

TPS STANDARD BUFFER SOLUTION PH 6.88

Chemwatch Independent Material Safety Data Sheet
For Workplace - Small Volume Use Only.
Issue Date: 19-Feb-2008
NC317TLP

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Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME

TPS STANDARD BUFFER SOLUTION PH 6.88

SYNONYMS

"potassium phosphate, dibasic buffer solution", "potassium sodium orthophosphates solution", "potassium dihydrogen phosphate and disodium hydrogen orthophosphate", "solution Neutral pH buffer buffer reagent", "Roache Buffer Solution 6.88 121306"

PRODUCT USE

Analytical reagent.
Used as pH (6.88) buffer in pH determinations.

SUPPLIER


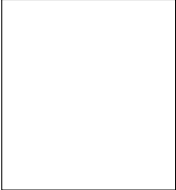
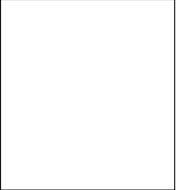
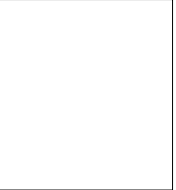


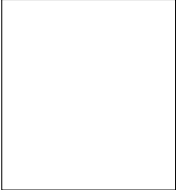
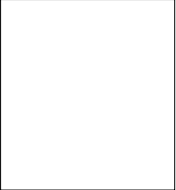
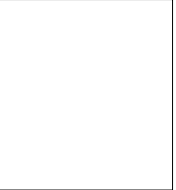


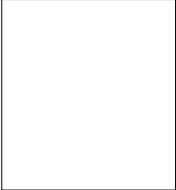
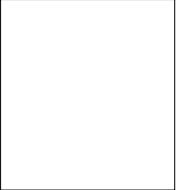
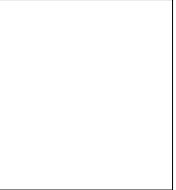


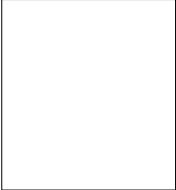
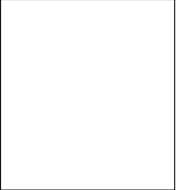
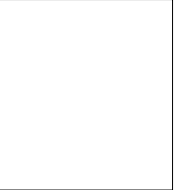


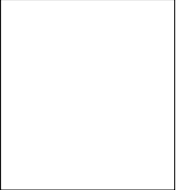
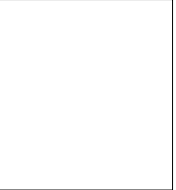

Company: Vintessential Laboratories Pty Ltd A.C.N.
068 057 045
Address:
13/143 Pt Nepean Road, Dromana, VIC, 3936,
Australia
Telephone: (03) 5987 2242
Emergency Tel: 0414 892 211
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Section 2 - HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE

NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS. According to the Criteria of NOHSC, and the ADG Code.

CHEMWATCH HAZARD RATINGS

Flammability					
Toxicity					
Body Contact					
Reactivity					
Chronic					

SCALE: Min/Nil=0 Low=1 Moderate=2 High=3 Extreme=4

POISONS SCHEDULE

None

RISK

» Cumulative effects may result following exposure*.
* (limited evidence).

SAFETY

» Do not breathe gas/ fumes/ vapour/ spray.
» Avoid contact with skin.

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Section 2 - HAZARDS IDENTIFICATION

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
sodium phosphate, dibasic	7558-79-4	0-1
potassium phosphate, monobasic	7778-77-0	0-1
water	7732-18-5	>98

Section 4 - FIRST AID MEASURES

SWALLOWED

- Immediately give a glass of water.
- First aid is not generally required. If in doubt, contact a Poisons Information Centre or a doctor.

EYE

- » If this product comes in contact with the eyes:
- Wash out immediately with fresh running water.
- Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.
- If pain persists or recurs seek medical attention.
- Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.

