The following list contains the Material Safety Data Sheets you requested. Please scroll down to view the requested MSDS(s).

<table>
<thead>
<tr>
<th>Product</th>
<th>MSDS</th>
<th>Distributor</th>
<th>Format</th>
<th>Language</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>2283449</td>
<td>N/A</td>
<td>Hach Company</td>
<td>OSHA</td>
<td>English</td>
<td>1</td>
</tr>
<tr>
<td>2283649</td>
<td>N/A</td>
<td>Hach Company</td>
<td>OSHA</td>
<td>English</td>
<td>1</td>
</tr>
<tr>
<td>2283549</td>
<td>N/A</td>
<td>Hach Company</td>
<td>OSHA</td>
<td>English</td>
<td>1</td>
</tr>
</tbody>
</table>

Total Enclosures: 3
MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Buffer Solution pH 4.01 ± 0.01
Catalog Number: 2283449

Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

Emergency Telephone Numbers:
P.O.Box 389 (Medical and Transportation)
Loveland, CO USA 80539 (303) 623-5716 24 Hour Service
(970) 669-3050 (515) 232-2533 8am - 4pm CST

MSDS Number: M00368
Chemical Name: Not applicable
CAS No.: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Hazard: Practically non-toxic.
Date of MSDS Preparation:
Day: 23
Month: 09
Year: 2004

2. COMPOSITION / INFORMATION ON INGREDIENTS

Demineralized Water
CAS No.: 7732-18-5
TSCA CAS Number: 7732-18-5
Percent Range: >95.0
Percent Range Units: weight / weight
LD50: None reported
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: No effects anticipated.

Other components, each
CAS No.: Not applicable
TSCA CAS Number: Not applicable
Percent Range: < 1.0
Percent Range Units: volume / volume
LD50: Not applicable
LC50: Not applicable
TLV: Not established
PEL: Not established
Hazard: Any ingredient(s) of this product listed as "Other component(s)" is not considered a health hazard to the user of this product.

Potassium Acid Phthalate
CAS No.: 877-24-7
TSCA CAS Number: 877-24-7
Percent Range: 1.0 - 5.0
Percent Range Units: weight / volume
LD50: Oral rat LDLo = 3200 mg/kg
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: May cause irritation.

3. HAZARDS IDENTIFICATION

Emergency Overview:
Appearance: Clear, red liquid
Odor: None

HMIS:
Health: 0
Flammability: 0
Reactivity: 0
Protective Equipment: X - See protective equipment, Section 8.

NFPA:
Health: 0
Flammability: 0
Reactivity: 0
Symbol: Not applicable

Potential Health Effects:
Eye Contact: No effects are anticipated
Skin Contact: No effects are anticipated
Skin Absorption: No effects anticipated
Target Organs: Not applicable
Ingestion: No Effects Anticipated
Target Organs: Not applicable
Inhalation: No effects anticipated
Target Organs: Not applicable
Medical Conditions Aggravated: None reported
Chronic Effects: No effects anticipated
Cancer / Reproductive Toxicity Information:
This product does NOT contain any OSHA listed carcinogens.
This product does NOT contain any IARC listed chemicals.
This product does NOT contain any NTP listed chemicals.

Additional Cancer / Reproductive Toxicity Information: None reported
Toxicologically Synergistic Products: None reported

4. FIRST AID

Eye Contact: Flush eyes with water. Call physician if irritation develops.
Skin Contact (First Aid): Wash skin with soap and plenty of water.
Ingestion (First Aid): Give large quantities of water. Call physician immediately.
Inhalation: None required.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn.
Flash Point: Not applicable
Method: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Autoignition Temperature: Not applicable
Hazardous Combustion Products: Not applicable
Fire / Explosion Hazards: None reported
Static Discharge: None reported.
Mechanical Impact: None reported
Extinguishing Media: Use media appropriate to surrounding fire conditions
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice: Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.
Containment Technique: Stop spilled material from being released to the environment.
Clean-up Technique: Cover spilled material with an alkali, such as soda ash or sodium bicarbonate. Scoop up slurry into a large beaker. Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Flush reacted material to the drain with a large excess of water. Decontaminate the area of the spill with a soap solution.
Evacuation Procedure: Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.
Special Instructions (for accidental release): Not applicable
304 EHS RQ (40 CFR 355): Not applicable
D.O.T. Emergency Response Guide Number: None

7. HANDLING / STORAGE

Handling: Avoid contact with eyes. Wash thoroughly after handling.
Storage: Keep container tightly closed when not in use.
Flammability Class: Not applicable

