

1. Product and Supplier Information

Product Name(s): Traceable® Buffer Solution pH 4.005 **Date:** March 2010
Product Number(s): 4280 and 4287

Supplier: Control Company **Phone:** 281-482-1714
 Drawer 58307 **Fax:** 281-482-9448
 Houston, TX 77258 **email:** sales@control3.com

Product Information: 281-482-1714
Transportation Emergency: 800-424-9300 (Chemtrec)
 International Call 703-527-3887 (collect calls accepted)

2. Composition and Information on Ingredients

CAS #	SARA	Material or Component	%	RQ#	Exposure Limits		
	313				TWA*	STEL*	WEEL*
877-24-7	No	Potassium hydrogen phthalate	<1	None	NE	NE	NE
7732-18-5	No	Water		Remainder None	NE	NE	NE

No component is listed in "Threshold and Biological Exposure Indices for 2010" from ACGIH except as noted above.
 Components listed in Title III Sec. 313 (EPCRA) are indicated by "Yes" above. NE = Not Established.
 *TWA= Time Weighted Average; STEL= Short Term Exposure Limit; WEEL= Workplace Employee Exposure Level

3. Hazards Identification

OSHA Hazard Classification: WARNING! CAUSES EYE IRRITATION.

Routes of Entry: Ingestion, eye

Chemical Interactions: None known

Medical Conditions Aggravated: None Found

Odor Threshold: No data.

Irritation Threshold: Not established

Hazard Category Classifications and Ratings

Hazard Categories:	Health	Fire	Pressure	Reactivity	Reference 49 CFR 171.8, OSHA 29 CFR 1910.1200 and SARA 302/311/312/313.
Immediate	Yes	No	No	No	
Delayed	No	No	No	No	
HMIS Hazard Ratings: Health 1 Fire 0 Instability 0 Other B (Glasses, gloves)					
NFPA 704 Hazard Ratings: Not rated					
Hazard Ratings: Least: 0 Slight: 1 Moderate: 2 High: 3 Extreme: 4					
Note: HMIS and NFPA ratings are subjective evaluations of hazards and can differ between preparers. They are intended and useful only as a rapid approximation of the hazards rated.					

Potential Health Effects

Inhalation: May cause mild irritation to the respiratory tract.

Ingestion: Large doses may cause gastro-intestinal upset.

Skin Contact: May irritate damaged skin.

Eye Contact: Causes irritation, redness, and pain: pH= 10.0

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: Damaged skin.

4. First Aid

Inhalation: Not a likely source of discomfort.

Remove individual to fresh air. If not breathing, give artificial respiration or oxygen as appropriate. Seek medical attention if breathing becomes difficult.

Skin Contact: Flush skin with water for 15 minutes and remove contaminated clothing. Wash clothing before reuse.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids apart.

Ingestion: If large amounts were swallowed, give water to drink and get medical advice.

Never give anything by mouth to an unconscious person.

Product Name(s): Traceable® Buffer Solution pH 4.005
Product Number(s): 4280 and 4287

Date: March 2010

5. Fire Fighting Measures

Flammability Summary:

Flammable Properties:

Flash Point: Not flammable

Autoignition Temperature: None

Upper Flammable/Explosive Limit, % in air: None

Lower Flammable/Explosive Limit, % in air: None

Fire/Explosion Hazards Not a hazard.

Extinguishing Media: Use material appropriate to the main source of the fire.

Fire Fighting Instructions: Use material appropriate to the main source of the fire.

Hazardous Combustion Products: None

6. Accidental Release Measures

Personal Protection for Emergency Situations: Contain the release and eliminate its source.

Spill Mitigation Procedures

Air Release: Low vapor pressure makes air release unlikely.

Water Release: This material is soluble in water. Notify all downstream users of possible contamination. Sweep up and containerize for reclamation or disposal. Small amounts of residue may be flushed to sewer with plenty of water.

7. Handling and Storage

Handling: Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash with water.

Storage: Keep in a tightly closed container. Protect against physical damage.

