# Buffer Solution pH 3.00

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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## SECTION 1: Identification

### 1.1. Identification

Product form : Mixture

Product name : Buffer Solution pH 3.00

Product code : LC12250

### 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.

Recommended use : Laboratory chemicals

Restrictions on use : Not for food, drug or household use

### 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: Hazard(s) identification

### 2.1. Classification of the substance or mixture

**GHS-US classification**

Not classified

### 2.2. Label elements

Not classified as a hazardous chemical.

### 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 | % | GHS-US classification |
|---|---|---|---|
| Water | (CAS No) 7732-18-5 | 98.79 | Not classified |
| Potassium Hydrogen Phthalate | (CAS No) 877-24-7 | 1.02 | Eye Irrit. 2B, H320 |
| Hydrochloric Acid, 37% w/w | (CAS No) 7647-01-0 | 0.15 | Acute Tox. 4 (Oral), H302<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318<br>STOT SE 3, H335<br>Aquatic Acute 3, H402 |
| Formaldehyde, 37% w/w | (CAS No) 50-00-0 | 0.04 | Flam. Liq. 3, H226<br>Acute Tox. 4 (Oral), H302<br>Acute Tox. 4 (Dermal), H312<br>Acute Tox. 2 (Inhalation:vapour), H330<br>Skin Corr. 1C, H314<br>Eye Dam. 1, H318<br>Carc. 1A, H350<br>STOT SE 1, H370<br>Aquatic Acute 2, H401 |

Full text of hazard classes and H-statements : 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

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 : None.

### 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.

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.

Hygiene measures : Do not eat, drink or smoke when using this product.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container closed when not in use.

Incompatible products : Strong oxidizers.

Incompatible materials : None known.

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| Hydrochloric Acid, 37% w/w (7647-01-0) | | |
|---|---|---|
| ACGIH | ACGIH Ceiling (mg/m³) | 2.98 mg/m³ |
| ACGIH | ACGIH Ceiling (ppm) | 2 ppm |
| OSHA | OSHA PEL (Ceiling) (mg/m³) | 7 mg/m³ |
| OSHA | OSHA PEL (Ceiling) (ppm) | 5 ppm |
| IDLH | US IDLH (ppm) | 50 ppm |
| NIOSH | NIOSH REL (ceiling) (mg/m³) | 7 mg/m³ |
| NIOSH | NIOSH REL (ceiling) (ppm) | 5 ppm |

| Potassium Hydrogen Phthalate (877-24-7) |
|---|
| Not applicable |

| Formaldehyde, 37% w/w (50-00-0) | | |
|---|---|---|
| ACGIH | ACGIH Ceiling (mg/m³) | 0.37 mg/m³ |
| OSHA | OSHA PEL (TWA) (ppm) | 0.75 ppm |
| OSHA | OSHA PEL (STEL) (ppm) | 2 ppm |
| IDLH | US IDLH (ppm) | 20 ppm |
| NIOSH | NIOSH REL (TWA) (ppm) | 0.016 ppm |
| NIOSH | NIOSH REL (ceiling) (ppm) | 0.1 ppm 15 min. |

| Water (7732-18-5) |
|---|
| Not applicable |

### 8.2. Exposure controls

Appropriate engineering controls : Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

Personal protective equipment : Safety glasses.

Eye protection : Chemical goggles or safety glasses.

Respiratory protection : Respiratory protection not required in normal conditions.

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 : Odorless

Odor threshold : No data available

pH : 3

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) : Non flammable.

Vapor pressure : No data available

| | | |
|---|---|---|
| Relative vapor density at 20 °C | : | No data available |
| Relative density | : | No data available |
| Specific gravity / density | : | 1 |
| Solubility | : | Soluble in water. |
| Log Pow | : | No data available |
| Auto-ignition temperature | : | No data available |
| Decomposition temperature | : | No data available |
| Viscosity, kinematic | : | No data available |
| Viscosity, dynamic | : | No data available |
| Explosion limits | : | No data available |
| Explosive properties | : | Not applicable. |
| Oxidizing properties | : | None. |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

None.

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

None.

