

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

1.1. Product identifier

Product form : Mixture
Product name : Buffer Solution pH 13.00
Product code : LC12565

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

GHS-US classification

Skin Corr. 1C H314
Eye Dam. 1 H318

2.2. Label elements

GHS-US labelling

Hazard pictograms (GHS-US) :



GHS05

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H314 - Causes severe skin burns and eye damage
Precautionary statements (GHS-US) : P260 - Do not breathe mist, vapours, spray
P264 - Wash exposed skin thoroughly after handling
P280 - Wear protective gloves, eye protection
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
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
P310 - Immediately call a POISON CENTER or doctor/physician
P363 - Wash contaminated clothing before reuse
P405 - Store locked up
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)

No data available

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

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Full text of H-phrases: see section 16

3.2. Mixture

| Name | Product identifier | % | GHS-US classification |
|--------------------|--------------------|-------|---|
| Water | (CAS No) 7732-18-5 | 99.24 | Not classified |
| Potassium Chloride | (CAS No) 7447-40-7 | 0.37 | Not classified |
| Sodium Hydroxide | (CAS No) 1310-73-2 | 0.34 | Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402 |
| Thymol | (CAS No) 89-83-8 | 0.05 | Acute Tox. 4 (Oral), H302 Aquatic Acute 2, H401 |

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 : Assure fresh air breathing. Allow the victim to rest. Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.
- First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician.

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

- Symptoms/injuries : Causes severe skin burns and eye damage.
- Symptoms/injuries after eye contact : Causes serious eye damage.

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

No additional information available

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

- Reactivity : Thermal decomposition generates : Corrosive vapours.

5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter 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.

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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 vapour. Do not breathe mist, vapours, spray.
- Hygiene measures : Wash contaminated clothing before reuse. Wash exposed skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Comply with applicable regulations.
- Storage conditions : Keep container closed when not in use.
- Incompatible products : Strong oxidizers. silver nitrate. Strong acids.
- Incompatible products : incompatible materials.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| Sodium Hydroxide (1310-73-2) | | |
|------------------------------|-------------------------------------|---------------------|
| USA ACGIH | ACGIH Ceiling (mg/m ³) | 2 mg/m ³ |
| USA OSHA | OSHA PEL (TWA) (mg/m ³) | 2 mg/m ³ |

8.2. Exposure controls

- Appropriate engineering controls : Provide adequate general and local exhaust ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
- Personal protective equipment : Avoid all unnecessary exposure.
- Hand protection : Wear protective gloves.
- Eye protection : Chemical goggles or face shield.
- Skin and body protection : Wear suitable protective clothing.
- Respiratory protection : None necessary. 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
- Colour : Colourless.
- Odour : None.
- Odour threshold : No data available
- pH : 13
- Relative evaporation rate (butylacetate=1) : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Self ignition temperature : No data available
- Decomposition temperature : No data available
- Flammability (solid, gas) : No data available
- Vapour pressure : No data available
- Relative vapour density at 20 °C : No data available
- Relative density : No data available
- Density : 1 g/ml
- Solubility : Miscible with water.
- Log Pow : No data available

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| | |
|----------------------|---------------------|
| Log Kow | : No data available |
| Viscosity, kinematic | : No data available |
| Viscosity, dynamic | : No data available |
| Explosive properties | : Not applicable. |
| Oxidising properties | : None. |
| Explosive limits | : No data available |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Not established.

10.4. Conditions to avoid

Incompatible materials. Extremely high or low temperatures.

10.5. Incompatible materials

silver nitrate. Strong oxidizers. Strong acids.

10.6. Hazardous decomposition products

Phosphine. Phosphorus oxides. Phosgene. Thermal decomposition generates : Corrosive vapours. Carbon dioxide. Carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

| Water (7732-18-5) | |
|--------------------------------|--|
| LD50 oral rat | ≥ 90000 mg/kg |
| Sodium Hydroxide (1310-73-2) | |
| LD50 dermal rabbit | 1350 mg/kg (Rabbit; Literature,Rabbit; Literature) |
| Potassium Chloride (7447-40-7) | |
| LD50 oral rat | 2600 mg/kg |
| Thymol (89-83-8) | |
| LD50 oral rat | 980 mg/kg (Rat) |

| | |
|---|---|
| Skin corrosion/irritation | : Causes severe skin burns and eye damage. pH: 13 |
| Serious eye damage/irritation | : Causes serious eye damage. pH: 13 |
| Respiratory or skin sensitisation | : Not classified |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| 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. |
| Symptoms/injuries after eye contact | : Causes serious eye damage. |

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SECTION 12: Ecological information