SKIN

- » If skin or hair contact occurs:
- Flush skin and hair with running water (and soap if available).
- Seek medical attention in event of irritation.

INHALED

- If fumes or combustion products are inhaled remove from contaminated area.
- Other measures are usually unnecessary.

NOTES TO PHYSICIAN

- » Treat symptomatically.
-

Section 5 - FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA

- There is no restriction on the type of extinguisher which may be used.

FIRE FIGHTING

- Alert Fire Brigade and tell them location and nature of hazard.
- Wear breathing apparatus plus protective gloves for fire only.
- Prevent, by any means available, spillage from entering drains or water courses.
- Use fire fighting procedures suitable for surrounding area.
- DO NOT approach containers suspected to be hot.
- Cool fire exposed containers with water spray from a protected location.
- If safe to do so, remove containers from path of fire.
- Equipment should be thoroughly decontaminated after use.

FIRE/EXPLOSION HAZARD

- » Non combustible liquid.

Not considered to be a significant fire risk.

Heating may cause expansion or decomposition leading to violent rupture of containers.

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Section 5 - FIRE FIGHTING MEASURES

FIRE INCOMPATIBILITY

» None known.

HAZCHEM: None

PERSONAL PROTECTION

Glasses:

Not normally required.

Gloves:

When handling larger quantities:

General purpose rubber glove.

PVC chemical resistant type.

Respirator:

Particulate

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS

- Clean up all spills immediately.
- Avoid breathing vapours and contact with skin and eyes.
- Control personal contact by using protective equipment.
- Contain and absorb spill with sand, earth, inert material or vermiculite.
- Wipe up.
- Place in a suitable, labelled container for waste disposal.

MAJOR SPILLS

» Minor hazard.

- Clear area of personnel.
- Alert Fire Brigade and tell them location and nature of hazard.
- Control personal contact by using protective equipment as required.
- Prevent spillage from entering drains or water ways.
- Contain spill with sand, earth or vermiculite.
- Collect recoverable product into labelled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite and place in appropriate containers for disposal.
- Wash area and prevent runoff into drains or waterways.
- If contamination of drains or waterways occurs, advise emergency services.

Personal Protective Equipment advice is contained in Section 8 of the MSDS.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

- Limit all unnecessary personal contact.
- Wear protective clothing when risk of exposure occurs.
- Use in a well-ventilated area.
- When handling DO NOT eat, drink or smoke.
- Always wash hands with soap and water after handling.
- Avoid physical damage to containers.
- Use good occupational work practice.
- Observe manufacturer's storing and handling recommendations.

SUITABLE CONTAINER

- Glass container is suitable for laboratory quantities.
- Plastic container.
- Check that containers are clearly labelled.

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Section 7 - HANDLING AND STORAGE

- Packaging as recommended by manufacturer.

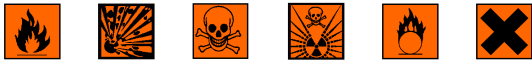
STORAGE INCOMPATIBILITY

» None known.

STORAGE REQUIREMENTS

- Store in original containers.
- Keep containers securely sealed.
- Store in a cool, dry, well ventilated area.
- DO NOT allow to freeze.
- Store away from incompatible materials.
- Protect containers against physical damage and check regularly for leaks.
- Observe manufacturer's storing and handling recommendations.

SAFE STORAGE WITH OTHER CLASSIFIED CHEMICALS



+ + + + X +

+: May be stored together

O: May be stored together with specific precautions

X: Must not be stored together

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- sodium phosphate, dibasic: CAS:7558- 79- 4 CAS:10028- 24- 7 CAS:148560- 76- 3
- potassium phosphate, monobasic: CAS:7778- 77- 0
- water: CAS:7732- 18- 5 CAS:558440- 53- 2 CAS:558440- 22- 5

MATERIAL DATA

» Not available. Refer to individual constituents.