8. Exposure Controls and Personal Protection

Ventilation: Use general exhaust ventilation to ensure general worker safety and comfort.

Protective Equipment for Routine Use of Product Where Appropriate:

Respiratory Protection: Not generally required due to low vapor pressure of materials.

Respirator Type(s): Not normally required.

Skin: Not normally required.

Eyes: Use chemical safety goggles.

Protective Clothing Type: Impervious butyl rubber apron, boots or suit, as appropriate.

9. Physical Data

Physical State: Liquid

Color: Water white

Odor: Non descript.

pH (@ 25 Deg. C): 4.005 as made

Octanol/Water Coeff: No data

Solubility in Water: Completely

Bulk Density: Not applicable

Specific Gravity: Approx. 1.0

10. Stability and Reactivity

Stability-Reactivity Summary: Stable under normal conditions.

Reactive Properties:

Sensitivity to mechanical shock: None

Hazardous Polymerization: Will not occur

Conditions to Avoid: Exposure to moist air: hygroscopic.

Chemical Incompatibility: Acids will neutralize the alkalinity and may generate carbon dioxide.

Incompatible materials: Compatible with standard metals of construction.

Hazardous Decomposition Products: CO₂ expelled when heated.

Decomposition Temperature: No data

Product Name(s): Traceable® Buffer Solution pH 4.005**Date:** March 2010**Product Number(s):** 4280 and 4287**11. Toxicological Information****Component Animal Toxicology**

Potassium hydrogen phthalate

Oral LD50 value mg/kg:

>3200, rat

Dermal LD50 value:

>1000 guinea pig

Epidemiology: No information found

Teratogenicity: Boys of moms highly exposed to phthalates show stunted genitals. The higher the levels of phthalates in the mother during the final months of pregnancy, the less masculine their boys were when examined by pediatricians. (Pittsburgh Post-Gazette 5/27/05)

Reproductive Effects: The phthalate esters have been the subject of interest because of the reproductive and developmental toxicity of some members of this group such as DEHP.

Mutagenicity: No information found

Neurotoxicity: No information found

12. Ecological Information**Ecological Toxicity Values:**

Environmental fate: No data.

Environmental Toxicity: This material is not expected to be toxic to aquatic life.

13. Disposal Considerations

No data provided.

14. Transportation Information

No data provided.

15. Regulatory Information

No data provided.

16. Additional Information

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IF THIS MSDS IS MORE THAN THREE YEARS OLD YOU SHOULD CONTACT THE SUPPLIER TO MAKE CERTAIN THAT THE INFORMATION IS CURRENT.

THE POSSESSOR OF THIS MATERIAL HAS THE RESPONSIBILITY TO INSURE THAT IT IS USED, HANDLED, STORED, TRANSPORTED AND DISPOSED OF IN COMPLIANCE WITH ALL RELEVANT LOCAL, STATE AND FEDERAL REGULATIONS

1. Product and Supplier Information

Product Name(s): Traceable® Buffer Solution pH 7.000
Product Number(s): 4281 and 4288

Date: March 2010

Supplier: Control Company
 Drawer 58307
 Houston, TX 77258

Phone: 281-482-1714
Fax: 281-482-9448
email: sales@control3.com

Product Information: 281-482-1714
Transportation Emergency: 800-424-9300 (Chemtrec)
 International Call 703-527-3887 (collect calls accepted)

2. Composition and Information on Ingredients

CAS #	SARA	Material or Component	%	RQ#	Exposure Limits		
	313				TWA*	STEL*	WEEL*
7558-79-4	No	Disodium hydrogen phosphate	<1	None	NE	NE	NE
7778-77-0	No	Potassium dihydrogen phosphate	<1	None	NE	NE	NE
7732-18-5	No	Water	Remainder	None	NE	NE	NE

No component is listed in "Threshold and Biological Exposure Indices for 2010" from ACGIH except as noted above. Components listed in Title III Sec. 313 (EPCRA) are indicated by "Yes" above. NE = Not Established.

*TWA= Time Weighted Average; STEL= Short Term Exposure Limit; WEEL= Workplace Employee Exposure Level

3. Hazards Identification

OSHA Hazard Classification: WARNING! CAUSES EYE IRRITATION.

