



Material Safety Data Sheet
Buffer Solution pH 10

MSDS# 58235

Section 1 - Chemical Product and Company Identification

MSDS Name: Buffer Solution pH 10
58235 - (KIT)
41118 - (individual)
Catalog Numbers:
Synonyms: None
Company Identification: Fisher Scientific-Fairlawn
One Reagent Lane
Fairlawn, 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:

CAS#: 584-08-7
Chemical Name: Potassium carbonate
%: 0.6
EINECS#: 209-529-3
Hazard Symbols:

Risk Phrases:

CAS#: 1310-58-3
Chemical Name: Potassium hydroxide
%: 0.2
EINECS#: 215-181-3
Hazard Symbols:

Risk Phrases:

CAS#: 6381-92-6
Chemical Name: Disodium ethylenediaminetetraacetate dihydrate
%: 1.0
EINECS#: unlisted
Hazard Symbols:

Risk Phrases:

CAS#: 7732-18-5
Chemical Name: Water
%: 97.8
EINECS#: 231-791-2

Hazard Symbols:

Risk Phrases:

CAS#: 12228-88-5
Chemical Name: Potassium Borate
%: 0.4
EINECS#: unlisted
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 irritation. Target Organs: None.

Potential Health Effects

Eye: May cause eye irritation.
Skin: May cause mild skin irritation.
Ingestion: Low hazard for usual industrial handling. May cause gastric disturbances and electrolytic imbalance.
Inhalation: May cause respiratory tract irritation. Low hazard for usual industrial handling.
Chronic: No information found.

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: 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:

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 extinguishing media appropriate to the surrounding fire. Substance is noncombustible.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Autoignition Temperature: Not available.

Flash Point: Not available

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

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.

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid

Spills/Leaks: runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section.

Section 7 - Handling and Storage

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

Storage: Store in a cool, dry place.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Potassium carbonate	none listed	none listed	none listed
Potassium hydroxide	2 mg/m3 Ceiling	none listed	none listed
Disodium ethylenedi aminetetraacetate d ihydrate	none listed	none listed	none listed
Water	none listed	none listed	none listed
Potassium Borate	none listed	none listed	none listed

OSHA Vacated PELs: Potassium carbonate: None listed Potassium hydroxide: None listed Disodium ethylenediaminetetraacetate dihydrate: None listed Water: None listed Potassium Borate: None listed

Engineering Controls:

Good general ventilation should be sufficient to control airborne levels. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits

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: A NIOSH/MSHA approved or European Standard EN 149 air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: clear, colorless

Odor: odorless

pH: 10

Vapor Pressure: Not available

Vapor Density: Not available

Evaporation Rate: >1.0 (Ether=1)

Viscosity: Not available

Boiling Point: Not available

Freezing/Melting Point: Not available

Decomposition Temperature: Not available

Solubility in water: soluble

Specific Gravity/Density:

Molecular Formula: Solution

Molecular Weight: 0

Section 10 - Stability and Reactivity

Chemical Stability:

Stable.

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# 584-08-7: TS7750000 CAS# 1310-58-3: TT2100000 CAS# 6381-92-6: AH4410000 CAS# 7732-18-5: ZC0110000 CAS# 12228-88-5: None listed
LD50/LC50:	RTECS: CAS# 584-08-7: Oral, mouse: LD50 = 2570 mg/kg; Oral, rat: LD50 = 1870 mg/kg; . RTECS: CAS# 1310-58-3: Draize test, rabbit, skin: 50 mg/24H Severe; Oral, rat: LD50 = 273 mg/kg; . RTECS: CAS# 6381-92-6: RTECS: CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg; . RTECS: CAS# 12228-88-5:
Carcinogenicity:	Potassium carbonate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. Potassium hydroxide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. Disodium ethylenediaminetetraacetate dihydrate - 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. Potassium Borate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Epidemiology:	No information found
Teratogenicity:	No information found
Reproductive:	No information found
Neurotoxicity:	No information found
Mutagenicity:	No information found
Other:	Not available

Section 12 - Ecological Information

Other:

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: None listed.