INGREDIENT DATA

POTASSIUM PHOSPHATE, MONOBASIC:

SODIUM PHOSPHATE, DIBASIC:

» It is the goal of the ACGIH (and other Agencies) to recommend TLVs (or their equivalent) for all substances for which there is evidence of health effects at airborne concentrations encountered in the workplace.

At this time no TLV has been established, even though this material may produce adverse health effects (as evidenced in animal experiments or clinical experience). Airborne concentrations must be maintained as low as is practically possible and occupational exposure must be kept to a minimum.

NOTE: The ACGIH occupational exposure standard for Particles Not Otherwise Specified (P.N.O.S) does NOT apply.

POTASSIUM PHOSPHATE, MONOBASIC:

SODIUM PHOSPHATE, DIBASIC:

» Sensory irritants are chemicals that produce temporary and undesirable side-effects on the eyes, nose or throat. Historically occupational exposure standards for these irritants have been based on observation of workers' responses to various airborne concentrations. Present day expectations require that nearly every individual should be protected against even minor sensory irritation and exposure standards are established using uncertainty factors or safety factors of 5 to 10 or more. On occasion animal no-observable-effect-

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

levels (NOEL) are used to determine these limits where human results are unavailable. An additional approach, typically used by the TLV committee (USA) in determining respiratory standards for this group of chemicals, has been to assign ceiling values (TLV C) to rapidly acting irritants and to assign short-term exposure limits (TLV STELs) when the weight of evidence from irritation, bioaccumulation and other endpoints combine to warrant such a limit. In contrast the MAK Commission (Germany) uses a five-category system based on intensive odour, local irritation, and elimination half-life. However this system is being replaced to be consistent with the European Union (EU) Scientific Committee for Occupational Exposure Limits (SCOEL); this is more closely allied to that of the USA.

OSHA (USA) concluded that exposure to sensory irritants can:

- cause inflammation
- cause increased susceptibility to other irritants and infectious agents
- lead to permanent injury or dysfunction
- permit greater absorption of hazardous substances and
- acclimate the worker to the irritant warning properties of these substances thus increasing the risk of overexposure.

WATER:

- » No exposure limits set by NOHSC or ACGIH.

PERSONAL PROTECTION



EYE

» No special equipment for minor exposure i.e. when handling small quantities.

• OTHERWISE:

- Safety glasses with side shields.
- Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lens or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available. In the event of chemical exposure, begin eye irrigation immediately and remove contact lens as soon as practicable. Lens should be removed at the first signs of eye redness or irritation - lens should be removed in a clean environment only after workers have washed hands thoroughly. [CDC NIOSH Current Intelligence Bulletin 59].

HANDS/FEET

» No special equipment needed when handling small quantities.

OTHERWISE: Wear general protective gloves, eg. light weight rubber gloves.

Wear protective gloves, eg. PVC.

OTHER

» No special equipment needed when handling small quantities.

- Eyewash unit.

RESPIRATOR

» Selection of the Class and Type of respirator will depend upon the level of breathing zone contaminant and the chemical nature of the contaminant. Protection Factors (defined as the ratio of contaminant outside and inside the mask) may also be important.

Breathing Zone Level ppm (volume)	Maximum Protection Factor	Half- face Respirator	Full- Face Respirator
1000	10	- AUS P	-

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Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

1000	50	-	- AUS P
5000	50	Airline *	-
5000	100	-	- 2 P
10000	100	-	- 3 P
	100+		Airline**

* - Continuous Flow

** - Continuous-flow or positive pressure demand.

The local concentration of material, quantity and conditions of use determine the type of personal protective equipment required. For further information consult site specific CHEMWATCH data (if available), or your Occupational Health and Safety Advisor.

ENGINEERING CONTROLS

» None under normal operating conditions.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE

Orange liquid; mixes with water.

PHYSICAL PROPERTIES

Liquid.

Mixes with water.

Molecular Weight: Not applicable.