8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

Engineering Controls: Maintain general industrial hygiene practices when using this product.
Personal Protective Equipment:
Eye Protection: safety glasses with top and side shields
Skin Protection: disposable latex gloves
Inhalation Protection: adequate ventilation
Precautionary Measures: Avoid contact with: eyes. Wash thoroughly after handling.
TLV: Not established
PEL: Not established

9. PHYSICAL / CHEMICAL PROPERTIES

Appearance: Clear, red liquid
Physical State: Liquid
Molecular Weight: Not applicable
Odor: None
pH: 4.01
Vapor Pressure: Not determined
Vapor Density (air = 1): Not determined
Boiling Point: > 100°C (> 212°F)
Melting Point: < 0°C (< 32°F)
Specific Gravity (water = 1): 1.002
Evaporation Rate (water = 1): Not determined
Volatile Organic Compounds Content: Not applicable
Partition Coefficient (n-octanol / water): Not determined
Solubility:
Water: Soluble
Acid: Soluble
Other: Not determined
Metal Corrosivity:
Steel: Not determined  
Aluminum: Not determined  

10. STABILITY / REACTIVITY

*Chemical Stability:* Stable when stored under proper conditions.  
*Conditions to Avoid:* Extreme temperatures  
*Reactivity/Incompatibility:* None reported  
*Hazardous Decomposition:* None reported  
*Hazardous Polymerization:* Will not occur.

11. TOXICOLOGICAL INFORMATION

*Product Toxicological Data:*  
  *LD50:* None reported  
  *LC50:* None reported  
*Dermal Toxicity Data:* None reported  
*Skin and Eye Irritation Data:* None reported  
*Mutation Data:* None reported  
*Reproductive Effects Data:* None reported  
*Ingredient Toxicological Data:* Potassium Acid Phthalate: Oral rat LD₅₀ = 3200 mg/kg

12. ECOLOGICAL INFORMATION

*Product Ecological Information:* --  
No ecological data available for this product.  
*Ingredient Ecological Information:* --  
No ecological data available for the ingredients of this product.

13. DISPOSAL CONSIDERATIONS

*EPA Waste ID Number:* None  
*Special Instructions (Disposal):* Adjust to a pH between 6 and 9 with an alkali, such as soda ash or sodium bicarbonate. Open cold water tap completely, slowly pour the reacted material to the drain.  
*Empty Containers:* Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.  
*NOTICE (Disposal):* These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

14. TRANSPORT INFORMATION

*D.O.T.:*  
*D.O.T. Proper Shipping Name:* Not Currently Regulated  
---  
*DOT Hazard Class:* NA  
*DOT Subsidiary Risk:* NA  
*DOT ID Number:* NA  
*DOT Packing Group:* NA

*I.C.A.O.:*  
*I.C.A.O. Proper Shipping Name:* Not Currently Regulated  
---  
*ICAO Hazard Class:* NA  
*ICAO Subsidiary Risk:* NA  
*ICAO ID Number:* NA  
*ICAO Packing Group:* NA

*I.M.O.:*  
*I.M.O. Proper Shipping Name:* Not Currently Regulated  
---  
*I.M.O. Hazard Class:* NA  
*I.M.O. Subsidiary Risk:* NA
I.M.O. ID Number: NA
I.M.O. Packing Group: NA

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit Hazard Class: 9 UN Number 3316

15. REGULATORY INFORMATION

U.S. Federal Regulations:
O.S.H.A.: This product does not meet the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)
E.P.A.:
S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): This product is not hazardous under 29 CFR.1910.1200 and therefore is not covered by Title III under SARA.
S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.
302 (EHS) TPQ (40 CFR 355): Not applicable
304 CERCLA RQ (40 CFR 302.4): Not applicable
304 EHS RQ (40 CFR 355): Not applicable
Clean Water Act (40 CFR 116.4): Not applicable
RCRA: Contains no RCRA regulated substances.
C.P.S.C.: Not applicable
State Regulations:
California Prop. 65: No Prop. 65 listed chemicals are present in this product.
Identification of Prop. 65 Ingredient(s): --
Trade Secret Registry: Not applicable
National Inventories:
U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).
TSCA CAS Number: Not applicable

16. OTHER INFORMATION

Intended Use: Buffer

Revision Summary: Updates in Section(s) 14,

Legend:
NA - Not Applicable  w/w - weight/weight
ND - Not Determined  w/v - weight/volume
NV - Not Available  v/v - volume/volume