Section 14 - Transport Information

US DOT
Shipping Name: Not Regulated
Hazard Class:
UN Number:
Packing Group:
Canada TDG
Shipping Name: Not regulated as a hazardous material
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 584-08-7 is listed on the TSCA Inventory.

CAS# 1310-58-3 is listed on the TSCA Inventory.

CAS# 6381-92-6 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.

CAS# 12228-88-5 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)).

Health & Safety Reporting List

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

Chemical Test Rules Section 12b

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

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# 1310-58-3: 1000 lb final RQ; 454 kg final RQ

SARA Section 302

Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes Section 313

CAS # 584-08-7: acute. CAS # 1310-58-3: acute, reactive. CAS # 6381-92-6: acute.

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

CAS# 1310-58-3 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:

STATE

Potassium carbonate is not present on state lists from CA, PA, MN, MA, FL, or NJ. Potassium hydroxide can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts. Disodium ethylenediaminetetraacetate dihydrate is not present on state lists from CA, PA, MN, MA, FL, or NJ. Water is not present on state lists from CA, PA, MN, MA, FL, or NJ. Potassium Borate is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No Significant Risk Level:

None of the chemicals in this product are listed.

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# 584-08-7: 1

CAS# 1310-58-3: 1

CAS# 6381-92-6: 2

CAS# 7732-18-5: Not available

CAS# 12228-88-5: Not available

Canada

CAS# 584-08-7 is listed on Canada's DSL List

CAS# 1310-58-3 is listed on Canada's DSL List

CAS# 6381-92-6 is listed on Canada's DSL List

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

Canadian WHMIS Classifications: 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.

CAS# 584-08-7 is listed on Canada's Ingredient Disclosure List

CAS# 1310-58-3 is listed on Canada's Ingredient Disclosure List

CAS# 6381-92-6 is not listed on Canada's Ingredient Disclosure List.

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

CAS# 12228-88-5 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: 2/24/1999

Revision #8 Date 2/13/2008

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.



Material Safety Data Sheet

Buffer Solution pH 7.0 (Color-Coded Yellow)

MSDS# 58235

Section 1 - Chemical Product and Company Identification

MSDS Name: Buffer Solution pH 7.0 (Color-Coded Yellow)

58235 - (KIT)

41138 - (individual)

Catalog Numbers:

Synonyms: None.

Company Identification:

Fisher Scientific-Fairlawn
One Reagent Lane
Fairlawn, 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: 35

CAS#: 1310-73-2
Chemical Name: Sodium hydroxide
%: 0.1
EINECS#: 215-185-5
Hazard Symbols: C

Risk Phrases:

CAS#: 1934-21-0
Chemical Name: FD&C Yellow 5
%: 0.0-0.02
EINECS#: 217-699-5
Hazard Symbols:

Risk Phrases:

CAS#: 7732-18-5
Chemical Name: Water
%: 99.18
EINECS#: 231-791-2
Hazard Symbols:

Risk Phrases:

CAS#: 7778-77-0
Chemical Name: Potassium phosphate monobasic
%: 0.7
EINECS#: 231-913-4
Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: None listed

Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! This is expected to be a low hazard for usual industrial handling. May cause irritation. Target Organs: None.

Potential Health Effects

Eye: May cause mild eye irritation.

Skin: May cause skin irritation.

Ingestion: Low hazard for usual industrial handling. May cause gastric disturbances and electrolytic imbalance.

Inhalation: May cause respiratory tract irritation. Low hazard for usual industrial handling.

Chronic: None

Section 4 - First Aid Measures

Eyes: Gently lift eyelids and flush continuously with water. If irritation develops, 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: Do NOT induce vomiting. If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or 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. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

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. Substance is noncombustible.

Extinguishing Media: Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

Autoignition Temperature: Not applicable.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

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: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. 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

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Sodium hydroxide	2 mg/m ³ Ceiling	10 mg/m ³ IDLH	2 mg/m ³ TWA
FD&C Yellow 5	none listed	none listed	none listed
Water	none listed	none listed	none listed
Potassium phosphate monobasic	none listed	none listed	none listed

OSHA Vacated PELs: Sodium hydroxide: None listed FD&C Yellow 5: None listed Water: None listed Potassium phosphate monobasic: None listed

Engineering Controls:

Good general ventilation should be sufficient to control airborne levels. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear butyl rubber gloves to prevent skin exposure.

