

MATERIAL SAFETY DATA SHEET

**VIVANTIS TECHNOLOGIES SDN BHD
REVONGEN CORPORATION CENTER**

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SECTION 1: CHEMICAL IDENTIFICATION

Catalogue Number: PB0312-500ML; PB0312-1L; PB0314-500ML; PB0314-1L;
PB0315-500ML; PB0315-1L; PB0342-500ML; PB0342-1L;
PB0344-500ML; PB0344-1L; PB0345-500ML; PB0345-1L;
PB0354-500ML; PB0354-1L; PB0355-500ML; PB0355-1L

Product Name: 1X Phosphate Buffered Saline, pH7.2;
1X Phosphate Buffered Saline, pH7.4;
1X Phosphate Buffered Saline, pH8.0;
10X Phosphate Buffered Saline (1X Phosphate Buffered Saline, pH7.2);
10X Phosphate Buffered Saline (1X Phosphate Buffered Saline, pH7.4);
10X Phosphate Buffered Saline (1X Phosphate Buffered Saline, pH8.0);
20X Phosphate Buffered Saline (1X Phosphate Buffered Saline, pH7.4);
20X Phosphate Buffered Saline (1X Phosphate Buffered Saline, pH8.0)

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.	%
Sodium chloride	7647-14-5	8
Sodium phosphate	7558-79-4	<1
Potassium chloride	7447-40-7	<2
Potassium phosphate	7778-77-0	<1
Nuclease-free Water	-	>90

See actual entry in RTECS for complete information.

SECTION 3: HAZARDS IDENTIFICATION

GHS Classification

Skin irritant – Category 2
Eye irritant – Category 2

GHS Label elements, including precautionary statements



Signal word: Warning

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GHS Classification

Not a hazardous substance or mixture according to Singapore Standard SS 586 Part 2.

GHS label elements

Not a hazardous substance or mixture according to Singapore Standard SS 586 Part 2.

Hazard statements

H315 Causes skin irritation
H319 Causes serious eye irritation
H335 May cause respiratory irritation

Precautionary statements

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
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.

SECTION 4: FIRST-AID MEASURES

In case of eye contact, immediately flush eyes with copious amounts of water for at least 15 minute and consult a physician.

In case of skin contact, immediately wash skin with soap and copious amounts of water.

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

In case of ingestion, wash 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 dry chemical, carbon dioxide, water spray or regular foam.

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

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Hazardous decomposition products formed under fire conditions: No information available.
 Flash point: Not determined.
 Explosion data – sensitivity to mechanical impact: Not sensitive.
 Explosion data – sensitivity to static discharge: Not sensitive.

SECTION 6: ACCIDENTAL RELEASE MEASURES

For personal protection, use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation.
 For containment, prevent further leakage or spillage if safe to do so.
 For cleaning up, absorb on sand or vermiculite and place in closed containers for disposal. 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 containers tightly closed in a dry, cool and well-ventilated place.
 Incompatible with strong acids.

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.

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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear/Colorless haze-free
Physical state:	Liquid
Odor:	No information available
Odor threshold:	No information available
Density:	No information available
pH:	pH 7.2 (PB0312, PB0342); pH 7.4 (PB0314, PB0344, PB0354); pH 8.0 (PB0315, PB0345, PB0355)
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 acids.
Hazardous decomposition product:	Carbon oxides.
Hazardous polymerization:	Hazardous polymerization does not occur.
Conditions to avoid:	None known based on information supplied.

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SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Irritating to eye, skin and respiratory system.

Chronic toxicity

Chronic toxicity: No known effect based on information supplied.

Target organ effects: Heart.

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

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

LC50: Pimephales promelas – 6020-7070 mg/L – 96 hrs
Pimephales promelas – 6420-6700 mg/L – 96 hrs
Oncorhynchus mykiss – 4747-7824 mg/L – 96 hrs
Lepomis macrochirus – 12946 mg/L – 96 hrs
Pimephales promelas – 7050 mg/L -96 hrs
Lepomis macrochirus – 5560-6080 mg/L – 96 hrs

SECTION 13: DISPOSAL CONSIDERATIONS

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

For contaminated packaging, dispose as waste material.

SECTION 14: TRANSPORT INFORMATION

IATA

Not regulated.

DOT

Not regulated.

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SECTION 15: REGULATORY INFORMATION

International Inventories:

TSCA	Complies
EINECS/ELINCS	Complies
ENCS	Complies
IECSC	Complies
KECL	Does not comply
PICCS	Complies
AICS	Complies

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.

CERCLA

Hazardous substances RQs: 5000lb

Extremely Hazardous Substances RQs: -

U.S. State Regulations

California Proposition 65 This product does not contain any Proposition 65 chemicals.

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U.S. State Right-to-Know Regulations

Massachusetts:	X
New Jersey:	X
Pennsylvania:	X
Illinois:	-
Rhode Island:	-

International Regulations

Mexico – Grade No information available.

WHMIS Hazard Class

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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