Melting Range (°C): Not available

Solubility in water (g/L): Miscible

pH (1% solution): Not available

Volatile Component (%vol): Not available

Relative Vapour Density (air=1): Not available.

Lower Explosive Limit (%): Not applicable

Autoignition Temp (°C): Not applicable

State: Liquid

Boiling Range (°C): 100 approx

Specific Gravity (water=1): 1.0 approx.

pH (as supplied): Not available

Vapour Pressure (kPa): 3.33 @ 25 C

Evaporation Rate: Not available

Flash Point (°C): Not applicable

Upper Explosive Limit (%): Not applicable

Decomposition Temp (°C): Not available.

Viscosity: Not Available

Section 10 - CHEMICAL STABILITY AND REACTIVITY INFORMATION

CONDITIONS CONTRIBUTING TO INSTABILITY

» Product is considered stable and hazardous polymerisation will not occur.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

» The material may be discomforting to the gastro-intestinal tract and is non-toxic if swallowed Considered an unlikely route of entry in commercial/industrial environments.

EYE

» The liquid may be slightly discomforting to the eyes.

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Section 11 - TOXICOLOGICAL INFORMATION

SKIN

» The material may be mildly discomforting to the skin. if exposure is prolonged.
Overexposure is unlikely in this form.

INHALED

» Not normally a hazard due to non-volatile nature of product.

CHRONIC HEALTH EFFECTS

» Primary route of exposure is usually by skin contact.
As with any chemical product, contact with unprotected bare skin; inhalation of vapour, mist or dust in work place atmosphere; or ingestion in any form, should be avoided by observing good occupational work practice.

TOXICITY AND IRRITATION

» None assigned. Refer to individual constituents.

SODIUM PHOSPHATE, DIBASIC:

» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (rat) LD50: 17000 mg/kg
Intravenous (Rabbit) LD: 1075 mg/kg

» Asthma-like symptoms may continue for months or even years after exposure to the material ceases. This may be due to a non-allergenic condition known as reactive airways dysfunction syndrome (RADS) which can occur following exposure to high levels of highly irritating compound. Key criteria for the diagnosis of RADS include the absence of preceding respiratory disease, in a non-atopic individual, with abrupt onset of persistent asthma-like symptoms within minutes to hours of a documented exposure to the irritant. A reversible airflow pattern, on spirometry, with the presence of moderate to severe bronchial hyperreactivity on methacholine challenge testing and the lack of minimal lymphocytic inflammation, without eosinophilia, have also been included in the criteria for diagnosis of RADS. RADS (or asthma) following an irritating inhalation is an infrequent disorder with rates related to the concentration of and duration of exposure to the irritating substance. Industrial bronchitis, on the other hand, is a disorder that occurs as result of exposure due to high concentrations of irritating substance (often particulate in nature) and is completely reversible after exposure ceases. The disorder is characterised by dyspnea, cough and mucus production. The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

IRRITATION

Skin (rabbit): 500 mg/24h - Mild
Eye (rabbit): 500 mg/24h - Mild

POTASSIUM PHOSPHATE, MONOBASIC:

» unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY

Oral (Rat) LD: 4640 mg/kg
» No data of toxicological significance identified in literature search.

IRRITATION

WATER:

» No significant acute toxicological data identified in literature search.

Section 12 - ECOLOGICAL INFORMATION

Refer to data for ingredients, which follows:

SODIUM PHOSPHATE, DIBASIC:

» The principal problems of phosphate contamination of the environment relates to eutrophication processes in lakes and ponds. Phosphorus is an essential plant nutrient and is usually the limiting nutrient for blue-green algae. A lake undergoing eutrophication shows a rapid growth of algae in surface waters. Planktonic

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Section 12 - ECOLOGICAL INFORMATION

algae cause turbidity and flotation films. Shore algae cause ugly muddying, films and damage to reeds. Decay of these algae causes oxygen depletion in the deep water and shallow water near the shore. The process is self-perpetuating because anoxic conditions at the sediment/water interface causes the release of more adsorbed phosphates from the sediment. The growth of algae produces undesirable effects on the treatment of water for drinking purposes, on fisheries, and on the use of lakes for recreational purposes.

