MATERIAL SAFETY DATA SHEET

VIVANTIS TECHNOLOGIES SDN BHD
REVONGEN CORPORATION CENTER

Document No.: MSDSrev05_SodiumPyrophosphateBuffer
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SECTION 1: CHEMICAL IDENTIFICATION

Catalogue Number: PB0729-1L; PB0730-1L; PB0732-1L
Product Name: 0.05M Sodium Pyrophosphate Buffer, pH 7.5;
0.05M Sodium Pyrophosphate Buffer, pH 9.0;
0.01M Sodium Pyrophosphate Buffer, pH 7.4

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.	%
Tetrasodium pyrophosphate	7722-88-5	231-767-1	<5

Synonym: Tetrasodium pyrophosphate; sodium diphosphate tetrabasic
Chemical formula: $Na_4O_7P_2$
Molecular weight: 26590 g/mol
See actual entry in RTECS for complete information.

SECTION 3: HAZARDS IDENTIFICATION

GHS Classification according to CLASS regulations 2013

Acute toxicity, oral – Category 4
Serious eye damage/eye irritation – Category 1

GHS Label elements, including precautionary statements

Signal word: Danger

Hazard statements

H302	Harmful if swallowed.
H318	Causes serious eye damage.

Precautionary statements

P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear eye protection/ face protection.
P301 + P312 + P330	If swallowed, call a poison center/doctor if you feel unwell. Rinse mouth.
P305 + P351 + P338 + P310	If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor.
P501	Dispose of contents/ container to an approved waste disposal plant.

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. 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, rinse mouth with water. Never give anything by mouth to an unconscious person. Consult a physician.

SECTION 5: FIRE FIGHTING MEASURES

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
Use dry chemical, carbon dioxide, water spray or alcohol-resistant foam.
As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and fully protective gear.

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

SECTION 6: ACCIDENTAL RELEASE MEASURES

For personal protection, use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.
For environmental precautions, do not let material enter drains.
For containment and cleaning up, pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 7: HANDLING AND STORAGE

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.
Avoid contact with skin and eyes. Avoid formation of dust and aerosols.
Keep container tightly closed in a dry, cool and well-ventilated place.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Component	Control parameters
Tetrasodium pyrophosphate	TWA: 5g/m^3

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.

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:	7.4 (PC0732), 7.5 (PC0729), 9.0 (PC0730)
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 in water
Partition coefficient:	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
Relative density:	2.53 g/cm^3 at 25 °C

SECTION 10: STABILITY AND REACTIVITY

Stable under recommended storage conditions.

Materials to avoid:	Strong oxidizing agents and strong acids.
Hazardous decomposition products:	Oxides of phosphorus, sodium oxides.
Hazardous polymerization:	No data available.
Conditions to avoid:	No data available

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50:	Rat – >300-<2000 mg/kg
Inhalation LC50:	No data available
Dermal LD50:	Rabbit – 7940 mg/kg
Other information on acute toxicity:	No data available
Skin corrosion/irritation:	Rabbit – no skin irritation
Serious eye damage/eye irritation:	Rabbit – risk of serious damage to eyes
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 burns.

Signs and Symptoms of Exposure

Nausea and vomiting may be the effects of ingestion.

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

RTECS: UX7350000

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity

LC50: Fish – 1.380mg/L – 96hrs

EC50: Daphnia magna (Water flea) – 391mg/L – 48hrs

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. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

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

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

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