### 10.4. Conditions to avoid

Extremely high or low temperatures.

### 10.5. Incompatible materials

Strong oxidizers.

### 10.6. Hazardous decomposition products

Formaldehyde. Carbon monoxide. Carbon dioxide.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

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

| **Hydrochloric Acid, 37% w/w (7647-01-0)** | |
|---|---|
| LD50 oral rat | 700 mg/kg |
| LD50 dermal rabbit | 5010 mg/kg |
| ATE US (oral) | 700.000 mg/kg body weight |
| ATE US (dermal) | 5010.000 mg/kg body weight |

| **Potassium Hydrogen Phthalate (877-24-7)** | |
|---|---|
| LD50 oral rat | ≥ 3200 mg/kg |
| ATE US (oral) | 3200.000 mg/kg body weight |

| **Formaldehyde, 37% w/w (50-00-0)** | |
|---|---|
| LD50 oral rat | 500 mg/kg |
| ATE US (oral) | 500.000 mg/kg body weight |
| ATE US (dermal) | 2000.000 mg/kg body weight |
| ATE US (vapors) | 0.578 mg/l/4h |

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

| | | |
|---|---|---|
| Skin corrosion/irritation | : | Not classified<br>pH: 3 |
| Serious eye damage/irritation | : | Not classified<br>pH: 3 |
| Respiratory or skin sensitization | : | Not classified |
| Germ cell mutagenicity | : | Not classified |
| Carcinogenicity | : | Not classified |

| **Hydrochloric Acid, 37% w/w (7647-01-0)** | |
|---|---|
| IARC group | 3 - Not classifiable |

| **Formaldehyde, 37% w/w (50-00-0)** | |
|---|---|
| IARC group | 1 - 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

| **Hydrochloric Acid, 37% w/w (7647-01-0)** | |
|---|---|
| LC50 fish 1 | 282 mg/l (LC50; 96 h) |
| EC50 Daphnia 1 | < 56 mg/l (EC50; 72 h) |

| **Formaldehyde, 37% w/w (50-00-0)** | |
|---|---|
| LC50 fish 1 | 41 mg/l (LC50; 96 h) |
| EC50 Daphnia 1 | 14.7 mg/l (EC50; 24 h) |
| EC50 Daphnia 2 | 2 mg/l |
| Threshold limit algae 1 | 2.5 mg/l (EC0; 192 h) |

### 12.2. Persistence and degradability

| **Buffer Solution pH 3.00** | |
|---|---|
| Persistence and degradability | Not established. |

| **Hydrochloric Acid, 37% w/w (7647-01-0)** | |
|---|---|
| Persistence and degradability | Biodegradability: not applicable. No test data on mobility of the components available. |
| Biochemical oxygen demand (BOD) | Not applicable |
| Chemical oxygen demand (COD) | Not applicable |
| ThOD | Not applicable |

| **Potassium Hydrogen Phthalate (877-24-7)** | |
|---|---|
| Persistence and degradability | Not established. |

| **Formaldehyde, 37% w/w (50-00-0)** | |
|---|---|
| Persistence and degradability | Readily biodegradable in water. Biodegradability in soil: no data available. No test data on mobility of the components available. Photodegradation in the air. |
| Biochemical oxygen demand (BOD) | 0.64 g $O_2$/g substance |
| Chemical oxygen demand (COD) | 1.06 g $O_2$/g substance |
| ThOD | 1.068 g $O_2$/g substance |
| BOD (% of ThOD) | 0.6 (5 days; Literature study) |

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

### 12.3. Bioaccumulative potential

| Buffer Solution pH 3.00 | |
|---|---|
| Bioaccumulative potential | Not established. |

| Hydrochloric Acid, 37% w/w (7647-01-0) | |
|---|---|
| Log Pow | 0.25 (QSAR) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

| Potassium Hydrogen Phthalate (877-24-7) | |
|---|---|
| Bioaccumulative potential | Not established. |

| Formaldehyde, 37% w/w (50-00-0) | |
|---|---|
| Log Pow | -0.78 - 0.0 |
| Bioaccumulative potential | Bioaccumulation: not applicable. |

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

### 12.4. Mobility in soil

| Hydrochloric Acid, 37% w/w (7647-01-0) | |
|---|---|
| Ecology - soil | May be harmful to plant growth, blooming and fruit formation. |

| Formaldehyde, 37% w/w (50-00-0) | |
|---|---|
| Ecology - soil | Toxic to flora. |

### 12.5. Other adverse effects

Effect on the global warming : No known effects from this product.

