

MATERIAL SAFETY DATA SHEET

**VIVANTIS TECHNOLOGIES SDN BHD
REVONGEN CORPORATION CENTER**

Document No.: MSDSrev05_TBE

Date prepared: 10th January 2023

Reviewed: 10th January 2023

SECTION 1: CHEMICAL IDENTIFICATION

Catalogue Number: PB1010-1L; PB1030-1L; PB1040-1L

Product Name: 1X Tris-Borate-EDTA (TBE) Buffer, pH 8.3; 5X Tris-Borate-EDTA (TBE) Buffer, pH 8.3; 10X Tris-Borate-EDTA (TBE) Buffer, pH 8.3

Intended Use:

For research use only. Not for use in diagnostic procedures.

Company Headquarters:

Vivantis Technologies Sdn Bhd
Revongen Corporation Center
Level 17, Top Glove Tower,
No. 16, Persiaran Setia Dagang,
Setia Alam, Seksyen U13, 40170 Shah Alam,
Selangor Darul Ehsan, Malaysia.

Tel: +6 03 3359 1166

Fax: +6 03 3358 0303

Email: info@vivanttechnologies.com

Website: www.vivanttechnologies.com

Company Manufacturing:

Vivantis Technologies Sdn Bhd
Production Lab
Level 1, Enterprise 2,
Technology Park Malaysia,
Lebuhraya Puchong-Sg. Besi,
57000 Bukit Jalil,
Kuala Lumpur, Malaysia

Pairing Nature with
Scientific Discoveries

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	EC No.	%
Boric acid	10043-35-3	233-139-2	<8
Ethylenediaminetetraacetic acid (EDTA), disodium dihydrate	6381-92-6	-	<5
Tris(hydroxymethyl)aminomethane	77-86-1	201-064-4	<15

See actual entry in RTECS for complete information.

SECTION 3: HAZARDS IDENTIFICATION

GHS Classification

Reproductive toxicity – Category 1B

GHS Label elements, including precautionary statements



Signal word: Danger

Hazard statements

H360 May damage fertility or the unborn child

Precautionary statements

- P201 Obtain special instructions before use
- P202 Do not handle until all safety precautions have been read and understood
- P281 Use personal protective equipment as required
- P308 + P313 If exposed or concerned, get medical attention/ advice
- P405 Store locked up
- P501 Dispose of contents/container to an approved waste disposal plant

Pairing Nature with
Scientific Discoveries

SECTION 4: FIRST-AID MEASURES

In case of eye contact, immediately flush eyes with copious amounts of water as a precaution.

In case of skin contact, immediately wash off with soap and copious amount of water. Consult a physician.

In case of inhalation, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of ingestion, never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: FIRE FIGHTING MEASURES

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and fully protective gear.

Hazardous decomposition products formed under fire conditions: Carbon oxides, nitrogen oxides, borane/boron oxides.

Flash point:	Not determined.
Explosion data – sensitivity to mechanical impact:	No data available.
Explosion data – sensitivity to static discharge:	No data available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

For personal protection, use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

For environmental precautions, prevent further leakage or spillage if safe to do so. Do not let product enter drains.

For containment and cleaning up, soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

Pairing Nature with
Scientific Discoveries

SECTION 7: HANDLING AND STORAGE

Avoid exposure - obtain special instructions before use. Avoid inhalation of vapor or mist. Keep in tightly closed container, stored in cool, dry and well-ventilated area. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye/face protection	Safety glasses with side-shields conforming to EN166 Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
Skin protection	Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.
Body Protection	Impervious clothing, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Pairing Nature with
Scientific Discoveries

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear/Colorless
Physical state:	Liquid
Odor:	No information available
Odor threshold:	No information available
Density:	No information available
pH:	8.35 (Diluted in 1X)
Melting point:	No information available
Freezing point:	No information available
Initial Boiling point:	No information available
Boiling point:	No information available
Flash point:	Not applicable
Autoignition temperature:	No data available
Decomposition temperature:	No information available
Upper Flammability limit in air:	No data available
Lower Flammability limit in air:	No data available
Explosive properties:	No information available
Oxidizing properties:	No information available
Solubility:	Soluble
Partition coefficient (n-octanol/water):	No data available
Vapor pressure:	No data available
Vapor density:	No data available
Evaporation rate:	No data available
Specific gravity:	No data available
Viscosity:	No information available

SECTION 10: STABILITY AND REACTIVITY

Stable under recommended storage conditions.