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

HACH COMPANY ©2004
MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Buffer Solution pH 10.01 ± 0.02
Catalog Number: 2283649

Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

Emergency Telephone Numbers:
P.O.Box 389 (Medical and Transportation)
Loveland, CO USA 80539 (303) 623-5716 24 Hour Service
(970) 669-3050 (515) 232-2533 8am - 4pm CST

MSDS Number: M00370
Chemical Name: Not applicable
CAS No.: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Hazard: May cause irritation.
Date of MSDS Preparation:
Day: 23
Month: 09
Year: 2004

2. COMPOSITION / INFORMATION ON INGREDIENTS

Demineralized Water
CAS No.: 7732-18-5
TSCA CAS Number: 7732-18-5
Percent Range: > 99.0
Percent Range Units: volume / volume
LD50: None reported
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: No effects anticipated.

Other components, each
CAS No.: Not applicable
TSCA CAS Number: Not applicable
Percent Range: < 1.0
Percent Range Units: volume / volume
LD50: Not applicable
LC50: Not applicable
TLV: Not established
PEL: Not established
Hazard: Any ingredient(s) of this product listed as "Other component(s)" is not considered a health hazard to the user of this product.

3. HAZARDS IDENTIFICATION

Emergency Overview:
Appearance: Clear, blue
Odor: None
HMIS:

Health: 1
Flammability: 0
Reactivity: 0

Protective Equipment: X - See protective equipment, Section 8.

NFPA:

Health: 0
Flammability: 0
Reactivity: 0
Symbol: Not applicable

Potential Health Effects:

Eye Contact: May cause irritation
Skin Contact: May cause irritation
Skin Absorption: No effects anticipated
Target Organs: Not applicable
Ingestion: None reported
Target Organs: None reported
Inhalation: No effects anticipated
Target Organs: Not applicable
Medical Conditions Aggravated: None reported
Chronic Effects: None reported
Cancer / Reproductive Toxicity Information:
This product does NOT contain any OSHA listed carcinogens.
This product does NOT contain any IARC listed chemicals.
This product does NOT contain any NTP listed chemicals.

Additional Cancer / Reproductive Toxicity Information: None reported
Toxicologically Synergistic Products: None reported

4. FIRST AID

Eye Contact: Immediately flush eyes with water for 15 minutes. Call physician.
Skin Contact (First Aid): Wash skin with plenty of water. Call physician if irritation develops.
Ingestion (First Aid): Give large quantities of water. Call physician immediately.
Inhalation: None required.

5. FIRE FIGHTING MEASURES

Flammable Properties: Material will not burn.
Flash Point: Not applicable
Method: Not applicable
Flammability Limits:
Lower Explosion Limits: Not applicable
Upper Explosion Limits: Not applicable
Autoignition Temperature: Not applicable
Hazardous Combustion Products: None
Fire / Explosion Hazards: None reported
Static Discharge: None reported
Mechanical Impact: None reported
Extinguishing Media: Use media appropriate to surrounding fire conditions
Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Spill Response Notice:
Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company's emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.

**Containment Technique:** Stop spilled material from being released to the environment.

**Clean-up Technique:** Cover spilled material with a dry acid, such as citric or boric. Scoop up slurry into a large beaker. Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Flush reacted material to the drain with a large excess of water.

**Evacuation Procedure:** Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

**Special Instructions (for accidental release):** Not applicable

304 EHS RQ (40 CFR 355): Not applicable

D.O.T. Emergency Response Guide Number: None

### 7. HANDLING / STORAGE

**Handling:** Avoid contact with eyes. Wash thoroughly after handling. Maintain general industrial hygiene practices when using this product.

**Storage:** Protect from heat. Keep container tightly closed when not in use.

**Flammability Class:** Not applicable

### 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** Maintain general industrial hygiene practices when using this product.