GWPmix comment : No known effects from 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

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

| | | |
|---|---|---|
| Hydrochloric Acid, 37% w/w | CAS No 7647-01-0 | 0.15% |

| Hydrochloric Acid, 37% w/w (7647-01-0) | |
|---|---|
| EPA TSCA Regulatory Flag | T - T - indicates a substance that is the subject of a Section 4 test rule under TSCA. |
| RQ (Reportable quantity, section 304 of EPA's List of Lists) | 5000 lb |
| SARA Section 302 Threshold Planning Quantity (TPQ) | 500 lb |
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard |

| Formaldehyde, 37% w/w (50-00-0) | |
|---|---|
| RQ (Reportable quantity, section 304 of EPA's List of Lists) | 100 lb |
| SARA Section 311/312 Hazard Classes | Immediate (acute) health hazard<br>Delayed (chronic) health hazard |
| SARA Section 313 - Emission Reporting | 0.1 % |

### 15.2. International regulations

**CANADA**

| Buffer Solution pH 3.00 | |
|---|---|
| WHMIS Classification | Uncontrolled product according to WHMIS classification criteria |

| Hydrochloric Acid, 37% w/w (7647-01-0) | |
|---|---|
| WHMIS Classification | Class E - Corrosive Material |

| Potassium Hydrogen Phthalate (877-24-7) | |
|---|---|
| WHMIS Classification | Class D Division 2 Subdivision B - Toxic material causing other toxic effects |

| Formaldehyde, 37% w/w (50-00-0) | |
|---|---|
| Listed on the Canadian DSL (Domestic Substances List) | |
| WHMIS Classification | Class B Division 3 - Combustible Liquid<br>Class D Division 1 Subdivision A - Very toxic material causing immediate and serious toxic effects<br>Class D Division 2 Subdivision A - Very toxic material causing other toxic effects<br>Class D Division 2 Subdivision B - Toxic material causing other toxic effects<br>Class E - Corrosive Material |

| Water (7732-18-5) | |
|---|---|
| WHMIS Classification | Uncontrolled product according to WHMIS classification criteria |

**EU-Regulations**

No additional information available

**National regulations**

| Formaldehyde, 37% w/w (50-00-0) |
|---|
| Listed on the Canadian IDL (Ingredient Disclosure List) |

### 15.3. US State regulations

California Proposition 65 - This product contains, or may contain, trace quantities of a substance(s) known to the state of California to cause cancer, developmental and/or reproductive harm

| Formaldehyde, 37% w/w (50-00-0) | | | | |
|---|---|---|---|---|
| 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 | Non-significant risk level (NSRL) |
| Yes | Yes | No | No | 40 µg/day |

## SECTION 16: Other information

Revision date : 12/20/2016

Other information : None.

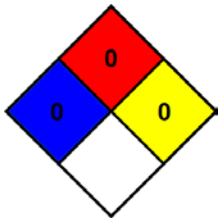
Full text of H-phrases: see section 16:

| | |
|---|---|
| H226 | Flammable liquid and vapor |
| H302 | Harmful if swallowed |
| H312 | Harmful in contact with skin |
| H314 | Causes severe skin burns and eye damage |
| H318 | Causes serious eye damage |
| H320 | Causes eye irritation |
| H330 | Fatal if inhaled |
| H335 | May cause respiratory irritation |
| H350 | May cause cancer |
| H370 | Causes damage to organs |
| H401 | Toxic to aquatic life |
| H402 | Harmful to aquatic life |

NFPA health hazard : 0 - Exposure under fire conditions would offer no hazard beyond that of ordinary combustible materials.

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 : 0 Minimal Hazard - No significant risk to health

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 : A

A - Safety glasses

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