Materials to avoid:	Strong oxidizing agents, potassium, acid anhydrides.
Hazardous decomposition products:	No data available.
Hazardous polymerization:	No data available.
Conditions to avoid:	No data available.

Pairing Nature with
Scientific Discoveries

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50:	No data available
Inhalation LC50:	No data available
Dermal LD50:	No data available
Other information on acute toxicity:	No data available
Skin corrosion/irritation:	No data available
Serious eye damage/eye irritation:	No data available
Respiratory or skin sensitization:	No data available
Germ cell mutagenicity:	No data available
Reproductive toxicity:	No data available
Teratogenicity:	No data available
Aspiration hazard:	No data available
Synergistic effects:	No data available
STOT – single exposure:	No data available
STOT – repeated exposure:	No data available

Carcinogenicity

IARC: No component of this product presents at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Potential health effects

Inhalation	May be harmful if inhaled. May cause respiratory tract irritation.
Ingestion	May be harmful if swallowed.
Skin	May be harmful if absorbed through skin. May cause skin irritation.
Eyes	May cause eye irritation.

Signs and Symptoms of Exposure

Toxicity reported for borates in humans: ingestion or absorption may cause nausea, vomiting, diarrhea, abdominal cramps, and erythematous lesions on the skin and mucous membranes. Other symptoms include circulatory collapse, tachycardia, cyanosis, delirium, convulsions, and coma. Death has been reported to occur in infants from less than 5 grams and in adults from 5 to 20 grams.

To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

Pairing Nature with
Scientific Discoveries

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Mobility in soil:	No data available
Other adverse effect:	No data available

SECTION 13: DISPOSAL CONSIDERATIONS

Dispose of waste material in accordance with federal, state and local environmental regulations. Offer surplus and non-recyclable solutions to a licensed disposal company. For contaminated packaging, dispose as waste material.

SECTION 14: TRANSPORT INFORMATION

ADR/RID

UN No.:	-
Proper shipping name:	Not dangerous goods
Transport hazard class(es):	-
Packaging group:	-
Environmental hazards:	No
Special precautions for user:	No data available

IMDG

UN No.:	-
Proper shipping name:	Not dangerous goods
Transport hazard class(es):	-
Packaging group:	-
Environmental hazards:	No
Special precautions for user:	No data available

IATA-DGR

UN No.:	-
Proper shipping name:	Not dangerous goods
Transport hazard class(es):	-
Packaging group:	-
Environmental hazards:	No
Special precautions for user:	No data available

Pairing Nature with
Scientific Discoveries

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

No data available

SECTION 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

No data available

SECTION 16: OTHER INFORMATION

The information contained in this MSDS relates only to the material(s) designed and does not relate to use(s) in combination with any other material, process(es) and /or chemical reaction(s). Vivantis Technologies Sdn. Bhd. provides this information in good faith, from sources believed to be accurate; however, Vivantis assumes no liability for its accuracy or completeness, and thus shall not be held liable for any damage resulting from handling or from contact with the above product.

All Vivantis products are supplied for manufacturing, research and laboratory use only. Researchers and laboratory personnel intending to use any of these products for medical investigation on human are solely responsible for such use and for compliance with the pertinent regulations of the United States Food & Drug Administration (US-FDA) and other regulations. We do not assume liability for damages resulting from the handling, use and/or disposal of these products, from their use in violation of patent or other rights or reliance upon this information.

Pairing Nature with
Scientific Discoveries