

# Material Safety Data Sheet

## Buffer Solution pH 3.00

ACC# 41119

### Section 1 - Chemical Product and Company Identification

**MSDS Name:** Buffer Solution pH 3.00

**Catalog Numbers:** S799282, SB97-20, SB97-500

**Synonyms:** None.

**Company Identification:**

Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410

**For information, call:** 201-796-7100

**Emergency Number:** 201-796-7100

**For CHEMTREC assistance, call:** 800-424-9300

**For International CHEMTREC assistance, call:** 703-527-3887

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7732-18-5	Water	98.86	231-791-2
877-24-7	Potassium hydrogen phthalate	1.0	212-889-4
7647-01-0	Hydrogen chloride	0.07	231-595-7
50-00-0	Formaldehyde	0.05	200-001-8
67-56-1	Methyl alcohol	0.02	200-659-6

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

Appearance: clear, colorless liquid.

**Warning!** Causes eye, skin, and respiratory tract irritation.

**Target Organs:** Eyes, skin, mucous membranes.

#### Potential Health Effects

**Eye:** Causes eye irritation.

**Skin:** Causes skin irritation. May cause skin sensitization, an allergic reaction, which

becomes evident upon re-exposure to this material.

**Ingestion:** May cause irritation of the digestive tract.

**Inhalation:** May cause allergic respiratory reaction. May cause respiratory tract irritation.

**Chronic:** May cause cancer according to animal studies.

## Section 4 - First Aid Measures

**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

**Skin:** Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.

**Ingestion:** Get medical aid. Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water.

**Inhalation:** Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

**Notes to Physician:** Treat symptomatically and supportively.

## Section 5 - Fire Fighting Measures

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use extinguishing media appropriate to the surrounding fire. Substance is nonflammable.

**Extinguishing Media:** Use water fog, dry chemical, carbon dioxide, or regular foam.

**Flash Point:** Not applicable.

**Autoignition Temperature:** Not applicable.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 1; Flammability: 0; Instability: 0

## Section 6 - Accidental Release Measures

**General Information:** Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:** Absorb the liquid and scrub the area with detergent and water. Pick up wash liquid with additional absorbent and place into a suitable disposable container.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Keep container tightly closed. Avoid ingestion and inhalation.

**Storage:** Store in a tightly closed container. No special precautions indicated.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Good general ventilation should be sufficient to control airborne levels.

### Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Water	none listed	none listed	none listed
Potassium hydrogen phthalate	none listed	none listed	none listed
Hydrogen chloride	2 ppm Ceiling	50 ppm IDLH	5 ppm Ceiling; 7 mg/m <sup>3</sup> Ceiling
Formaldehyde	0.3 ppm Ceiling	0.016 ppm TWA 20 ppm IDLH	0.75 ppm TWA; 0.5 ppm Action Level; 0.75 ppm TWA; 2 ppm STEL (Irritant and potential cancer hazard - see 29 CFR 1910.1048)
Methyl alcohol	200 ppm TWA; 250 ppm STEL; Skin - potential significant contribution to overall exposure by the cutaneous route	200 ppm TWA; 260 mg/m <sup>3</sup> TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m <sup>3</sup> TWA

**OSHA Vacated PELs:** Water: No OSHA Vacated PELs are listed for this chemical.

Potassium hydrogen phthalate: No OSHA Vacated PELs are listed for this chemical.

Hydrogen chloride: No OSHA Vacated PELs are listed for this chemical.

Formaldehyde: 3 ppm TWA (unless specified in 1910.1048) Methyl alcohol: 200 ppm TWA; 260 mg/m<sup>3</sup> TWA

### Personal Protective Equipment

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:** Wear appropriate gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective gloves to prevent skin exposure.

**Respirators:** A respiratory protection program that meets OSHA's 29 CFR 1910.134

and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

## Section 9 - Physical and Chemical Properties

**Physical State:** Liquid  
**Appearance:** clear, colorless  
**Odor:** none reported  
**pH:** 3.00  
**Vapor Pressure:** Not available.  
**Vapor Density:** Not available.  
**Evaporation Rate:**Not available.  
**Viscosity:** Not available.  
**Boiling Point:** 100 deg C  
**Freezing/Melting Point:**0 deg C  
**Decomposition Temperature:**Not available.  
**Solubility:** Soluble in water  
**Specific Gravity/Density:**0.7  
**Molecular Formula:**Mixture  
**Molecular Weight:**Not available.