Routes of Entry: Ingestion, eye

Chemical Interactions: None known

Medical Conditions Aggravated: None Found

Odor Threshold: No data.

Irritation Threshold: Not established

Hazard Category Classifications and Ratings

Hazard Categories:	Health	Fire	Pressure	Reactivity	Reference 49 CFR 171.8, OSHA 29 CFR 1910.1200 and SARA 302/311/312/313.
Immediate	Yes	No	No	No	
Delayed	No	No	No	No	
HMIS Hazard Ratings: Health 1 Fire 0 Instability 0 Other B (Glasses, gloves)					
NFPA 704 Hazard Ratings: Not rated					
Hazard Ratings: Least: 0 Slight: 1 Moderate: 2 High: 3 Extreme: 4					
Note: HMIS and NFPA ratings are subjective evaluations of hazards and can differ between preparers. They are intended and useful only as a rapid approximation of the hazards rated.					

Potential Health Effects

Inhalation: May cause mild irritation to the respiratory tract.

Ingestion: Large doses may cause gastro-intestinal upset.

Skin Contact: May irritate damaged skin.

Eye Contact: Causes irritation, redness, and pain: pH= 10.0

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: Damaged skin.

4. First Aid

Inhalation: Not a likely source of discomfort.

Remove individual to fresh air. If not breathing, give artificial respiration or oxygen as appropriate. Seek medical attention if breathing becomes difficult.

Skin Contact: Flush skin with water for 15 minutes and remove contaminated clothing. Wash clothing before reuse.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids apart.

Ingestion: If large amounts were swallowed, give water to drink and get medical advice.

Never give anything by mouth to an unconscious person.

Product Name(s): Traceable® Buffer Solution pH 7.000
Product Number(s): 4281 and 4288

Date: March 2010

5. Fire Fighting Measures

Flammability Summary:

Flammable Properties:

Flash Point: Not flammable

Autoignition Temperature: None

Upper Flammable/Explosive Limit, % in air: None

Lower Flammable/Explosive Limit, % in air: None

Fire/Explosion Hazards Not a hazard.

Extinguishing Media: Use material appropriate to the main source of the fire.

Fire Fighting Instructions: Use material appropriate to the main source of the fire.

Hazardous Combustion Products: None

6. Accidental Release Measures

Personal Protection for Emergency Situations: Contain the release and eliminate its source.

Spill Mitigation Procedures

Air Release: Low vapor pressure makes air release unlikely.

Water Release: This material is soluble in water. Notify all downstream users of possible contamination. Sweep up and containerize for reclamation or disposal. Small amounts of residue may be flushed to sewer with plenty of water.

7. Handling and Storage

Handling: Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash with water.

Storage: Keep in a tightly closed container. Protect against physical damage.

8. Exposure Controls and Personal Protection

Ventilation: Use general exhaust ventilation to ensure general worker safety and comfort.

Protective Equipment for Routine Use of Product Where Appropriate:

Respiratory Protection: Not generally required due to low vapor pressure of materials.

Respirator Type(s): Not normally required.

Skin: Not normally required.

Eyes: Use chemical safety goggles.

Protective Clothing Type: Impervious butyl rubber apron, boots or suit, as appropriate.

9. Physical Data

Physical State: Liquid

Color: Water white

Odor: Non descript.

pH (@ 25 Deg. C): 7.000 as made

Octanol/Water Coeff: No data

Solubility in Water: Completely

Bulk Density: Not applicable

Specific Gravity: Approx. 1.0

10. Stability and Reactivity

Stability-Reactivity Summary: Stable under normal conditions.

Reactive Properties:

Sensitivity to mechanical shock: None

Hazardous Polymerization: Will not occur

Conditions to Avoid: Exposure to moist air: hygroscopic.

Chemical Incompatibility: Acids will neutralize the alkalinity and may generate carbon dioxide.

Incompatible materials: Compatible with standard metals of construction.

Hazardous Decomposition Products: CO₂ expelled when heated.

