

Material Safety Data Sheet
Buffer Solution pH 4.0 (Color-Coded Red)

ACC# 41128

Section 1 - Chemical Product and Company Identification

MSDS Name: Buffer Solution pH 4.0 (Color-Coded Red)
Catalog Numbers: NC9200576, SB101-1, SB101-20, SB101-4, SB101-500
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	98.91	231-791-2
877-24-7	Potassium hydrogen phthalate	1.0	212-889-4
50-00-0	Formaldehyde	0.05	200-001-8
67-56-1	Methyl alcohol	0.02	200-659-6
16423-68-0	Red #3	0.02	240-474-8

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: clear red liquid.
Caution! May cause irritation. This is expected to be a low hazard for usual industrial handling.
Target Organs: No data found.

Potential Health Effects
Eye: May cause eye irritation.
Skin: May cause mild skin irritation. May cause skin sensitization, an allergic reaction, which becomes evident upon re-exposure to this material. Low hazard for usual industrial handling.
Ingestion: Low hazard for usual industrial handling. May cause gastric disturbances and electrolytic imbalance.
Inhalation: May cause allergic respiratory reaction. May cause respiratory tract irritation. Low hazard for usual industrial handling.
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: Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Wash mouth out with water. Get medical aid if irritation or symptoms occur.
Inhalation: Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. Get medical aid if cough or other symptoms appear.
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. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Containers may explode when heated.
Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire. For small fires, use dry chemical, carbon dioxide, water spray or regular foam. Cool containers with flooding quantities of water until well after fire is out.
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 spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Provide ventilation.

Section 7 - Handling and Storage

Handling: Provide ventilation. Avoid contact with eyes. Keep container tightly closed. Use with adequate ventilation.
Storage: Store in a cool, dry place. No special precautions indicated.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Water	none listed	none listed	none listed
Potassium hydrogen phthalate	none listed	none listed	none listed
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 ha zard - see 29 CFR 1910.1048)
Methyl alcohol	200 ppm TWA; 250 ppm STEL; Skin - potential significant contribution to overall exposure by the cutaneous r oute	200 ppm TWA; 260 mg/m3 TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m3 TWA
Red #3	none listed	none listed	none listed

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. Formaldehyde: 3 ppm TWA (unless specified in 1910.1048) Methyl alcohol: 200 ppm TWA; 260 mg/m3 TWA Red #3: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment
Eyes: Wear chemical splash goggles.
Skin: Wear butyl rubber gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to minimize contact with skin.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Section 9 - Physical and Chemical Properties

Physical State: Liquid
Appearance: clear red
Odor: odorless
pH: 4.0
Vapor Pressure: Not available.
Vapor Density: 0.7 (Water)
Evaporation Rate:>1.0 (Ether=1)
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:1.0
Molecular Formula:Mixture
Molecular Weight:Not available

Section 10 - Stability and Reactivity

Chemical Stability: Stable.
Conditions to Avoid: Excess heat.
Incompatibilities with Other Materials: None reported.
Hazardous Decomposition Products: Irritating and toxic fumes and gases.
Hazardous Polymerization: Has not been reported

Section 11 - Toxicological Information

RTECS#:
CAS# 7732-18-5: ZC0110000
CAS# 877-24-7: CZ4326000
CAS# 50-00-0: LP8925000
CAS# 67-56-1: PC1400000
CAS# 16423-68-0: LM5950000
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# 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/m3/4H;
Inhalation, mouse: LC50 = 505 mg/m3/2H;
Inhalation, rat: LC50 = 203 mg/m3;
Inhalation, rat: LC50 = 578 mg/m3/2H;
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/m3/14H;
Inhalation, rat: LC50 = 64000 ppm/4H;
Oral, mouse: LD50 = 7300 mg/kg;
Oral, rabbit: LD50 = 34200 mg/kg;
Oral, rat: LD50 = 5600 mg/kg;
Skin, rabbit: LD50 = 15800 mg/kg;
CAS# 16423-68-0:
Oral, mouse: LD50 = 1264 mg/kg;
Oral, rat: LD50 = 1840 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# 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.
CAS# 16423-68-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Mutagenicity: No information available.
Neurotoxicity: No information 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.
CAS# 50-00-0: waste number U122.
CAS# 67-56-1: waste number U154 (Ignitable waste).

Section 14 - Transport Information

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

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# 50-00-0 is listed on the TSCA inventory.
CAS# 67-56-1 is listed on the TSCA inventory.
CAS# 16423-68-0 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# 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# 50-00-0: 500 lb TPQ
SARA Codes
CAS # 877-24-7: immediate.
CAS # 50-00-0: immediate, delayed.
CAS # 67-56-1: immediate, fire.
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# 50-00-0 is listed as a hazardous air pollutant (HAP).
CAS# 67-56-1 is listed as a hazardous air pollutant (HAP).
Ozone Depletors:
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.
Clean Water Act:
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# 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# 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.
CAS# 16423-68-0 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
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:
Not available.
Risk Phrases:

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# 50-00-0: 2
CAS# 67-56-1: 1
CAS# 16423-68-0: 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# 50-00-0 is listed on Canada's DSL List.
CAS# 67-56-1 is listed on Canada's DSL List.
CAS# 16423-68-0 is listed on Canada's DSL List.

Canada - WHMIS
This product has a WHMIS classification of Not controlled..
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# 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: 10/16/1998
Revision # 10 Dated: 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.