

10X DTNB Reaction Buffer

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)
Issue date: 1/23/2025 Revision date: 3/3/2026 Supersedes: 1/23/2025 Version: 2.0

SECTION 1 Identification

1.1. Product identifier

Product form : Mixture
Product name : 10X DTNB Reaction Buffer
Product code : 1E0200

1.2. Other means of identification

Synonyms : 10X DTNB Reaction Buffer

1.3. Recommended use of the chemical and restrictions on use

Use of the substance/mixture : For research use only
Restrictions on use : Not for food, drug or household use

1.4. Supplier's details

Ethos Biosciences, Inc.
2070 Center Square Road
Logan Township, New Jersey 08085
United States
T +1-856-224-0900; +1-800-441-0366 Technical Service; Monday-Friday: 8:00 AM-5:00 PM, Eastern US Time
www.ethosbiosciences.com

1.5. Emergency phone number

Emergency number : 800-424-9300 CHEMTREC (USA) -- 24 Hours/Day, 7 Days/Week

SECTION 2 Hazard Identification

2.1. Classification of the substance or mixture

GHS US classification

Not classified

2.2. Label elements

GHS US labeling

No labeling applicable

2.3. Hazards associated with known or reasonably anticipated uses

No additional information available

2.4. Hazards not otherwise classified

No additional information available

2.5. Unknown acute toxicity

No additional information available

SECTION 3 Composition/information on ingredients

3.1. Substances

Not applicable

10X DTNB Reaction Buffer

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

3.2. Mixtures

Name	Product identifier	Conc.	GHS US classification
water	CAS-No.: 7732-18-5	> 97	Not classified
2-Amino-2-(hydroxymethyl)-1,3-propanediol	CAS-No.: 77-86-1	< 13	Not classified
ethylenediaminetetraacetic acid (EDTA)	CAS-No.: 60-00-4	< 2	Eye Irrit. 2, H319
hydrogen chloride, conc=37%, aqueous solution	CAS-No.: 7647-01-0	< 1	Skin Corr. 1, H314 Eye Dam. 1, H318

Full text of hazard classes and H-statements : see section 16

SECTION 4 First aid measures

4.1. Description of necessary first-aid measures

First-aid measures general	: If you feel unwell, seek medical advice.
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/doctor/physician if you feel unwell.
Personal protection for first-aid responders.	: First aid workers will be equipped with suitable personal protective equipment.

4.2. Most important symptoms/effects, acute and delayed

Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

4.3. Indication of immediate medical attention and special treatment needed, if necessary

Other medical advice or treatment	: Treat symptomatically.
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SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

Suitable extinguishing media	: Water spray. Dry powder. Foam. Carbon dioxide.
Unsuitable extinguishing media	: Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

Fire hazard	: No fire hazard.
Explosion hazard	: No direct explosion hazard.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions	: Fight fire from safe distance and protected location. Do not enter fire area without proper protective equipment, including respiratory protection.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

10X DTNB Reaction Buffer

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

SECTION 6 Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Stop leak if safe to do so. Notify authorities if product enters sewers or public waters. Absorb spillage to prevent material-damage.

For non-emergency personnel

Protective equipment : Wear recommended personal protective equipment.
Emergency procedures : Ventilate spillage area.

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".
Emergency procedures : Evacuate unnecessary personnel. Stop leak if safe to do so.
Environmental precautions : Avoid release to the environment.

6.2. Methods and materials for containment and cleaning up

For containment : Absorb spilled material with sand or earth. Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

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.
Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.
Additional hazards when processed : Not expected to present a significant hazard under anticipated conditions of normal use.

7.2. Conditions for safe storage, including incompatibilities

Technical measures : Keep in a cool, well-ventilated place away from heat.
Storage conditions : Keep cool. Protect from sunlight.
Storage temperature : 4 – 8 °C
Packaging materials : Always store product in container of same material as original container.

SECTION 8 Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls : Ensure good ventilation of the work station.
Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Personal protective equipment:

Wear recommended personal protective equipment.

10X DTNB Reaction Buffer

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Hand protection:
Protective gloves
Eye protection:
Safety glasses
Skin and body protection:
Wear suitable protective clothing
Respiratory protection:
In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s):



SECTION 9 Physical and chemical properties

9.1. Basic physical and chemical properties

Physical state	: Liquid
Color	: No data available
Odor	: No data available
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20°C	: No data available
Relative density	: No data available
Solubility	: Water: Solubility in water of component(s) of the mixture : • ethylenediaminetetraacetic acid (EDTA): 0.04 g/100ml • 2-Amino-2-(hydroxymethyl)-1,3-propanediol: 550000 mg/l • hydrogen chloride, conc=37%, aqueous solution:
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Explosion limits	: No data available
Particle characteristics	: No data available

ethylenediaminetetraacetic acid (EDTA)	
Boiling point	Not applicable
Flash point	> 100 °C
Auto-ignition temperature	> 400 °C (1013 hPa, T2)
Vapor pressure	< 0.01 hPa (25 °C)