**Personal Protective Equipment:**
- **Eye Protection:** safety glasses with top and side shields
- **Skin Protection:** disposable latex gloves, lab coat
- **Inhalation Protection:** adequate ventilation

**Precautionary Measures:** Avoid contact with eyes. Wash thoroughly after handling.

**TLV:** Not established

**PEL:** Not established

### 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** Clear, blue

**Physical State:** Liquid

**Molecular Weight:** Not applicable

**Odor:** None

**pH:** 10.0

**Vapor Pressure:** Not determined

**Vapor Density (air = 1):** Not determined

**Boiling Point:** ~100°C (~212°F)

**Melting Point:** ~0°C (~32°F)

**Specific Gravity (water = 1):** 0.990

**Evaporation Rate (water = 1):** 0.76

**Volatile Organic Compounds Content:** Not applicable

**Partition Coefficient (n-octanol / water):** Not determined

**Solubility:**
- **Water:** Soluble
- **Acid:** Soluble
- **Other:** Not determined

**Metal Corrosivity:**
- **Steel:** Not determined
- **Aluminum:** Not determined

### 10. STABILITY / REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.

**Conditions to Avoid:** Heat

**Reactivity / Incompatibility:** None reported

**Hazardous Decomposition:** None reported
Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:
LD50: None reported
LC50: None reported
Dermal Toxicity Data: None reported
Skin and Eye Irritation Data: None reported
Mutation Data: None reported
Reproductive Effects Data: None reported
Ingredient Toxicological Data: None reported

12. ECOLOGICAL INFORMATION

Product Ecological Information: No information available for this product.
Ingredient Ecological Information: None reported

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: None
Special Instructions (Disposal): Adjust to a pH between 6 and 9 with an acid, such as sulfuric or citric. Open cold water tap completely, slowly pour the reacted material to the drain.
Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.
NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

14. TRANSPORT INFORMATION

D.O.T.: Not Currently Regulated
D.O.T. Proper Shipping Name: Not Currently Regulated
DOT Hazard Class: NA
DOT Subsidiary Risk: NA
DOT ID Number: NA
DOT Packing Group: NA
I.C.A.O.: Not Currently Regulated
I.C.A.O. Proper Shipping Name: Not Currently Regulated
ICAO Hazard Class: NA
ICAO Subsidiary Risk: NA
ICAO ID Number: NA
ICAO Packing Group: NA
I.M.O.: Not Currently Regulated
I.M.O. Proper Shipping Name: Not Currently Regulated
I.M.O. Hazard Class: NA
I.M.O. Subsidiary Risk: NA
I.M.O. ID Number: NA
I.M.O. Packing Group: NA
Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit Hazard Class: 9 UN Number 3316

15. REGULATORY INFORMATION

U.S. Federal Regulations:
O.S.H.A.: This product meets the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)

E.P.A.:
S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): Immediate (Acute) Health Hazard
S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

302 (EHS) TPD (40 CFR 355): Not applicable
304 CERCLA RQ (40 CFR 302.4): Not applicable
304 CERCLA RQ (40 CFR 355): Not applicable
Clean Water Act (40 CFR 116.4): Not applicable
RCRA: Contains no RCRA regulated substances.
C.P.S.C.: Not applicable

State Regulations:
California Prop. 65: No Prop. 65 listed chemicals are present in this product.
Identification of Prop. 65 Ingredient(s): None
Trade Secret Registry: Not applicable
National Inventories:
U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).
TSCA CAS Number: Not applicable

16. OTHER INFORMATION

Intended Use: Buffer
Revision Summary: Updates in Section(s) 14,

Legend:
NA - Not Applicable w/w - weight/weight
ND - Not Determined w/v - weight/volume
NV - Not Available v/v - volume/volume

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

HACH COMPANY ©2004
MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Buffer Solution pH 7.00 ± 0.02
Catalog Number: 2283549

Hach Company
P.O.Box 389
Loveland, CO USA 80539
(970) 669-3050

Emergency Telephone Numbers:
(P.O.Box 389) (Medical and Transportation)
Loveland, CO USA 80539 (303) 623-5716 24 Hour Service
(970) 669-3050 (515) 232-2533 8am - 4pm CST

MSDS Number: M00369
Chemical Name: Not applicable
CAS No.: Not applicable
Chemical Formula: Not applicable
Chemical Family: Not applicable
Hazard: Practically non-toxic.
Date of MSDS Preparation:
Day: 23
Month: 09
Year: 2004

2. COMPOSITION / INFORMATION ON INGREDIENTS

Demineralized Water
CAS No.: 7732-18-5
TSCA CAS Number: 7732-18-5
Percent Range: >95.0
Percent Range Units: volume / volume
LD50: None reported
LC50: None reported
TLV: Not established
PEL: Not established
Hazard: No effects anticipated.

Other components, each
CAS No.: Not applicable
TSCA CAS Number: Not applicable
Percent Range: < 1.0
Percent Range Units: volume / volume
LD50: Not applicable
LC50: Not applicable
TLV: Not established
PEL: Not established
Hazard: Any ingredient(s) of this product listed as "Other component(s)" is not considered a health hazard to the user of this product.