Decomposition Temperature: No data

Material Safety Data Sheet

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Product Name(s): Traceable® Buffer Solution pH 7.000

Date: March 2010

Product Number(s): 4281 and 4288

11. Toxicological Information

Component Animal Toxicology

CAS #7558-79-4	CAS #7778-77-0
Oral LD50 value mg/kg: 17 gm/kg (rat)	No data
Dermal: Irritation:500 mg/24 hr, mild	L/D50: >4640 mg/kg

Epidemiology: No information found

---NTP Carcinogen---

Ingredient	Known	Anticipated	IARC Category
Sodium Phosphate, Dibasic CAS #7558-79-4	No	No	None
Potassium Phosphate Monobasic CAS #7778-77-0	No	No	None

12. Ecological Information

Ecological Toxicity Values:

Environmental fate: No data.

Environmental Toxicity: This material is not expected to be toxic to aquatic life.

13. Disposal Considerations

No data provided.

14. Transportation Information

No data provided.

15. Regulatory Information

No data provided.

16. Additional Information

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1. Product and Supplier Information

Product Name(s): Traceable® Buffer Solution pH 10.012
Product Number(s): 4282, 4283 and 4289

Date: March 2010

Supplier: Control Company
 Drawer 58307
 Houston, TX 77258

Phone: 281-482-1714
Fax: 281-482-9448
email: sales@control3.com

Product Information: 281-482-1714
Transportation Emergency: 800-424-9300 (Chemtrec)
 International Call 703-527-3887 (collect calls accepted)

2. Composition and Information on Ingredients

CAS #	SARA 313	Material or Component	%	RQ#	Exposure Limits		
					TWA*	STEL*	WEEL*
144-55-8	No	Sodium bicarbonate	<1	None	NE	NE	NE
497-19-6	No	Sodium Carbonate	<1	None	NE	NE	NE
7732-18-5	No	Water	Remainder	None	NE	NE	NE

No component is listed in "Threshold and Biological Exposure Indices for 2010" from ACGIH except as noted above.
 Components listed in Title III Sec. 313 (EPCRA) are indicated by "Yes" above. NE = Not Established.

*TWA= Time Weighted Average; STEL= Short Term Exposure Limit; WEEL= Workplace Employee Exposure Level

3. Hazards Identification

OSHA Hazard Classification: WARNING! CAUSES EYE IRRITATION.

Routes of Entry: Ingestion, eye

Chemical Interactions: None known

Medical Conditions Aggravated: None Found

Odor Threshold: No data.

Irritation Threshold: Not established

Hazard Category Classifications and Ratings

Hazard Categories:	Health	Fire	Pressure	Reactivity	Reference 49 CFR 171.8, OSHA 29 CFR 1910.1200 and SARA 302/311/312/313.
Immediate	Yes	No	No	No	
Delayed	No	No	No	No	
HMIS Hazard Ratings: Health 1 Fire 0 Instability 0 Other B (Glasses, gloves)					
NFPA 704 Hazard Ratings: Not rated					
Hazard Ratings: Least: 0 Slight: 1 Moderate: 2 High: 3 Extreme: 4					
Note: HMIS and NFPA ratings are subjective evaluations of hazards and can differ between preparers. They are intended and useful only as a rapid approximation of the hazards rated.					

Potential Health Effects

Inhalation: May cause mild irritation to the respiratory tract.

Ingestion: Large doses may cause gastro-intestinal upset.

Skin Contact: May irritate damaged skin.

Eye Contact: Causes irritation, redness, and pain: pH= 10.0

Chronic Exposure: No information found.

Aggravation of Pre-existing Conditions: Damaged skin.

4. First Aid

Inhalation: Not a likely source of discomfort.

Remove individual to fresh air. If not breathing, give artificial respiration or oxygen as appropriate. Seek medical attention if breathing becomes difficult.

Skin Contact: Flush skin with water for 15 minutes and remove contaminated clothing. Wash clothing before reuse.

Eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids apart.

Ingestion: If large amounts were swallowed, give water to drink and get medical advice.

