



# MSDS (Material Safety Data Sheet)

MSDS revision date: 12/11/2017

## 1. Product and company identification

**Product Name:** 4X Upper Buffer  
**Catalogue Numbers:** TEB- BUB01

### Contents

Product	Content	Cat no:	Size
4X Upper Buffer	TOOLS 4X Upper Buffer (0.5M Tris (pH 6.8) and 0.4% SDS)	TEB- BUB01	500 ml

**Class Identifier:** For research use only reagent

**Company Identification:** TOOLS Biotechnology Co. Ltd.

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<http://www.tools-biotech.com>

## 2. Composition / information on hazardous ingredients

Chemical name	% Conc.	CAS#	EC#	Classification (pure ingredient)	Class.(comp.)
Proprietary ingredients	-	-	-	Not hazardous	NA
Water	>50%	-	-	Not hazardous	NA

Chemical characterization

**Description:** Solution, consisting of the following components.

**Other components:** Components not listed here are not hazardous or their concentrations do not exceed the limits specified in the OSHA Hazard Communication Standard 29.CFR 1910.1200.

## 3. Hazards identification

Eyes	May cause eye irritation with susceptible persons.
Skin	May cause skin irritation and/or dermatitis.
Inhalation	May be harmful by inhalation.
Ingestion	May be harmful if swallowed.
Carcinogenic effects	No information available.
Mutagenic Effects	No information available.
Reproductive Toxicity	No information available.
Sensitization	No information available.

Causes skin and eye irritation. May be harmful by inhalation or swallowed. Health 0 Flammability 0

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Reactivity 0

HMIS ratings (scale 0-4)

HEALTH	0
FIRE	0
REACTIVITY	0

#### 4. First aid measures

Ingestion	Never give anything by mouth to an unconscious person. Consult a physician.
After inhalation	Move to fresh air. If symptoms persist, call a physician.
After skin contact	Wash off immediately with plenty of water. If symptoms persist, call a physician.
After eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If eye irritation persists, consult a specialist.
Notes to physician	Treat symptomatically.

#### 5. Fire fighting measures

Suitable extinguishing agents	Dry chemical.
Protective equipment	Wear self-contained breathing apparatus and protective

#### 6. Accidental release measures

Person related safety precautions	Use personal protective equipment.
Measures for cleaning/collecting	Soak up with inert absorbent material.
Additional information	No dangerous substances are released.

#### 7. Handling and storage

Handling	Wash thoroughly after handling. Wash hands before eating. Keep container tightly closed. Use with adequate ventilation.
Storage	Keep container closed when not in use. Store at room temperature.

#### 8. Exposure controls and personal protection

Components with limit values that require monitoring at the workplace	The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information	Ensure adequate ventilation, especially in confined areas.
Personal protective equipment	
Respiratory Protection	In case of insufficient ventilation wear suitable respiratory equipment.
Hand Protection	Protective gloves.
Eye Protection	Safety glasses with side-shields.
Skin and Body Protection	Lightweight protective clothing.
Hygiene Measures	Handle in accordance with good industrial hygiene and safety practice.
Environmental Exposure Controls	Prevent product from entering drains.

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## 9. Physical and chemical protection

General Information	Form: Liquid (buffer); Color: Colorless (buffer); Odor: Odorless
Boiling Point/Range	100°C (212°F).
Melting Point/Range	Not applicable.
Flash point	Not applicable.
Autoignition Temperature	Do not auto ignition.
Oxidizing Properties	No information available.
Water Solubility	Moderate.

## 10. Physical and chemical protection

Stability	Stable under normal conditions.
Materials to be avoided	Metals.
Hazardous decomposition products	No information available.
Polymerization	Hazardous polymerisation does not occur.

## 11. Toxicological information

Acute toxicity	No irritant effect.
Primary irritant effect	No irritant effect.
On the skin	No irritant effect.
On the eye	No irritant effect.
Sensitization	No sensitizing effects known.

## 12. ECOLOGICAL INFORMATION

Ecotoxicity effects	No information available.
Mobility	No information available.
Biodegradation	No information available.
Bioaccumulation	No information available.

## 13. DISPOSAL CONSIDERATIONS

Recommendation	Dispose according to current regional and national rules.
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#### 14. TRANSPORT INFORMATION

Proper Shipping Name	Not classified as dangerous in the meaning of transport regulations
Road/Railway Haulage ADR/RID	Not restricted.
Sea Freight IMO (IMDG)	Not restricted.
Air Freight IATA (ICAO)	Not restricted.
UN Number	Not restricted.

#### 15. REGULATORY INFORMATION

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.  
None of the chemicals in this product are considered highly hazardous by OSHA.

#### 16. Other INFORMATION

This material is sold for research and development purposes only. It is not for any human or animal therapeutic or clinical diagnostic use. It is not intended for food, drug, household, agricultural, or cosmetic use. An individual technically qualified to handle potentially hazardous chemicals must supervise the use of this material.

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. All materials and mixtures may be present unknown hazards and should be used with caution. **INFORMATION IN THIS MSDS DOES NOT CONSTITUTE A WARRANTY, EXPRESS OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.**

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