3. HAZARDS IDENTIFICATION

Emergency Overview:
Appearance: Clear, yellow liquid
Odor: None
HMIS:
   Health: 0
   Flammability: 0
   Reactivity: 0
Potential Equipment: X - See protective equipment, Section 8.

NFPA:
   Health: 0
   Flammability: 0
   Reactivity: 0
Symbol: Not applicable

Potential Health Effects:
   Eye Contact: No effects are anticipated
   Skin Contact: No effects are anticipated
   Skin Absorption: No effects anticipated
   Target Organs: Not applicable
   Ingestion: No Effects Anticipated
   Target Organs: Not applicable
   Inhalation: No effects anticipated
   Target Organs: Not applicable
   Medical Conditions Aggravated: None reported
   Chronic Effects: No effects anticipated

Cancer / Reproductive Toxicity Information:
   This product does NOT contain any OSHA listed carcinogens.
   This product does NOT contain any IARC listed chemicals.
   This product does NOT contain any NTP listed chemicals.
   Additional Cancer / Reproductive Toxicity Information: None reported
   Toxicologically Synergistic Products: None reported

4. FIRST AID

   Eye Contact: Flush eyes with water. Call physician if irritation develops.
   Skin Contact (First Aid): Wash skin with plenty of water.
   Ingestion (First Aid): Give large quantities of water. Call physician immediately.
   Inhalation: None required.

5. FIRE FIGHTING MEASURES

   Flammable Properties: Material will not burn.
   Flash Point: Not applicable
   Method: Not applicable
   Flammability Limits:
      Lower Explosion Limits: Not applicable
      Upper Explosion Limits: Not applicable
   Autoignition Temperature: Not applicable
   Hazardous Combustion Products: None reported
   Fire / Explosion Hazards: None reported
      Static Discharge: None reported
      Mechanical Impact: None reported
   Extinguishing Media: Use media appropriate to surrounding fire conditions
   Fire Fighting Instruction: As in any fire, wear self-contained breathing apparatus pressure-demand and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

   Spill Response Notice:
Only persons properly qualified to respond to an emergency involving hazardous substances may respond to a spill according to federal regulations (OSHA 29 CFR 1910.120(a)(v)) and per your company’s emergency response plan and guidelines/procedures. See Section 13, Special Instructions for disposal assistance.

**Containment Technique:** Stop spilled material from being released to the environment.

**Clean-up Technique:** Absorb spilled liquid with non-reactive sorbent material. Place material in a plastic bag. Mark bag ‘Non-hazardous trash’, and dispose of as normal refuse.

**Evacuation Procedure:** Evacuate as needed to perform spill clean-up. If conditions warrant, increase the size of the evacuation.

**Special Instructions (for accidental release):** Not applicable

**D.O.T. Emergency Response Guide Number:** None

---

### 7. HANDLING / STORAGE

**Handling:** Avoid contact with eyes. Wash thoroughly after handling.

**Storage:** Protect from heat. Keep container tightly closed when not in use.

**Flammability Class:** Not applicable

---

### 8. EXPOSURE CONTROLS / PROTECTIVE EQUIPMENT

**Engineering Controls:** Maintain general industrial hygiene practices when using this product.

**Personal Protective Equipment:**

- **Eye Protection:** safety glasses with top and side shields
- **Skin Protection:** Not applicable
- **Inhalation Protection:** Adequate ventilation

**Precautionary Measures:** Avoid contact with: eyes. Wash thoroughly after handling.

**TLV:** Not established

**PEL:** Not established

---

### 9. PHYSICAL / CHEMICAL PROPERTIES

**Appearance:** Clear, yellow liquid

**Physical State:** Liquid

**Molecular Weight:** Not applicable

**Odor:** None

**pH:** 7.0 at 20°C

**Vapor Pressure:** Not determined

**Vapor Density (air = 1):** Not determined

**Boiling Point:** ~100°C (~212°F)

**Melting Point:** ~0°C (~32°F)

**Specific Gravity (water = 1):** ~1.0

**Evaporation Rate (water = 1):** Not determined

**Volatile Organic Compounds Content:** Not applicable

**Partition Coefficient (n-octanol / water):** Not determined

**Solubility:**

- **Water:** Soluble
- **Acid:** Soluble
- **Other:** Not determined

**Metal Corrosivity:**

- **Steel:** Not determined
- **Aluminum:** Not determined

---

### 10. STABILITY / REACTIVITY

**Chemical Stability:** Stable when stored under proper conditions.

**Conditions to Avoid:** Heat. Evaporation

**Reactivity / Incompatibility:** None reported

**Hazardous Decomposition:** None reported

**Hazardous Polymerization:** Will not occur.
11. TOXICOLOGICAL INFORMATION

Product Toxicological Data:
LD50: None reported
LC50: None reported
Dermal Toxicity Data: None reported
Skin and Eye Irritation Data: None reported
Mutation Data: None reported
Reproductive Effects Data: None reported
Ingredient Toxicological Data: None reported