## Section 10 - Stability and Reactivity

**Chemical Stability:** Stable under normal temperatures and pressures.  
**Conditions to Avoid:** None reported.  
**Incompatibilities with Other Materials:** None reported..  
**Hazardous Decomposition Products:** None.  
**Hazardous Polymerization:** Has not been reported.

## Section 11 - Toxicological Information

**RTECS#:**  
**CAS#** 7732-18-5: ZC0110000  
**CAS#** 877-24-7: CZ4326000  
**CAS#** 7647-01-0: MW4025000; MW4031000  
**CAS#** 50-00-0: LP8925000  
**CAS#** 67-56-1: PC1400000  
**LD50/LC50:**  
CAS# 7732-18-5:  
Oral, rat: LD50 = >90 mL/kg;

CAS# 877-24-7:

Dermal, guinea pig: LD50 = >1 gm/kg;  
Oral, rat: LD50 = >3200 mg/kg;

CAS# 7647-01-0:

Inhalation, mouse: LC50 = 1108 ppm/1H;  
Inhalation, mouse: LC50 = 20487 mg/m<sup>3</sup>/5M;  
Inhalation, mouse: LC50 = 3940 mg/m<sup>3</sup>/30M;  
Inhalation, mouse: LC50 = 8300 mg/m<sup>3</sup>/30M;  
Inhalation, rat: LC50 = 3124 ppm/1H;  
Inhalation, rat: LC50 = 60938 mg/m<sup>3</sup>/5M;  
Inhalation, rat: LC50 = 7004 mg/m<sup>3</sup>/30M;  
Inhalation, rat: LC50 = 45000 mg/m<sup>3</sup>/5M;  
Inhalation, rat: LC50 = 8300 mg/m<sup>3</sup>/30M;  
Oral, rabbit: LD50 = 900 mg/kg;

CAS# 50-00-0:

Draize test, rabbit, eye: 750 ug/24H Severe;  
Draize test, rabbit, eye: 750 ug Severe;  
Draize test, rabbit, eye: 10 mg Severe;  
Draize test, rabbit, eye: 37% Severe;  
Draize test, rabbit, skin: 2 mg/24H Severe;  
Draize test, rabbit, skin: 50 mg/24H Moderate;  
Inhalation, mouse: LC50 = 454 mg/m<sup>3</sup>/4H;  
Inhalation, mouse: LC50 = 505 mg/m<sup>3</sup>/2H;  
Inhalation, rat: LC50 = 203 mg/m<sup>3</sup>;  
Inhalation, rat: LC50 = 578 mg/m<sup>3</sup>/2H;  
Inhalation, rat: LC50 = 250 ppm/2H;  
Oral, mouse: LD50 = 42

CAS# 67-56-1:

Draize test, rabbit, eye: 40 mg Moderate;  
Draize test, rabbit, eye: 100 mg/24H Moderate;  
Draize test, rabbit, skin: 20 mg/24H Moderate;  
Inhalation, rabbit: LC50 = 81000 mg/m<sup>3</sup>/14H;  
Inhalation, rat: LC50 = 64000 ppm/4H;  
Oral, mouse: LD50 = 7300 mg/kg;  
Oral, rabbit: LD50 = 14200 mg/kg;  
Oral, rat: LD50 = 5600 mg/kg;  
Skin, rabbit: LD50 = 15800 mg/kg;

### **Carcinogenicity:**

CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 877-24-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 7647-01-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 50-00-0:

- **ACGIH:** A2 - Suspected Human Carcinogen
- **California:** carcinogen, initial date 1/1/88 (gas)
- **NTP:** Suspect carcinogen

- **IARC:** Group 1 carcinogen

CAS# 67-56-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

**Epidemiology:** No data available.

**Teratogenicity:** No data available.

**Reproductive Effects:** No data available.

**Mutagenicity:** No data available.

**Neurotoxicity:** No data available.

**Other Studies:**

## Section 12 - Ecological Information

No information available.

## Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

**RCRA P-Series:** None listed.

**RCRA U-Series:**

CAS# 50-00-0: waste number U122.

CAS# 67-56-1: waste number U154 (Ignitable waste).

## Section 14 - Transport Information

	US DOT	Canada TDG
<b>Shipping Name:</b>	Not regulated as a hazardous material	No information available.
<b>Hazard Class:</b>		
<b>UN Number:</b>		
<b>Packing Group:</b>		

## Section 15 - Regulatory Information

## **US FEDERAL**

### **TSCA**

CAS# 7732-18-5 is listed on the TSCA inventory.

