



SAFETY DATA SHEET

1. Identification of the substance/mixture and of the company/undertaking

Identification of the substance/preparation

Product code 15581044
Product name UltraPure™ 10X TBE Buffer

Company/Undertaking Identification

Life Technologies
5791 VAN ALLEN WAY
PO BOX 6482
CARLSBAD, CA 92008
+1 760 603 7200

INVITROGEN CORPORATION
5250 MAINWAY DRIVE
BURLINGTON, ONT
CANADA L7L 6A4
800/263-6236

24 hour Emergency Response (Transport): 866-536-0631
301-431-8585
Outside of the U.S. +1-301-431-8585

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

GHS - Classification**Signal Word****DANGER****Health Hazard**

| | |
|---|-------------|
| Skin Corrosion/Irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |
| Specific target organ systemic toxicity (single exposure) | Category 3 |
| Reproductive Toxicity | Category 1B |

Physical Hazards

not hazardous

Hazard statements

H315 - Causes skin irritation

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H360 - May damage fertility or the unborn child if inhaled

Precautionary statements

P261 - Avoid breathing dust/fume/gas/mist/vapors/spray

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P308 + P313 - IF exposed or concerned: Get medical attention/advice

Principle Routes of Exposure/**Potential Health effects**

| | |
|-------------------|--|
| Eyes | Irritating to eyes. |
| Skin | Irritating to skin. |
| Inhalation | Irritating to respiratory system. |
| Ingestion | May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |

Specific effects

| | |
|------------------------------|---|
| Carcinogenic effects | none |
| Mutagenic effects | none |
| Reproductive toxicity | May impair fertility May cause harm to the unborn child |
| Sensitization | none |

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Target Organ Effects None under normal use conditions

HMIS

| | |
|--------------|--------------------|
| Health | 1 * Chronic Hazard |
| Flammability | 0 |
| Reactivity | 0 |

3. Composition/information on ingredients

| Chemical Name | CAS-No | EINECS-No | Weight % |
|---------------|------------|-----------|----------|
| TRIS Base | 77-86-1 | 201-064-4 | 10-30 |
| boric acid | 10043-35-3 | 233-139-2 | 3-7 |

We recommend handling all chemicals with caution.

4. First aid measures

Skin contact Wash off immediately with plenty of water for at least 15 minutes. Remove and wash contaminated clothing before re-use. Immediate medical attention is required.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Immediate medical attention is required.

Ingestion Call a physician or Poison Control Centre immediately. Never give anything by mouth to an unconscious person. Do not induce vomiting without medical advice.

Inhalation Move to fresh air. If not breathing, give artificial respiration. Call a physician or Poison Control Centre immediately.

Notes to physician Treat symptomatically.

5. Fire-fighting measures

Suitable extinguishing media Water spray. Carbon dioxide (CO2). Foam. Dry chemical.

Special protective equipment for firefighters Wear self-contained breathing apparatus and protective suit.

6. Accidental release measures

Personal precautions Ensure adequate ventilation. Avoid contact with skin, eyes and clothing. Use personal protective equipment.

Methods for cleaning up Soak up with inert absorbent material.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

See Section 12 for additional information.

7. Handling and storage

Handling Always wear recommended Personal Protective Equipment. No special handling advice required.

Storage Keep in a dry, cool and well-ventilated place. Keep in properly labelled containers.

8. Exposure controls/personal protection

Exposure limits

| Chemical Name | OSHA PEL | OSHA PEL (Ceiling) | ACGIH OEL (TWA) | ACGIH OEL (STEL) |
|---------------|----------|--------------------|---------------------|---------------------|
| boric acid | - | - | 2 mg/m ³ | 6 mg/m ³ |

Engineering measures Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Respiratory protection In case of insufficient ventilation wear suitable respiratory equipment.

Hand protection Impervious 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. Do not allow material to contaminate ground water system.

9. Physical and chemical properties

General Information

| | |
|---------------------------------|---|
| Form | liquid |
| Appearance | No information available |
| Odor | No information available |
| Boiling Point/Range | °C no data available °F no data available |
| Melting point/range | °C no data available °F no data available |
| Flash point | °C no data available °F no data available |
| Autoignition temperature | °C no data available °F no data available |
| Oxidizing properties | No information available. |
| Water solubility | soluble |

10. Stability and reactivity

Stability Stable under normal conditions.

Materials to avoid No information available.

Hazardous decomposition products No information available.

polymerization None under normal processing.

11. Toxicological information

Acute toxicity

| Chemical Name | LD50 (oral, rat/mouse) | LD50 (dermal, rat/rabbit) | LC50 (inhalation, rat/mouse) |
|---------------|------------------------|---------------------------|------------------------------|
| TRIS Base | = 5900 mg/kg (Rat) | no data available | no data available |

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| | | | |
|------------|--------------------|-------------------|----------------|
| boric acid | = 2660 mg/kg (Rat) | no data available | >0.16mg/L(Rat) |
|------------|--------------------|-------------------|----------------|

**Principle Routes of Exposure/
Potential Health effects**

| | |
|------------------------------|---|
| Eyes | Irritating to eyes. |
| Skin | Irritating to skin. |
| Inhalation | Irritating to respiratory system. |
| Ingestion | May be harmful if swallowed Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. |
| Carcinogenic effects | none |
| Mutagenic effects | none |
| Reproductive toxicity | May impair fertility May cause harm to the unborn child |
| Sensitization | none |
| Target Organ Effects | None under normal use conditions |

12. Ecological information

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

| Chemical Name | Freshwater Algae Data | Water Flea Data | Freshwater Fish Species Data | Microtox Data | log Pow |
|----------------------------------|-----------------------|---|------------------------------|---------------|--------------|
| boric acid 10043-35-3 | | Daphnia magna EC50115 - 153 mg/L (48 h) | | | logPow-0.757 |

13. Disposal considerations

Dispose of in accordance with local regulations.

14. Transport information

IATA

| | |
|-----------------------------|---|
| Proper shipping name | Not classified as dangerous in the meaning of transport regulations |
| Hazard class | none |
| Subsidiary Class | none |
| Packing group | none |
| UN-No | none |

15. Regulatory information

| Component | TSCA |
|----------------------------------|--------|
| TRIS Base 77-86-1 (10-30) | Listed |
| boric acid 10043-35-3 (3-7) | Listed |

U.S. Federal Regulations

SARA 313

This product is not regulated by SARA.

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain HAPs.

U.S. State Regulations

California Proposition 65

This product does not contain chemicals listed under Proposition 65

WHMIS hazard class:

D2A Very toxic materials



This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR

16. Other information

Reason for Revision (M)SDS sections updated.

For research use only. Not intended for human or animal diagnostic or therapeutic uses.

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 present unknown hazards and should be used with caution. Since the Company cannot control the actual methods, volumes, or conditions of use, the Company shall not be held liable for any damages or losses resulting from the handling or from contact with the product as described herein. THE INFORMATION IN THIS MSDS DOES NOT CONSTITUTE A WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE.

End of Safety Data Sheet

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