Phosphate Buffer pH 6.2-6.5, for Chlorine

Safety Data Sheet

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SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Product name : Phosphate Buffer pH 6.2-6.5, for Chlorine

Product code : LC18540

Synonyms : Phosphate Buffer for Chlorine / Phosphate Buffer for Chlorine Dioxide

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the substance/mixture : For laboratory and manufacturing use only.

1.3. Details of the supplier of the safety data sheet

LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (GHS-US)

Aquatic Acute 3 H402

Full text of H-phrases: see section 16

2.2. Label elements

GHS-US labeling

Hazard statements (GHS-US) : H402 - Harmful to aquatic life

Precautionary statements (GHS-US) : P273 - Avoid release to the environment
P501 - Dispose of contents/container to comply with local, state and federal regulations

2.3. Other hazards

Other hazards not contributing to the classification : None.

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification (GHS-US)
Water	(CAS No) 7732-18-5	92.918	Not classified
Potassium Phosphate, Monobasic	(CAS No) 7778-77-0	4.6	Not classified
Sodium Phosphate, Dibasic, Anhydrous	(CAS No) 7558-79-4	2.4	Eye Irrit. 2B, H320
EDTA, Disodium, Dihydrate	(CAS No) 6381-92-6	0.08	Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2A, H319 STOT SE 3, H335
Mercuric Chloride	(CAS No) 7487-94-7	0.002	Acute Tox. 1 (Oral), H300 Acute Tox. 1 (Dermal), H310 Carc. 2, H351 Repr. 2, H361 STOT RE 2, H373 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Allow victim to breathe fresh air. Allow the victim to rest.

First-aid measures after skin contact : Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

First-aid measures after eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persist.

First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Not expected to present a significant hazard under anticipated conditions of normal use.

4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.

Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

No additional information available

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Safety glasses. Gloves.

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use.

Incompatible products : Strong bases. Strong acids.

Incompatible materials : Sources of ignition. Direct sunlight.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Phosphate Buffer pH 6.2-6.5, for Chlorine	
ACGIH	Not applicable
OSHA	Not applicable

Water (7732-18-5)	
ACGIH	Not applicable
OSHA	Not applicable

Sodium Phosphate, Dibasic, Anhydrous (7558-79-4)	
ACGIH	Not applicable
OSHA	Not applicable

EDTA, Disodium, Dihydrate (6381-92-6)	
ACGIH	Not applicable
OSHA	Not applicable

Potassium Phosphate, Monobasic (7778-77-0)	
ACGIH	Not applicable
OSHA	Not applicable

Mercuric Chloride (7487-94-7)		
ACGIH	ACGIH TWA (mg/m³)	0.025 mg/m³
OSHA	OSHA PEL (TWA) (mg/m³)	0.1 mg/m³

8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Provide adequate general and local exhaust ventilation.

Personal protective equipment : Avoid all unnecessary exposure.

Hand protection : Wear protective gloves.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Wear appropriate mask.

Other information : Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Color : Colorless

Odor	:	None.
Odor threshold	:	No data available
pH	:	6.2 - 6.5
Melting point	:	No data available
Freezing point	:	No data available
Boiling point	:	No data available
Flash point	:	No data available
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability (solid, gas)	:	No data available
Explosion limits	:	No data available
Explosive properties	:	No data available
Oxidizing properties	:	No data available
Vapor pressure	:	No data available
Relative density	:	No data available
Relative vapor density at 20 °C	:	No data available
Specific gravity / density	:	1 g/ml
Solubility	:	Miscible with water. Water: Solubility in water of component(s) of the mixture : • EDTA, Disodium, Dihydrate: 11 g/100ml • Potassium Phosphate, Monobasic: 33 % • Mercuric Chloride: 6.9 g/100ml
Log Pow	:	No data available
Log Kow	:	No data available
Auto-ignition temperature	:	No data available
Decomposition temperature	:	No data available
Viscosity	:	No data available
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids. Strong bases.