CAS# 877-24-7 is listed on the TSCA inventory.

CAS# 7647-01-0 is listed on the TSCA inventory.

CAS# 50-00-0 is listed on the TSCA inventory.

CAS# 67-56-1 is listed on the TSCA inventory.

### **Health & Safety Reporting List**

None of the chemicals are on the Health & Safety Reporting List.

### **Chemical Test Rules**

None of the chemicals in this product are under a Chemical Test Rule.

### **Section 12b**

None of the chemicals are listed under TSCA Section 12b.

### **TSCA Significant New Use Rule**

None of the chemicals in this material have a SNUR under TSCA.

### **CERCLA Hazardous Substances and corresponding RQs**

CAS# 7647-01-0: 5000 lb final RQ; 2270 kg final RQ    CAS# 50-00-0: 100 lb final RQ; 45.4 kg final RQ    CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

### **SARA Section 302 Extremely Hazardous Substances**

CAS# 7647-01-0: 500 lb TPQ (gas only)    CAS# 50-00-0: 500 lb TPQ

### **SARA Codes**

CAS # 877-24-7: immediate.

CAS # 7647-01-0: immediate.

CAS # 50-00-0: immediate, delayed.

CAS # 67-56-1: immediate, fire.

### **Section 313**

Hydrogen chloride is not at a high enough concentration to be reportable under Section 313.

Formaldehyde is not at a high enough concentration to be reportable under Section 313.

Methyl alcohol is not at a high enough concentration to be reportable under Section 313.    No chemicals are reportable under Section 313.

### **Clean Air Act:**

CAS# 7647-01-0 is listed as a hazardous air pollutant (HAP).

CAS# 50-00-0 is listed as a hazardous air pollutant (HAP).

CAS# 67-56-1 is listed as a hazardous air pollutant (HAP).

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

### **Clean Water Act:**

CAS# 7647-01-0 is listed as a Hazardous Substance under the CWA. CAS# 50-00-0 is listed as a Hazardous Substance under the CWA.

None of the chemicals in this product are listed as Priority Pollutants under the CWA.

None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

### **OSHA:**

CAS# 7647-01-0 is considered highly hazardous by OSHA.    CAS# 50-00-0 is considered highly hazardous by OSHA.

### **STATE**

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 877-24-7 is not present on state lists from CA, PA, MN, MA, FL, or NJ.  
CAS# 7647-01-0 can be found on the following state right to know lists:  
California, New Jersey, Pennsylvania, Minnesota, Massachusetts.  
CAS# 50-00-0 can be found on the following state right to know lists: California,  
New Jersey, Pennsylvania, Minnesota, Massachusetts.  
CAS# 67-56-1 can be found on the following state right to know lists: California,  
New Jersey, Pennsylvania, Minnesota, Massachusetts.

### **California Prop 65**

WARNING: This product contains Formaldehyde, a chemical known to the state of California to cause cancer.  
California No Significant Risk Level: CAS# 50-00-0: 40 æg/day NSRL

## **European/International Regulations**

### **European Labeling in Accordance with EC Directives**

#### **Hazard Symbols:**

XI

#### **Risk Phrases:**

R 36/37/38 Irritating to eyes, respiratory system and skin.

#### **Safety Phrases:**

S 24/25 Avoid contact with skin and eyes.

### **WGK (Water Danger/Protection)**

CAS# 7732-18-5: No information available.

CAS# 877-24-7: No information available.

CAS# 7647-01-0: 1

CAS# 50-00-0: 2

CAS# 67-56-1: 1

### **Canada - DSL/NDSL**

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 877-24-7 is listed on Canada's DSL List.

CAS# 7647-01-0 is listed on Canada's DSL List.

CAS# 50-00-0 is listed on Canada's DSL List.

CAS# 67-56-1 is listed on Canada's DSL List.

### **Canada - WHMIS**

This product has a WHMIS classification of D2B.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

### **Canadian Ingredient Disclosure List**

CAS# 7647-01-0 is listed on the Canadian Ingredient Disclosure List.

CAS# 50-00-0 is listed on the Canadian Ingredient Disclosure List.

CAS# 67-56-1 is listed on the Canadian Ingredient Disclosure List.

## Section 16 - Additional Information

**MSDS Creation Date:** 9/02/1997

**Revision #5 Date:** 11/07/2007

*The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.*