12. ECOLOGICAL INFORMATION

Product Ecological Information: --
No ecological data available for this product.

Ingredient Ecological Information: --
No ecological data available for the ingredients of this product.

13. DISPOSAL CONSIDERATIONS

EPA Waste ID Number: None
Special Instructions (Disposal): Open cold water tap completely, slowly pour the material to the drain.
Empty Containers: Rinse three times with an appropriate solvent. Dispose of empty container as normal trash.

NOTICE (Disposal): These disposal guidelines are based on federal regulations and may be superseded by more stringent state or local requirements. Please consult your local environmental regulators for more information.

14. TRANSPORT INFORMATION

D.O.T.:
D.O.T. Proper Shipping Name: Not Currently Regulated
--
DOT Hazard Class: NA
DOT Subsidiary Risk: NA
DOT ID Number: NA
DOT Packing Group: NA

I.C.A.O.:
I.C.A.O. Proper Shipping Name: Not Currently Regulated
--
ICAO Hazard Class: NA
ICAO Subsidiary Risk: NA
ICAO ID Number: NA
ICAO Packing Group: NA

I.M.O.:
I.M.O. Proper Shipping Name: Not Currently Regulated
--
I.M.O. Hazard Class: NA
I.M.O. Subsidiary Risk: NA
I.M.O. ID Number: NA
I.M.O. Packing Group: NA

Additional Information: This product may be shipped as part of a chemical kit composed of various compatible dangerous goods for analytical or testing purposes. This kit would have the following classification: Proper Shipping Name: Chemical Kit Hazard Class: 9 UN Number 3316

15. REGULATORY INFORMATION

U.S. Federal Regulations:
O.S.H.A.: This product does not meet the criteria for a hazardous substance as defined in the Hazard Communication Standard. (29 CFR 1910.1200)
E.P.A.:
S.A.R.A. Title III Section 311/312 Categorization (40 CFR 370): This product is not hazardous under 29 CFR 1910.1200 and therefore is not covered by Title III under SARA.

S.A.R.A. Title III Section 313 (40 CFR 372): This product does NOT contain any chemical subject to the reporting requirements of Section 313 of Title III of SARA.

302 (EHS) TPQ (40 CFR 355): Not applicable
304 CERCLA RQ (40 CFR 302.4): Not applicable
304 EHS RQ (40 CFR 355): Not applicable
Clean Water Act (40 CFR 116.4): Not applicable
RCRA: Contains no RCRA regulated substances.
C.P.S.C.: Not applicable

State Regulations:
California Prop. 65: No Prop. 65 listed chemicals are present in this product.
Identification of Prop. 65 Ingredient(s): None
Trade Secret Registry: Not applicable

National Inventories:
U.S. Inventory Status: All ingredients in this product are listed on the TSCA 8(b) Inventory (40 CFR 710).
TSCA CAS Number: Not applicable

16. OTHER INFORMATION

Intended Use: Buffer

Revision Summary: Updates in Section(s) 14,

Legend:

<table>
<thead>
<tr>
<th>Code</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td>NA</td>
<td>Not Applicable w/w - weight/weight</td>
</tr>
<tr>
<td>ND</td>
<td>Not Determined w/v - weight/volume</td>
</tr>
<tr>
<td>NV</td>
<td>Not Available v/v - volume/volume</td>
</tr>
</tbody>
</table>

USER RESPONSIBILITY: Each user should read and understand this information and incorporate it in individual site safety programs in accordance with applicable hazard communication standards and regulations.

THE INFORMATION CONTAINED HEREIN IS BASED ON DATA CONSIDERED TO BE ACCURATE. HOWEVER, NO WARRANTY IS EXPRESSED OR IMPLIED REGARDING THE ACCURACY OF THESE DATA OR THE RESULTS TO BE OBTAINED FROM THE USE THEREOF.

HACH COMPANY ©2004