Clothing: Protective garments not normally required.

Respirators: Respirator protection is not normally required.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: yellow

Odor: odorless

pH: 7.00 @ 25°C

Vapor Pressure: 760 mm Hg @ 20 deg C

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

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.
Hazardous Polymerization	Has not been reported.

Section 11 - Toxicological Information

RTECS#:
CAS# 1310-73-2: WB4900000
CAS# 1934-21-0: UQ6400000
CAS# 7732-18-5: ZC0110000
CAS# 7778-77-0: TC6615500

RTECS:

CAS# 1310-73-2: Draize test, rabbit, eye: 400 ug Mild;
Draize test, rabbit, eye: 1% Severe;
Draize test, rabbit, eye: 50 ug/24H Severe;
Draize test, rabbit, eye: 1 mg/24H Severe;
Draize test, rabbit, skin: 500 mg/24H Severe;

LD50/LC50:
RTECS:
CAS# 1934-21-0: Oral, mouse: LD50 = 12750 mg/kg;

RTECS:

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

RTECS:

CAS# 7778-77-0: Skin, rabbit: LD50 = >4640 mg/kg;

Carcinogenicity:
Sodium hydroxide - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
FD&C Yellow 5 - 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.
Potassium phosphate monobasic - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Not available

Teratogenicity: Not available

Reproductive: Not available

Neurotoxicity: Not available

Mutagenicity: Not available

Other: Not available

Section 12 - Ecological Information

Other:

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: None listed.

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# 1310-73-2: 1000 lb final RQ; 454 kg final RQ

Section 15 - Regulatory Information

US Federal

TSCA

CAS# 1310-73-2 is listed on the TSCA Inventory.

CAS# 1934-21-0 is listed on the TSCA Inventory.

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

CAS# 7778-77-0 is listed on the TSCA Inventory.

Health & Safety Reporting List

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

Chemical Test Rules Section 12b

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

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# 1310-73-2: 1000 lb final RQ; 454 kg final RQ

SARA Section 302

Extremely Hazardous Substances

None of the chemicals in this product have a TPQ.

SARA Codes Section 313

CAS # 1310-73-2: acute, reactive. CAS # 1934-21-0: acute. CAS # 7778-77-0: acute.

No chemicals are reportable under Section 313.

Clean Air Act:

This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act:

CAS# 1310-73-2 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:

STATE

Sodium hydroxide can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts. FD&C Yellow 5 is not present on state lists from CA, PA, MN, MA, FL, or NJ. Water is not present on state lists from CA, PA, MN, MA, FL, or NJ. Potassium phosphate monobasic is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

California No

Significant Risk Level:

None of the chemicals in this product are listed.

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# 1310-73-2: 1

CAS# 1934-21-0: 1

CAS# 7732-18-5: Not available

CAS# 7778-77-0: 1

Canada

CAS# 1310-73-2 is listed on Canada's DSL List

CAS# 1934-21-0 is listed on Canada's DSL List

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

CAS# 7778-77-0 is listed on Canada's DSL List

Canadian WHMIS Classifications: 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.

CAS# 1310-73-2 is listed on Canada's Ingredient Disclosure List

CAS# 1934-21-0 is not listed on Canada's Ingredient Disclosure List.

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

CAS# 7778-77-0 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: 11/19/1998

Revision #9 Date 2/15/2008

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.



Material Safety Data Sheet

Buffer Solution pH 4.0 (Color-Coded Red)

MSDS# 58235

Section 1 - Chemical Product and Company Identification

MSDS Name: Buffer Solution pH 4.0 (Color-Coded Red)

58235 - (KIT)

41128 - (individual)

Catalog Numbers:

Synonyms: None.