12.1. Toxicity

| Sodium Hydroxide (1310-73-2) | |
|-------------------------------------|---|
| LC50 fishes 1 | 45.4 mg/l (96 h; Salmo gairdneri (Oncorhynchus mykiss); Solution >=50%) |
| EC50 Daphnia 1 | 40.4 mg/l (48 h; Ceriodaphnia sp.; Nominal concentration) |
| LC50 fish 2 | 189 mg/l (48 h; Leuciscus idus) |
| TLM fish 1 | 99 mg/l (48 h; Lepomis macrochirus) |
| TLM fish 2 | 125 ppm (96 h; Gambusia affinis) |

| Potassium Chloride (7447-40-7) | |
|---------------------------------------|----------|
| EC50 Daphnia 1 | 825 mg/l |

| Thymol (89-83-8) | |
|-------------------------|--------------------------------------|
| LC50 fishes 1 | 3.2 mg/l (96 h; Pimephales promelas) |
| EC50 Daphnia 1 | 3.2 mg/l (96 h; Gammarus sp.) |
| LC50 fish 2 | 5 mg/l (96 h; Brachydanio rerio) |
| EC50 Daphnia 2 | 3.2 mg/l (96 h; Daphnia magna) |
| Threshold limit algae 1 | 2.3 mg/l (96 h; Chlorophyta) |

12.2. Persistence and degradability

| Buffer Solution pH 13.00 | |
|---------------------------------|------------------|
| Persistence and degradability | Not established. |

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

| Sodium Hydroxide (1310-73-2) | |
|-------------------------------------|--|
| 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 |

| Potassium Chloride (7447-40-7) | |
|---------------------------------------|------------------|
| Persistence and degradability | Not established. |

| Thymol (89-83-8) | |
|-------------------------------|------------------------------------|
| Persistence and degradability | Readily biodegradable in water. |
| Chemical oxygen demand (COD) | 2.69 g O ² /g substance |
| ThOD | 2.76 g O ² /g substance |

12.3. Bioaccumulative potential

| Buffer Solution pH 13.00 | |
|---------------------------------|------------------|
| Bioaccumulative potential | Not established. |

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

| Sodium Hydroxide (1310-73-2) | |
|-------------------------------------|----------------------------------|
| Bioaccumulative potential | Bioaccumulation: not applicable. |

| Potassium Chloride (7447-40-7) | |
|---------------------------------------|------------------|
| Bioaccumulative potential | Not established. |

| Thymol (89-83-8) | |
|-------------------------|-----------|
| Log Pow | 3.3 - 3.4 |

12.4. Mobility in soil

No additional information available

12.5. Other adverse effects

Other information : Avoid release to the environment.

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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

In accordance with DOT
No dangerous good in sense of transport regulations

Additional information

Other information : No supplementary information available.

ADR

Transport document description :

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 Hydroxide (1310-73-2)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

RQ (Reportable quantity, section 304 of EPA's List of Lists) : 1000 lb

SARA Section 311/312 Hazard Classes : Immediate (acute) health hazard

Potassium Chloride (7447-40-7)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

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WHMIS Classification : Class D Division 2 Subdivision B - Toxic material causing other toxic effects

Water (7732-18-5)

WHMIS Classification : Uncontrolled product according to WHMIS classification criteria

Sodium Hydroxide (1310-73-2)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification : Class E - Corrosive Material

Potassium Chloride (7447-40-7)

Listed on the Canadian DSL (Domestic Substances List) inventory.

WHMIS Classification : Uncontrolled product according to WHMIS classification criteria

EU-Regulations

No additional information available

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

Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

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15.2.2. National regulations

Sodium Hydroxide (1310-73-2)

Listed on the Canadian Ingredient Disclosure List

Potassium Chloride (7447-40-7)

Not listed on the Canadian Ingredient Disclosure List

15.3. US State regulations

No additional information available

SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

| | |
|-----------------------|--|
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal), Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Acute 2 | Hazardous to the aquatic environment — AcuteHazard, Category 2 |
| Aquatic Acute 3 | Hazardous to the aquatic environment — AcuteHazard, Category 3 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Skin Corr. 1A | Skin corrosion/irritation, Category 1A |
| Skin Corr. 1C | Skin corrosion/irritation, Category 1C |
| H302 | Harmful if swallowed |
| H312 | Harmful in contact with skin |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |
| H401 | Toxic to aquatic life |
| H402 | Harmful to aquatic life |

NFPA health hazard

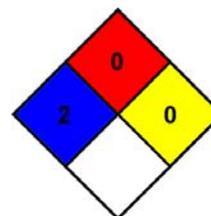
: 2 - Intense or continued exposure could cause temporary incapacitation or possible residual injury unless prompt medical attention is given.

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

Physical : 0 Minimal Hazard

Personal Protection : B

SDS US (GHS HazCom 2012)

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