

**MATERIAL SAFETY DATA SHEET**

**VIVANTIS TECHNOLOGIES SDN BHD  
REVONGEN CORPORATION CENTER**

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**SECTION 1: CHEMICAL IDENTIFICATION**

Catalogue Number: PB1510-1L; PB1540-1L

Product Name: 1X Tris-Glycine-Sodium Dodecyl Sulfate (TG-SDS) Buffer; 10X Tris-Glycine-Sodium Dodecyl Sulfate (TG-SDS) Buffer

Intended Use:

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

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**SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	CAS No.	EC No.	%
Glycine	56-40-6	-	>1
Tris(hydroxymethyl)aminomethane	77-86-1	201-064-4	>1
Sodium lauryl sulfate	151-21-3	205-788-1	0-1

See actual entry in RTECS for complete information.

**SECTION 3: HAZARDS IDENTIFICATION**

**GHS Classification**

Acute skin sensitizer – Category 1  
 Respiratory sensitizer – Category 1  
 Skin irritant – Category 2  
 Eye irritant – Category 2

**GHS Label elements, including precautionary statements**



Signal word: Danger

**Hazard statements**

H317 May cause an allergic skin reaction  
 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled  
 H315 Causes skin irritation  
 H319 Causes serious eye irritation  
 H335 May cause respiratory irritation  
 H303 Maybe harmful if swallowed  
 H313 May be harmful in contact with skin

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## Precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+ P352	If on skin, wash with plenty of soap and water.
P304 + P340	If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing.
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.

## SECTION 4: FIRST-AID MEASURES

In case of eye contact, rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

In case of skin contact, wash off with soap and plenty of water. Removing all contaminated clothes and shoes.

In case of inhalation, move to fresh air. If breathing becomes difficult, give oxygen.

In case of ingestion, clean mouth with water and afterwards drink plenty of water.

## SECTION 5: FIRE FIGHTING MEASURES

Not flammable.

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.

Flash point:

Not determined.

Explosion data – sensitivity to mechanical impact:

Not sensitive.

Explosion data – sensitivity to static discharge:

Not sensitive.

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### SECTION 6: ACCIDENTAL RELEASE MEASURES

For personal protection, use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.

For environmental precautions, prevent further leakage and spillage if safe to do so.

For cleaning up, soak up with inert absorbent material. Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

### SECTION 7: HANDLING AND STORAGE

Handle in accordance with good industrial hygiene and safety practice.

Keep container tightly in a dry and well-ventilated place.

Incompatible with strong oxidizing agents.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye/Face Protection	Tightly fitting safety goggles.
Skin and Body Protection	Wear protective gloves/clothing
Respiratory Protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA Approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Use engineering measures such as showers, eyewash stations and ventilation systems.

Handle in accordance with good industrial hygiene and safety practice.

### 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:	No information available
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

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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:	No data available
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 data available

## SECTION 10: STABILITY AND REACTIVITY

Stable under recommended storage conditions.

Materials to avoid:	Strong oxidizing agents.
Hazardous decomposition products:	Carbon oxides, nitrogen oxides.
Hazardous polymerization:	Hazardous polymerization does not occur.
Conditions to avoid:	None known based on information supplied.

## SECTION 11: TOXICOLOGICAL INFORMATION

### Acute toxicity

Irritating to eye, skin and respiratory system. Sensitizer. May be harmful if swallowed. May be harmful if absorbed through skin.

### **Sodium lauryl sulfate**

Oral LD50:	Rat – 1288 mg/kg
Inhalation LC50:	Rat – 3900 mg/kg – 1h
Dermal LD50:	Rabbit – 580 mg/kg

### Chronic toxicity

No known effect based on information supplied.

Target organ effects:           Lungs

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

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## SECTION 12: ECOLOGICAL INFORMATION

### Ecotoxicity

The environmental impact of this product has not been fully investigated.

Sodium lauryl sulfate

LC50:

Fish

Pimephales promelas – 15-18.9 mg/L – 96hrs

Lepomis macrochirus – 4.06-5.75 mg/L – 96hrs

Lepomis macrochirus – 4.2-4.8 mg/L – 96hrs

Pimephales promelas – 6.2-9.6 mg/L – 96hrs

Oncorhynchus mykiss – 4.2 mg/L – 96hrs

Poecilia reticulata – 13.5-18.3 mg/L – 96hrs

Pimephales promelas – 5.8-7.5 mg/L – 96hrs

Brachydanio rerio – 9.9-20.1 mg/L – 96hrs

Pimephales promelas – 10.2-22.5 mg/L – 96hrs

Pimephales promelas – 8-12.5 mg/L – 96hrs

Lepomis macrochirus – 4.5 mg/L – 96hrs

Oncorhynchus mykiss – 4.62mg/L – 96hrs

Poecilia reticulata – 10.8-16.6 mg/L – 96hrs

Pimephales promelas – 22.1-22.8 mg/L – 96hrs

Oncorhynchus mykiss – 4.3-8.5 mg/L – 96hrs

Cyprinus carpio – 1.31 mg/L – 96hrs

Brachydanio rerio – 7.97 mg/L – 96hrs

EC50:

Algae – 3.59-15.6 mg/L – 96hrs, 117mg/L – 96hrs, 53 mg/L – 72hrs, 30-100 mg/L – 96hrs

Daphnia magna (water flea) – 1.8 mg/L – 48hrs

Log Pow:

1.6

## SECTION 13: DISPOSAL CONSIDERATIONS

Dispose waste material in accordance with federal, state and local environmental regulations.

For contaminated packaging, dispose as waste material.

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**SECTION 14: TRANSPORT INFORMATION**

**IATA**

Not regulated.

**DOT**

Not regulated.

**SECTION 15: REGULATORY INFORMATION**

**International Inventories:**

<b>TSCA</b>	Does not comply
<b>EINECS/ELINCS</b>	Does not comply
<b>ENCS</b>	Does not comply
<b>IECSC</b>	Does not comply
<b>KECL</b>	Does not comply
<b>PICCS</b>	Does not comply
<b>AIC</b>	Does not comply

**United States Federal Regulations**

**SARA 313** Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

**SARA 311/312 Hazard Categories**

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

**Clean Water Act**

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

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

This product does not contain any substances regulated as hazardous air pollutants (HAPS) under Section 112 of the Clean Air Act Amendments of 1990.

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**U.S. State Regulations**

**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

**International Regulations**

**Mexico – Grade**

No information available.

**WHMIS Hazard Class**

D2B Very toxic materials

D2B Toxic materials



**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.

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