Company Identification:

Fisher Scientific-Fairlawn
One Reagent Lane

For information in the US, call:
Emergency Number US:
CHEMTREC Phone Number, US:

Fairlawn, NJ 07410
201-796-7100
201-796-7100
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: 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#: 877-24-7
Chemical Name: Potassium hydrogen phthalate
%: 1.0
EINECS#: 212-889-4
Hazard Symbols:

Risk Phrases:

CAS#: 7732-18-5
Chemical Name: Water
%: 98.91
EINECS#: 231-791-2
Hazard Symbols:

Risk Phrases:

CAS#: 16423-68-0
Chemical Name: Red #3
%: 0.02
EINECS#: 240-474-8
Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: None listed
Risk Phrases: None listed

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Caution! This is expected to be a low hazard for usual industrial handling. May cause irritation. 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:

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.
- Autoignition Temperature: Not applicable.
- Flash Point: Not applicable.
- Explosion Limits: Lower: Not available
- Explosion Limits: Upper: Not available
- 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. 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

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)
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
Potassium hydrogen phthalate	none listed	none listed	none listed
Water	none listed	none listed	none listed
Red #3	none listed	none listed	none listed

OSHA Vacated PELs: Formaldehyde: 3 ppm TWA (unless specified in 1910.1048) Methyl alcohol: 200 ppm TWA; 260 mg/m3 TWA Potassium hydrogen phthalate: None listed Water: None listed Red #3: None listed

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.

Exposure Limits

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.

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a

Respirators: 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: 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 (212.00°F)

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

Decomposition Temperature: Not available

Solubility in water: Soluble

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

None reported.

Hazardous Polymerization

Has not been reported.

Section 11 - Toxicological Information

RTECS#: CAS# 50-00-0: LP8925000
CAS# 67-56-1: PC1400000
CAS# 877-24-7: CZ4326000
CAS# 7732-18-5: ZC0110000
CAS# 16423-68-0: LM5950000
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# 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# 877-24-7: Dermal, guinea pig: LD50 = >1 gm/kg;
Oral, rat: LD50 = >3200 mg/kg;

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

RTECS:
CAS# 16423-68-0: Oral, mouse: LD50 = 1264 mg/kg;
Oral, rat: LD50 = 1840 mg/kg;

Carcinogenicity: Formaldehyde - ACGIH: A2 - Suspected Human Carcinogen California: carcinogen, initial date 1/1/88
(gas) NTP: Suspect carcinogen IARC: Group 1 carcinogen
Methyl alcohol - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Potassium hydrogen phthalate - 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.
Red #3 - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Not available
Teratogenicity: Not available

Reproductive: Not available

Neurotoxicity: Not available

Mutagenicity: Not available

Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Not 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

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

Section 15 - Regulatory Information

US Federal

TSCA

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

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

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

CAS# 7732-18-5 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 # 50-00-0: acute, chronic. CAS # 67-56-1: acute, flammable. CAS # 877-24-7: acute.

This material contains Formaldehyde (CAS# 50-00-0, 0.05%), which is subject to the reporting

Section 313 requirements of Section 313 of SARA Title III and 40 CFR Part 372. This chemical is not at a high enough concentration to be 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). This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

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:

STATE Formaldehyde can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts. Methyl alcohol can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts. Potassium hydrogen phthalate is not present on state lists from CA, PA, MN, MA, FL, or NJ. Water is not present on state lists from CA, PA, MN, MA, FL, or NJ. Red #3 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65 The following statement(s) is(are) made in order to comply with the California Safe Drinking Water Act: 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# 50-00-0: 2

CAS# 67-56-1: 1

CAS# 877-24-7: Not available

CAS# 7732-18-5: Not available

CAS# 16423-68-0: 1

Canada

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

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

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

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

CAS# 16423-68-0 is listed on Canada's DSL List

Canadian WHMIS Classifications: 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.

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

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

CAS# 877-24-7 is not listed on Canada's Ingredient Disclosure List.

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

CAS# 16423-68-0 is not listed on Canada's Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: 10/16/1998

Revision #10 Date 11/07/2007

Revisions were made in Sections: 9

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.