10.6. Hazardous decomposition products

mercury. Phosphorus oxides. Nitrogen oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure	:	Skin and eye contact
Acute toxicity	:	Not classified

Water (7732-18-5)	
LD50 oral rat	≥ 90000 mg/kg
ATE US (oral)	90000.000 mg/kg body weight

Sodium Phosphate, Dibasic, Anhydrous (7558-79-4)	
LD50 oral rat	5950 mg/kg
LD50 dermal rabbit	≥ 7940 mg/kg
ATE US (oral)	17000.000 mg/kg body weight

EDTA, Disodium, Dihydrate (6381-92-6)	
LD50 oral rat	2000 mg/kg
ATE US (oral)	2000.000 mg/kg body weight

Potassium Phosphate, Monobasic (7778-77-0)	
LD50 dermal rabbit	4640 mg/kg
ATE US (dermal)	4640.000 mg/kg body weight

Mercuric Chloride (7487-94-7)	
LD50 oral rat	1 mg/kg (Rat)
LD50 dermal rat	41 mg/kg (Rat)
ATE US (oral)	1.000 mg/kg body weight
ATE US (dermal)	41.000 mg/kg body weight

Skin corrosion/irritation : Not classified
pH: 6.2 - 6.5

Serious eye damage/irritation : Not classified
pH: 6.2 - 6.5

Respiratory or skin sensitization : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Mercuric Chloride (7487-94-7)	
IARC group	2B - Possibly carcinogenic to humans

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Phosphate Buffer pH 6.2-6.5, for Chlorine	
LC50 fish 1	99.92 mg/l

Sodium Phosphate, Dibasic, Anhydrous (7558-79-4)	
LC50 fish 1	≥ 100 mg/l
EC50 Daphnia 1	≥ 100 mg/l

EDTA, Disodium, Dihydrate (6381-92-6)	
LC50 fish 1	>= 500 mg/l

Mercuric Chloride (7487-94-7)	
LC50 fish 1	0.03 mg/l (96 h; Poecilia reticulata)
EC50 Daphnia 1	0.0081 mg/l (24 h; Daphnia magna)
LC50 fish 2	0.04 mg/l (96 h; Cyprinus carpio)
EC50 Daphnia 2	0.003 mg/l (48 h; Daphnia magna)
TLM fish 1	0.82 mg/l (168 h; Carassius auratus)
Threshold limit algae 1	0.08 mg/l (Selenastrum capricornutum)
Threshold limit algae 2	0.07 mg/l (Scenedesmus quadricauda)

12.2. Persistence and degradability

Phosphate Buffer pH 6.2-6.5, for Chlorine	
Persistence and degradability	Not established.

Water (7732-18-5)	
Persistence and degradability	Not established.

EDTA, Disodium, Dihydrate (6381-92-6)	
Persistence and degradability	Not established.

Potassium Phosphate, Monobasic (7778-77-0)	
Persistence and degradability	Not established.

Mercuric Chloride (7487-94-7)	
Persistence and degradability	Biodegradability: not applicable. No test data on mobility of the substance available.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Phosphate Buffer pH 6.2-6.5, for Chlorine	
Bioaccumulative potential	Not established.

Water (7732-18-5)	
Bioaccumulative potential	Not established.

EDTA, Disodium, Dihydrate (6381-92-6)	
Bioaccumulative potential	Not established.

Potassium Phosphate, Monobasic (7778-77-0)	
Bioaccumulative potential	Not established.

Mercuric Chloride (7487-94-7)	
BCF fish 1	10000 (Pisces)
BCF fish 2	500 - 4620 (Cyprinus carpio; Test duration: 10 weeks)
BCF other aquatic organisms 1	10000 (Ostreidae)
Log Pow	0.1 - 0.22 (Calculated)
Bioaccumulative potential	Potential for bioaccumulation (500 ≤ BCF ≤ 5000).

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Effect on the global warming : No known ecological damage caused by this product.

Other information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials : Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated for transport

Additional information

Other information : No supplementary information available.

