

Hazard statements (CLP) :

H373 - May cause damage to organs through prolonged or repeated exposure.

Precautionary statements (CLP) :

P314 - Get medical advice/attention if you feel unwell.

2.3. Other hazards

Contains no PBT and/or vPvB substances \geq 0.1% assessed in accordance with REACH Annex XIII

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 %

Component	
Ethylenediaminetetraacetate (EDTA) disodium dihydrate(6381-92-6)	

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
TRIS ultrapure fine <500 μ m	CAS-No.: 77-86-1 EC-No.: 201-064-4	76,582	Not classified
Ethylenediaminetetraacetate (EDTA) disodium dihydrate	CAS-No.: 6381-92-6 EC-No.: 205-358-3 REACH-no: 01-2119486775-20-XXXX	23,418	Acute Tox. 4 (Inhalation), H332 STOT RE 2, H373

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	: Get medical advice/attention if you feel unwell.
First-aid measures after inhalation	: Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact	: Wash skin with plenty of water.
First-aid measures after eye contact	: Rinse eyes with water as a precaution.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

No additional information available

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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 : Alcohol resistant foam. Dry chemical powder. Carbon dioxide (CO₂). Water spray.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : - CO_x. - NO_x. - SO_x.

5.3. Advice for firefighters

Firefighting instructions : Prevent fire fighting water from entering the environment.
Protection during firefighting : Wear proper protective equipment. 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**

General measures : Avoid raising powdered materials into airborne dust.

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area. Wear suitable protective clothing. Do not breathe dust/fume/gas/mist/vapours/spray.

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

Methods for cleaning up : Mechanically recover the product. Sweep up dry powder and dispose properly.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 8.

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. Avoid dust formation. Handle in accordance with good industrial hygiene and safety procedures. Do not breathe dust/fume/gas/mist/vapours/spray.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store at room temperature. Keep container tightly closed and dry. Store in a well-ventilated place.

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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

8.1.4. DNEL and PNEC

No additional information available

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			
Type	Field of application	Characteristics	Standard
Safety glasses	Dust		EN 166

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

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 P3	Dust protection	EN 143

8.2.2.4. Thermal hazards

No additional information available

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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
Colour	: White to slightly yellow.
Appearance	: Powder.
Odour	: Characteristic. Weak.
Odour threshold	: Not available
Melting point	: Not available
Freezing point	: Not applicable
Boiling point	: Not available
Flammability	: Non flammable.
Explosive limits	: Not applicable
Lower explosion limit	: Not applicable
Upper explosion limit	: Not applicable
Flash point	: Not applicable
Auto-ignition temperature	: Not applicable
Decomposition temperature	: Not available
pH	: Not available
pH solution	: Not available
Viscosity, kinematic	: Not applicable
Solubility	: Readily soluble in water.
Partition coefficient n-octanol/water (Log Kow)	: Not available
Vapour pressure	: Not available
Vapour pressure at 50°C	: Not available
Density	: Not available
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

9.2.2. Other safety characteristics

No additional information available

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

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Moisture.

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10.5. Incompatible materials

Strong oxidizers.

10.6. Hazardous decomposition products

Thermal decomposition generates : - COx. - NOx. - SOx.

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) : Not classified

Ethylenediaminetetraacetate (EDTA) disodium dihydrate (6381-92-6)	
LD50 oral rat	2800 mg/kg bodyweight Animal: rat
LC50 Inhalation - Rat	30 mg/l/4h
LC50 Inhalation - Rat (Dust/Mist)	30000 mg/l/4h

Skin corrosion/irritation : Not classified

Ethylenediaminetetraacetate (EDTA) disodium dihydrate (6381-92-6)	
pH	4 - 5 (aqueous solution 1%, 20 °C)

Serious eye damage/irritation : Not classified

Ethylenediaminetetraacetate (EDTA) disodium dihydrate (6381-92-6)	
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
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard : Not classified

TE-buffer	
Viscosity, kinematic	Not applicable

TRIS ultrapure fine <500µm (77-86-1)	
Viscosity, kinematic	Not applicable

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 %

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11.2.2. Other information

No additional information available

SECTION 12: Ecological information**12.1. Toxicity**

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

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

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

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

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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. Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA

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

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

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PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

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 (Classification according to AwSV, Annex 1).

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

Netherlands

SZW-lijst van kankerverwekkende stoffen : None of the components are listed

SZW-lijst van mutagene stoffen : None of the components are listed

SZW-lijst van reprotoxische stoffen – : None of the components are listed

Borstvoeding

SZW-lijst van reprotoxische stoffen – : None of the components are listed

Vruchtbaarheid

SZW-lijst van reprotoxische stoffen – : None of the components are listed

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 chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes			
Section	Changed item	Change	Comments
	Revision date	Modified	
	Supersedes	Modified	
	Adverse health effects caused by endocrine disrupting properties	Added	
	Flammability	Added	
	Regulatory framework	Added	

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Indication of changes			
Section	Changed item	Change	Comments
2.1	Adverse physicochemical, human health and environmental effects	Added	
2.1	Classification according to Regulation (EC) No. 1272/2008 [CLP]	Modified	
2.2	Hazard pictograms (CLP)	Modified	
2.2	Precautionary statements (CLP)	Modified	
2.2	Hazard statements (CLP)	Modified	
3	Composition/information on ingredients	Modified	
4.1	First-aid measures general	Modified	
4.1	First-aid measures after skin contact	Modified	
4.1	First-aid measures after inhalation	Modified	
4.1	First-aid measures after ingestion	Modified	
4.1	First-aid measures after eye contact	Modified	
4.3	Other medical advice or treatment	Added	
5.2	Hazardous decomposition products in case of fire	Modified	
5.3	Protection during firefighting	Modified	
6.1	Protective equipment	Added	
6.1	Emergency procedures	Modified	
6.2	Environmental precautions	Modified	
6.3	Other information	Added	
6.3	Methods for cleaning up	Modified	
6.4	Reference to other sections (8, 13)	Added	
7.1	Hygiene measures	Added	
7.1	Precautions for safe handling	Modified	
7.2	Storage conditions	Modified	
8.2	Environmental exposure controls	Added	
8.2	Appropriate engineering controls	Added	
8.2	Skin and body protection	Modified	
9.1	Viscosity, kinematic	Added	
9.1	Freezing point	Added	
9.1	Flash point	Added	
9.1	Explosive limits (vol %)	Added	
9.1	Auto-ignition temperature	Added	
10.3	Possibility of hazardous reactions	Added	
10.6	Hazardous decomposition products	Modified	
12.1	Ecology - general	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	Waste treatment methods	Modified	
15.2	Chemical safety assessment	Added	
16	Other information	Added	
16	Data sources	Modified	
16	Abbreviations and acronyms	Modified	

Abbreviations and acronyms:	
ATE	Acute Toxicity Estimate
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
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
PBT	Persistent Bioaccumulative Toxic
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
SDS	Safety Data Sheet
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
COD	Chemical oxygen demand (COD)
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC-No.	European Community number
EC50	Median effective concentration
EN	European Standard
IARC	International Agency for Research on Cancer
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration

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Abbreviations and acronyms:

OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PNEC	Predicted No-Effect Concentration
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
VOC	Volatile Organic Compounds
CAS-No.	Chemical Abstract Service number
N.O.S.	Not Otherwise Specified
vPvB	Very Persistent and Very Bioaccumulative
ED	Endocrine disrupting properties

Data sources : 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. Supplier's safety documents. ECHA (European Chemicals Agency).

Other information : DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness.

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.