Never give anything by mouth to an unconscious person.

Product Name(s): Traceable® Buffer Solution pH 10.012
Product Number(s): 4282, 4283 and 4289

Date: March 2010

5. Fire Fighting Measures

Flammability Summary:

Flammable Properties:

Flash Point: Not flammable

Autoignition Temperature: None

Upper Flammable/Explosive Limit, % in air: None

Lower Flammable/Explosive Limit, % in air: None

Fire/Explosion Hazards Not a hazard.

Extinguishing Media: Use material appropriate to the main source of the fire.

Fire Fighting Instructions: Use material appropriate to the main source of the fire.

Hazardous Combustion Products: None

6. Accidental Release Measures

Personal Protection for Emergency Situations: Contain the release and eliminate its source.

Spill Mitigation Procedures

Air Release: Low vapor pressure makes air release unlikely.

Water Release: This material is soluble in water. Notify all downstream users of possible contamination. Sweep up and containerize for reclamation or disposal. Small amounts of residue may be flushed to sewer with plenty of water.

7. Handling and Storage

Handling: Do not take internally. Avoid contact with skin, eyes and clothing. Upon contact with skin or eyes, wash with water.

Storage: Keep in a tightly closed container.
Protect against physical damage.

8. Exposure Controls and Personal Protection

Ventilation: Use general exhaust ventilation to ensure general worker safety and comfort.

Protective Equipment for Routine Use of Product Where Appropriate:

Respiratory Protection: Not generally required due to low vapor pressure of materials.

Respirator Type(s): Not normally required.

Skin: Not normally required.

Eyes: Use chemical safety goggles.

Protective Clothing Type: Impervious butyl rubber apron, boots or suit, as appropriate.

9. Physical Data

Physical State: Liquid

Color: Water white

Odor: Non descript.

pH (@ 25 Deg. C): 10.012 as made

Octanol/Water Coeff: No data

Solubility in Water: Completely

Bulk Density: Not applicable

Specific Gravity: Approx. 1.008

10. Stability and Reactivity

Stability-Reactivity Summary: Stable under normal conditions.

Reactive Properties:

Sensitivity to mechanical shock: None

Hazardous Polymerization: Will not occur

Conditions to Avoid: Exposure to moist air: hygroscopic.

Chemical Incompatibility: Acids will neutralize the alkalinity and may generate carbon dioxide.

Incompatible materials: Compatible with standard metals of construction.

Hazardous Decomposition Products: CO2 expelled when heated.

Decomposition Temperature: No data

Product Name(s): Traceable® Buffer Solution pH 10.012**Date:** March 2010**Product Number(s):** 4282, 4283 and 4289**11. Toxicological Information****Component Animal Toxicology** Sodium carbonate Sodium bicarbonate

Oral LD50 value mg/kg: 4090 (rat) 4220 (rat)

Dermal LD50 value: No data No data

Inhalation LC50 value: 2300 mg/m3/2 hr No data

Skin Irritation: This material expected to be slightly irritating with extended contact, but not a skin sensitizer.

Eye Irritation: This material is expected to be severely irritating with a pH of 10.0

Reproductive and Developmental Toxicity:

Mutagenicity: Not known or reported to be mutagenic.

Carcinogenicity: This chemical is not known or reported to be carcinogenic by any reference source including IARC, OSHA, NTP, or EPA.

12. Ecological Information**Ecological Toxicity Values:**

Environmental fate: No data.

Environmental Toxicity: This material is not expected to be toxic to aquatic life.

For Sodium Bicarbonate:

For sodium carbonate:

48 hour EC50 Daphnia magna (water flea) : 2350 mg/L. 48 Hr EC50 Daphnia magna: 265 mg/l

96 hour LC50 Lepomis macrochirus (bluegill) : > 5000 mg/L. 96 Hr LC50 Lepomis macro chirus: 300 mg/l: [static]

120 hour EC50 Nitzschia linearis (diatom) : 650 mg/L.

13. Disposal Considerations

No data provided.

14. Transportation Information

No data provided.

15. Regulatory Information

No data provided.

16. Additional Information

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