



Material Safety Data Sheet

Buffer Solution pH 4.63

MSDS# 41134

Section 1 - Chemical Product and Company Identification

MSDS Name: Buffer Solution pH 4.63
Catalog Numbers: SB100-1
Synonyms: None

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100
Emergency Number US: 201-796-7100
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

Risk Phrases: 43
CAS#: 50-00-0
Chemical Name: Formaldehyde
%: 0.05
EINECS#: 200-001-8
Hazard Symbols: XI

Risk Phrases:
CAS#: 64-19-7
Chemical Name: Acetic acid
%: 0.40
EINECS#: 200-580-7
Hazard Symbols:

Risk Phrases: 11 23/24/25 39/23/24/25
CAS#: 67-56-1
Chemical Name: Methyl alcohol
%: 0.02
EINECS#: 200-659-6
Hazard Symbols: F T

Risk Phrases:
CAS#: 6131-90-4
Chemical Name: Sodium acetate, trihydrate
%: 0.8
EINECS#: unlisted
Hazard Symbols:

Risk Phrases:

CAS#: 7732-18-5
Chemical Name: Water
%: 99.0
EINECS#: 231-791-2
Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: None listed
Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! May cause eye, skin, and respiratory tract irritation. Target Organs: None.

Potential Health Effects

Eye: May cause eye irritation.
Skin: May cause skin irritation.
Ingestion: May cause irritation of the digestive tract.
Inhalation: May cause respiratory tract irritation.
Chronic: Contains formaldehyde which can cause cancer in humans. There is sufficient evidence that formaldehyde causes nasopharyngeal cancer in humans, a rare cancer in developed countries.

Section 4 - First Aid Measures

Eyes: Get medical aid. Gently lift eyelids and flush continuously with water.
Skin: Get medical aid if irritation develops or persists. Flush skin with plenty of soap and water.
Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Get medical aid.
Inhalation: Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration.

Notes to
Physician:

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.
Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.
Autoignition Temperature: Not applicable.
Flash Point: Not applicable.
Explosion Limits: Not available
Lower:
Explosion Limits: Not available
Upper:
NFPA Rating: 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.

Section 7 - Handling and Storage

Handling: Use with adequate ventilation. Avoid contact with eyes. Keep container tightly closed.
Storage: Store in a cool, dry place.

Section 8 - Exposure Controls, Personal Protection

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| Chemical Name | ACGIH | NIOSH | OSHA - Final PELs |

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)
Acetic acid	10 ppm; 15 ppm STEL	10 ppm TWA; 25 mg/m3 TWA 50 ppm IDLH	10 ppm TWA; 25 mg/m3 TWA
Methyl alcohol	200 ppm; 250 ppm STEL; Skin - potential significant contribution to overall exposure by the cutaneous route	200 ppm TWA; 260 mg/m3 TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m3 TWA
Sodium acetate, trihydrate	none listed	none listed	none listed
Water	none listed	none listed	none listed

OSHA Vacated PELs: Formaldehyde: 3 ppm TWA (unless specified in 1910.1048) Acetic acid: 10 ppm TWA; 25 mg/m3 TWA Methyl alcohol: 200 ppm TWA; 260 mg/m3 TWA Sodium acetate, trihydrate: None listed Water: None listed

Engineering Controls:

Good general ventilation should be sufficient to control airborne levels.

Exposure Limits

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 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

Color: not available

Odor: none reported

pH: 4.63

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: Not available

Viscosity: Not available

Boiling Point: 100 deg C (212.00°F)

Freezing/Melting Point: 0 deg C (32.00°F)

Decomposition Temperature: Not available

Solubility in water: Soluble in water.

Specific Gravity/Density: 1.0

Molecular Formula: Mixture

Molecular Weight: 0

Section 10 - Stability and Reactivity

Chemical Stability:	Stable.
Conditions to Avoid:	None reported.
Incompatibilities with Other Materials	Not available
Hazardous Decomposition Products	None reported.
Hazardous Polymerization	Hazardous Polymerization

Section 11 - Toxicological Information

RTECS#:
 CAS# 50-00-0: LP8925000
 CAS# 64-19-7: AF1225000
 CAS# 67-56-1: PC1400000
 CAS# 6131-90-4: AJ4580000
 CAS# 7732-18-5: ZC0110000

RTECS:
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 mg/kg;
 Oral, mouse: LD50 = 385 mg/kg;
 Oral, mouse: LD50 = 500 mg/kg;
 Oral, rat: LD50 = 100 mg/kg;
 Oral, rat: LD50 = 500 mg/kg;
 Skin, rabbit: LD50 = 270 uL/kg;
 Skin, rabbit: LD50 = 270 mg/kg;

LD50/LC50:
 RTECS:
CAS# 64-19-7: Draize test, rabbit, skin: 50 mg/24H Mild;
 Inhalation, mouse: LC50 = 5620 ppm/1H;
 Oral, rat: LD50 = 3310 mg/kg;
 Skin, rabbit: LD50 = 1060 uL/kg;

RTECS:
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 = 14200 mg/kg;
 Oral, rat: LD50 = 5600 mg/kg;
 Skin, rabbit: LD50 = 15800 mg/kg;

RTECS:
CAS# 6131-90-4:
 RTECS:
CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;

Carcinogenicity:
 Formaldehyde - ACGIH: A2 - Suspected Human Carcinogen California: carcinogen, initial date 1/1/88
 (gas) NTP: Suspect carcinogen IARC: Group 1 carcinogen
 Acetic acid - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Methyl alcohol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Sodium acetate, trihydrate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Other: No information available.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Not regulated as a hazardous material

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

USA RQ: CAS# 50-00-0: 100 lb final RQ; 45.4 kg final RQ

USA RQ: CAS# 64-19-7: 5000 lb final RQ; 2270 kg final RQ

USA RQ: CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 50-00-0: 2

CAS# 64-19-7: 1

CAS# 67-56-1: 1

CAS# 6131-90-4: 1

CAS# 7732-18-5: Not available

Canada

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

CAS# 64-19-7 is listed on Canada's DSL List

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

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

Canadian WHMIS Classifications: 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.

CAS# 50-00-0 is listed on Canada's Ingredient Disclosure List

CAS# 64-19-7 is listed on Canada's Ingredient Disclosure List

CAS# 67-56-1 is listed on Canada's Ingredient Disclosure List

CAS# 6131-90-4 is not listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

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

CAS# 64-19-7 is listed on the TSCA Inventory.

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

CAS# 6131-90-4 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the Inventory (40CFR720.3(u)(2)).

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

Section 16 - Other Information

MSDS Creation Date: 6/07/1999

Revision #6 Date 7/20/2009

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 the company 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 the company has been advised of the possibility of such damages.