ADR
No additional information available

Transport by sea
No additional information available

Air transport
No additional information available

SECTION 15: Regulatory information

15.1. US Federal regulations

Water (7732-18-5)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Sodium Phosphate, Dibasic, Anhydrous (7558-79-4)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Not listed on the United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	5000 lb

EDTA, Disodium, Dihydrate (6381-92-6)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Potassium Phosphate, Monobasic (7778-77-0)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

Mercuric Chloride (7487-94-7)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory Listed on the United States SARA Section 302 Listed on United States SARA Section 313	
RQ (Reportable quantity, section 304 of EPA's List of Lists)	500 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb
SARA Section 311/312 Hazard Classes	Immediate (acute) health hazard Delayed (chronic) health hazard

15.2. International regulations

CANADA

Phosphate Buffer pH 6.2-6.5, for Chlorine	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

Water (7732-18-5)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

Sodium Phosphate, Dibasic, Anhydrous (7558-79-4)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

EDTA, Disodium, Dihydrate (6381-92-6)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Potassium Phosphate, Monobasic (7778-77-0)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Uncontrolled product according to WHMIS classification criteria

Mercuric Chloride (7487-94-7)	
Listed on the Canadian DSL (Domestic Substances List)	
WHMIS Classification	Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects Class D Division 2 Subdivision A - Very toxic material causing other toxic effects Class E - Corrosive Material

EU-Regulations
No additional information available

Classification according to Regulation (EC) No. 1272/2008 [CLP]
No additional information available

Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
Not classified

National regulations

Water (7732-18-5)
Not listed on the Canadian IDL (Ingredient Disclosure List)

Sodium Phosphate, Dibasic, Anhydrous (7558-79-4)
Not listed on the Canadian IDL (Ingredient Disclosure List)

EDTA, Disodium, Dihydrate (6381-92-6)
Not listed on the Canadian IDL (Ingredient Disclosure List)

Potassium Phosphate, Monobasic (7778-77-0)
Not listed on the Canadian IDL (Ingredient Disclosure List)

Mercuric Chloride (7487-94-7)
Listed on the Canadian IDL (Ingredient Disclosure List)

15.3. US State regulations

Mercuric Chloride (7487-94-7)				
U.S. - California - Proposition 65 - Carcinogens List	U.S. - California - Proposition 65 - Developmental Toxicity	U.S. - California - Proposition 65 - Reproductive Toxicity - Female	U.S. - California - Proposition 65 - Reproductive Toxicity - Male	No significance risk level (NSRL)
No	Yes	No	No	

SECTION 16: Other information

Revision date : 04/10/2015

Other information : None.

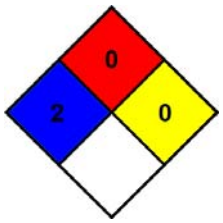
Full text of H-phrases: see section 16:

Acute Tox. 1 (Dermal)	Acute toxicity (dermal) Category 1
Acute Tox. 1 (Oral)	Acute toxicity (oral) Category 1
Acute Tox. 4 (Oral)	Acute toxicity (oral) Category 4
Aquatic Acute 1	Hazardous to the aquatic environment - Acute Hazard Category 1
Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Aquatic Chronic 1	Hazardous to the aquatic environment - Chronic Hazard Category 1
Carc. 2	Carcinogenicity Category 2
Eye Irrit. 2A	Serious eye damage/eye irritation Category 2A
Eye Irrit. 2B	Serious eye damage/eye irritation Category 2B
Repr. 2	Reproductive toxicity Category 2
Skin Irrit. 2	Skin corrosion/irritation Category 2
STOT RE 2	Specific target organ toxicity (repeated exposure) Category 2
STOT SE 3	Specific target organ toxicity (single exposure) Category 3
H300	Fatal if swallowed
H302	Harmful if swallowed
H310	Fatal in contact with skin
H315	Causes skin irritation
H319	Causes serious eye irritation
H320	Causes eye irritation
H335	May cause respiratory irritation
H351	Suspected of causing cancer
H361	Suspected of damaging fertility or the unborn child
H373	May cause damage to organs through prolonged or repeated exposure
H400	Very toxic to aquatic life
H402	Harmful to aquatic life
H410	Very toxic to aquatic life with long lasting effects

NFPA health hazard : 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

NFPA fire hazard : 0 - Materials that will not burn.

NFPA reactivity : 0 - Normally stable, even under fire exposure conditions, and are not reactive with water.



HMIS III Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 0 Minimal Hazard - Materials that will not burn

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal Protection : B

B - Safety glasses, Gloves

SDS US (GHS HazCom 2012)

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