10X DTNB Reaction Buffer

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

2-Amino-2-(hydroxymethyl)-1,3-propanediol	
Boiling point	219 – 220 °C at 10mmHg Source: National Library of Medicine/Hazardous Substances Data Bank
Flash point	170 °C Source: The Chemical Database, The Department of Chemistry at the University of Akron
Vapor pressure	0.000002 mm Hg at 25 °C Source: ChemIDplus

hydrogen chloride, conc=37%, aqueous solution	
Flash point	Not applicable
Auto-ignition temperature	Not applicable

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10 Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

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

ethylenediaminetetraacetic acid (EDTA) (60-00-4)	
LD50 oral rat	4500 mg/kg body weight (Equivalent or similar to OECD 401, Rat, Male / female, Experimental value, Oral, 14 day(s))
ATE US (oral)	4500 mg/kg body weight

10X DTNB Reaction Buffer

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

2-Amino-2-(hydroxymethyl)-1,3-propanediol (77-86-1)	
LD50 dermal rabbit	5900 mg/kg Source: Corporate Solution From Thomson Micromedex
ATE US (dermal)	5900 mg/kg body weight
Skin corrosion/irritation	: Not classified
ethylenediaminetetraacetic acid (EDTA) (60-00-4)	
pH	2.5 (1 %)
2-Amino-2-(hydroxymethyl)-1,3-propanediol (77-86-1)	
pH	10.4 Source: HSDB
hydrogen chloride, conc=37%, aqueous solution (7647-01-0)	
pH	< 1
Serious eye damage/irritation	: Not classified
ethylenediaminetetraacetic acid (EDTA) (60-00-4)	
pH	2.5 (1 %)
2-Amino-2-(hydroxymethyl)-1,3-propanediol (77-86-1)	
pH	10.4 Source: HSDB
hydrogen chloride, conc=37%, aqueous solution (7647-01-0)	
pH	< 1
Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
hydrogen chloride, conc=37%, aqueous solution (7647-01-0)	
IARC group	3 - Not classifiable
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
hydrogen chloride, conc=37%, aqueous solution (7647-01-0)	
Viscosity, kinematic	1.933 mm²/s
Symptoms/effects after inhalation	: None under normal conditions.
Symptoms/effects after skin contact	: None under normal conditions.
Symptoms/effects after eye contact	: None under normal conditions.
Symptoms/effects after ingestion	: None under normal conditions.

SECTION 12 Ecological information

12.1. Ecotoxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or 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

10X DTNB Reaction Buffer

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

ethylenediaminetetraacetic acid (EDTA) (60-00-4)	
LC50 - Fish [1]	159 mg/l (US EPA, 96 h, Lepomis macrochirus, Static system, Fresh water, Experimental value, Nominal concentration)
EC50 - Crustacea [1]	140 mg/l (DIN 38412-11, 48 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect)
ErC50 algae	> 100 mg/l (OECD 201: Alga, Growth Inhibition Test, 72 h, Pseudokirchneriella subcapitata, Static system, Fresh water, Weight of evidence, GLP)

2-Amino-2-(hydroxymethyl)-1,3-propanediol (77-86-1)	
LC50 - Fish [1]	955.892 mg/l Source: Ecological Structure Activity Relationships
EC50 - Crustacea [1]	19.793 mg/l Source: Ecological Structure Activity Relationships
EC50 96h - Algae [1]	163.053 mg/l Source: Ecological Structure Activity Relationships

hydrogen chloride, conc=37%, aqueous solution (7647-01-0)	
LC50 - Fish [1]	282 mg/l (96 h, Gambusia affinis, Pure substance)
EC50 - Crustacea [1]	< 56 mg/l (72 h, Daphnia magna, Pure substance)

12.2. Persistence and degradability

10X DTNB Reaction Buffer	
Persistence and degradability	Not rapidly degradable

ethylenediaminetetraacetic acid (EDTA) (60-00-4)	
Persistence and degradability	Not readily biodegradable in water.
Biochemical oxygen demand (BOD)	0.01 g O ₂ /g substance
Chemical oxygen demand (COD)	0.85 g O ₂ /g substance
ThOD	1.09 g O ₂ /g substance
BOD (% of ThOD)	0.0091

water (7732-18-5)	
Persistence and degradability	Not rapidly degradable

2-Amino-2-(hydroxymethyl)-1,3-propanediol (77-86-1)	
Persistence and degradability	Not rapidly degradable

hydrogen chloride, conc=37%, aqueous solution (7647-01-0)	
Persistence and degradability	Biodegradability: not applicable.
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

ethylenediaminetetraacetic acid (EDTA) (60-00-4)	
BCF - Fish [1]	1.1 – 1.8 (28 day(s), Lepomis macrochirus, Flow-through system, Fresh water, Read-across, Fresh weight)
Partition coefficient n-octanol/water (Log Pow)	0.13 (Weight of evidence approach)