POTASSIUM PHOSPHATE, MONOBASIC:

» The principal problems of phosphate contamination of the environment relates to eutrophication processes in lakes and ponds. Phosphorus is an essential plant nutrient and is usually the limiting nutrient for blue-green algae. A lake undergoing eutrophication shows a rapid growth of algae in surface waters. Planktonic algae cause turbidity and flotation films. Shore algae cause ugly muddying, films and damage to reeds. Decay of these algae causes oxygen depletion in the deep water and shallow water near the shore. The process is self-perpetuating because anoxic conditions at the sediment/water interface causes the release of more adsorbed phosphates from the sediment. The growth of algae produces undesirable effects on the treatment of water for drinking purposes, on fisheries, and on the use of lakes for recreational purposes.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
TPS Standard Buffer Solution pH 6.88		No data		
sodium phosphate, dibasic		No data		
potassium phosphate, monobasic		No data		
water	LOW	No data	LOW	HIGH

Section 13 - DISPOSAL CONSIDERATIONS

- Recycle wherever possible or consult manufacturer for recycling options.
- Consult State Land Waste Management Authority for disposal.
- Bury residue in an authorised landfill.
- Recycle containers if possible, or dispose of in an authorised landfill.

Section 14 - TRANSPORTATION INFORMATION

HAZCHEM: None (ADG6)

NOT REGULATED FOR TRANSPORT OF DANGEROUS GOODS: UN, IATA, IMDG

Section 15 - REGULATORY INFORMATION

POISONS SCHEDULE: None

REGULATIONS

TPS Standard Buffer Solution pH 6.88 (CAS: None):
No regulations applicable

Regulations for ingredients

sodium phosphate, dibasic (CAS: 7558-79-4) is found on the following regulatory lists:

Australia Inventory of Chemical Substances (AICS)

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 3

Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 4

Australia Therapeutic Goods Administration (TGA) Substances that may be used as active ingredients in

Listed medicines

OECD Representative List of High Production Volume (HPV) Chemicals

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Section 15 - REGULATORY INFORMATION

sodium phosphate, dibasic (CAS: 10028-24-7) is found on the following regulatory lists;
Australia Inventory of Chemical Substances (AICS)
Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 3
Australia Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP) - Schedule 4
Australia Therapeutic Goods Administration (TGA) Substances that may be used as active ingredients in Listed medicines
OECD Representative List of High Production Volume (HPV) Chemicals

potassium phosphate, monobasic (CAS: 7778-77-0) is found on the following regulatory lists;
Australia Inventory of Chemical Substances (AICS)
Australia Therapeutic Goods Administration (TGA) Substances that may be used as active ingredients in Listed medicines
OECD Representative List of High Production Volume (HPV) Chemicals

water (CAS: 7732-18-5) is found on the following regulatory lists;
Australia Inventory of Chemical Substances (AICS)
GESAMP/EHS Composite List of Hazard Profiles - Hazard evaluation of substances transported by ships
IMO IBC Code Chapter 18: List of products to which the Code does not apply
OECD Representative List of High Production Volume (HPV) Chemicals

Section 16 - OTHER INFORMATION

INGREDIENTS WITH MULTIPLE CAS NUMBERS

Ingredient Name	CAS
sodium phosphate, dibasic	7558- 79- 4, 10028- 24- 7

EXPOSURE STANDARD FOR MIXTURES

» "Worst Case" computer-aided prediction of spray/ mist or fume/ dust components and concentration:

» Composite Exposure Standard for Mixture (TWA) :100 mg/m³.

» Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.

A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

» The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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This is the end of the MSDS.