

# MATERIAL SAFETY DATA SHEET

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## 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:  
(Medical and Transportation)  
(303) 623-5716 24 Hour Service  
(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:** 27

**Month:** February

**Year:** 2008

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## 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.

### 2,4-Dinitrophenol

**CAS No.:** 51-28-5

**TSCA CAS Number:** 51-28-5

**Percent Range:** < 0.01

**Percent Range Units:** weight / volume

**LD50:** Oral rat LD50 = 30 mg/kg, Oral human LDLo = 36 mg/kg, Oral mouse LD50 = 45 mg/kg, Oral rabbit LD50 = 30 mg/kg

**LC50:** Inhalation dog LCLo = 300 mg/m<sup>3</sup>/30 M

**TLV:** Not established

**PEL:** Not established

**Hazard:** Poison. May cause irritation.

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### 3. HAZARDS IDENTIFICATION

**Emergency Overview:**

**Appearance:** Clear, yellow 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

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### 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.

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## 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.

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## 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  
**304 EHS RQ (40 CFR 355):** Not applicable  
**D.O.T. Emergency Response Guide Number:** None

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## 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

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## 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

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## 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

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## 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.

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## 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

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## 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.

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### 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.

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### 14. TRANSPORT INFORMATION

**D.O.T.:**

**D.O.T. Proper Shipping Name:** Not Currently Regulated

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**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

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**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

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**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:

Hazard Class: 9      UN Number 3316.

Proper Shipping Name: Chemical Kit

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### 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 contains a chemical(s) subject to the reporting requirements of Section 313 of Title III of SARA.

2,4-Dinitrophenol, CAS RN 51-28-5

**302 (EHS) TPQ (40 CFR 355):** Not applicable

**304 CERCLA RQ (40 CFR 302.4):** 2,4-Dinitrophenol 10 lbs.

**304 EHS RQ (40 CFR 355):** Not applicable

**Clean Water Act (40 CFR 116.4):** 2,4-Dinitrophenol - RQ 10 lbs.

**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

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## 16. OTHER INFORMATION

**Intended Use:** Buffer

**References:** 29 CFR 1900 - 1910 (Code of Federal Regulations - Labor). Air Contaminants, Federal Register, Vol. 54, No. 12. Thursday, January 19, 1989. pp. 2332-2983. TLV's Threshold Limit Values and Biological Exposure Indices for 1992-1993. American Conference of Governmental Industrial Hygienists, 1992.

Technical Judgment. In-house information.

**Revision Summary:** Updates in Section(s) 14, 2, 15,

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### 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.

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