10X DTNB Reaction Buffer

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

ethylenediaminetetraacetic acid (EDTA) (60-00-4)	
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).
2-Amino-2-(hydroxymethyl)-1,3-propanediol (77-86-1)	
Partition coefficient n-octanol/water (Log Pow)	-1.56 Source: HSDB
hydrogen chloride, conc=37%, aqueous solution (7647-01-0)	
Partition coefficient n-octanol/water (Log Pow)	0.25 (QSAR)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

12.4. Mobility in soil

ethylenediaminetetraacetic acid (EDTA) (60-00-4)	
Organic Carbon Normalized Adsorption Coefficient (Log Koc)	2.495 (log Koc, SRC PCKOCWIN v2.0, Calculated value)
Ecology - soil	Low potential for adsorption in soil.
hydrogen chloride, conc=37%, aqueous solution (7647-01-0)	
Ecology - soil	No (test)data on mobility of the component(s) available. May be harmful to plant growth, blooming and fruit formation.

12.5. Other adverse effects

Ozone	: Not classified
Fluorinated greenhouse gases	: No

SECTION 13 Disposal considerations

Regional waste regulation	: Disposal must be done according to official regulations.
Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Disposal must be done according to official regulations.
Additional information	: Do not re-use empty containers.
Ecological waste information	: The waste of the product should be considered as hazardous as the product itself, with the likelihood of impacting the environment in the same way. Consider the handling and disposal of the waste as defined by the product itself.

SECTION 14 Transport information

In accordance with DOT / TDG / IMDG / IATA

14.1. UN number

Not regulated for transport

14.2. UN Proper Shipping Name

Proper Shipping Name (DOT)	: Not regulated
Proper Shipping Name (TDG)	: Not regulated
Proper Shipping Name (IMDG)	: Not regulated
Proper Shipping Name (IATA)	: Not regulated

14.3. Transport hazard class(es)

DOT

Transport hazard class(es) (DOT)	: Not regulated
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10X DTNB Reaction Buffer

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

TDG

Transport hazard class(es) (TDG) : Not regulated

IMDG

Transport hazard class(es) (IMDG) : Not regulated

IATA

Transport hazard class(es) (IATA) : Not regulated

14.4. Packing group

Packing group (DOT) : Not regulated
Packing group (TDG) : Not regulated
Packing group (IMDG) : Not regulated
Packing group (IATA) : Not regulated

14.5. Environmental hazards

Other information : No supplementary information available.

14.6. Transport in bulk

Not applicable

14.7. Special precautions for user

DOT

Not regulated

TDG

Not regulated

IMDG

Not regulated

IATA

Not regulated

SECTION 15 Regulatory information

15.1. Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.		
hydrogen chloride, conc=37%, aqueous solution	CAS-No. 7647-01-0	< 1%

ethylenediaminetetraacetic acid (EDTA) (60-00-4)

CERCLA RQ	5000 lb
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hydrogen chloride, conc=37%, aqueous solution (7647-01-0)

Listed on EPA Hazardous Air Pollutant (HAPS)	
CERCLA RQ	5000 lb

10X DTNB Reaction Buffer

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

hydrogen chloride, conc=37%, aqueous solution (7647-01-0)	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb

15.2. International regulations

CANADA

ethylenediaminetetraacetic acid (EDTA) (60-00-4)	
Listed on the Canadian DSL (Domestic Substances List)	

water (7732-18-5)	
Listed on the Canadian DSL (Domestic Substances List)	

2-Amino-2-(hydroxymethyl)-1,3-propanediol (77-86-1)	
Listed on the Canadian DSL (Domestic Substances List)	

hydrogen chloride, conc=37%, aqueous solution (7647-01-0)	
Listed on the Canadian DSL (Domestic Substances List)	

EU-Regulations

No additional information available

National regulations

ethylenediaminetetraacetic acid (EDTA) (60-00-4)	
Listed on INSQ (Mexican National Inventory of Chemical Substances)	

water (7732-18-5)	
Listed on INSQ (Mexican National Inventory of Chemical Substances)	

2-Amino-2-(hydroxymethyl)-1,3-propanediol (77-86-1)	
Listed on INSQ (Mexican National Inventory of Chemical Substances)	

hydrogen chloride, conc=37%, aqueous solution (7647-01-0)	
Listed on INSQ (Mexican National Inventory of Chemical Substances)	

15.3. State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
ethylenediaminetetraacetic acid (EDTA)(60-00-4)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

10X DTNB Reaction Buffer

Safety Data Sheet

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

Component	State or local regulations
hydrogen chloride, conc=37%, aqueous solution(7647-01-0)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16 Other information

according to 29 CFR § 1910.1200, Hazard Communication Standard (HCS 2024)

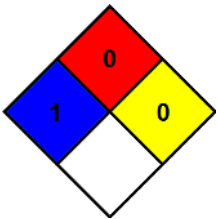
Revision date : 3/3/2026
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Full text of hazard classes and H-statements	
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H319	Causes serious eye irritation

NFPA health hazard : 1 - Materials that, under emergency conditions, can cause significant irritation.

NFPA fire hazard : 0 - Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.



Safety Data Sheet (SDS), USA

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