

**1. Identification**Name of the product: **Traceable Buffer Solution pH 7**

SDS Code: CC TBS pH 7 4280

Product Identification Number(s): 4280, 4287

Recommended use: Calibration and storage of pH meters/ probes.

The various codes indicate the conductivity of the various standards covered by this safety data sheet.

Use not recommended: No hazardous use known.

**2. Hazard(s) identification**

Emergency overview

OSHA Hazards:

Signal word: None (Hazards do reach threshold required for least severe category.)

Pictogram: None (Hazards do not reach threshold required for least severe category.)

May cause skin irritation

May cause eye irritation

Contains no hazardous ingredients which need to be disclosed per applicable regulations.

**3. Composition / Information on ingredients**

Chemical identity: Contains no hazardous ingredients above their cut off concentration limits.

Common name: Not applicable

Numbers of identity: Not applicable

Impurities: None of toxicological significance.

**4. First-aid measures**

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

P302+352 IF ON SKIN: Wash with soap and water

P303+361+353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.

Rinse skin with water.

P304+341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes.

Remove contact lenses if present and easy to do; continue rinsing.

Most important symptoms and effects, both acute and delayed: Mild eye discomfort.

Indication of any immediate medical attention and special treatment needed when necessary:

**5. Firefighting measures**

Suitable extinguishing media : Product is not flammable.

Use equipment appropriate for the main cause of a fire.

Precautions: Special protective equipment for firefighters: No special protective equipment required.

Flash point: Does not flash.

Autoignition temperature: Does not ignite.

Specific hazards in case of fire: Product vapors generated, mainly 1-propanol.

Special protective equipment and precaution for fire fighters:

Wear self contained breathing apparatus for fire fighting if necessary.

**6. Accidental release measures**

Personal precautions:

Spill may be slippery. Avoid breathing vapors.

Environmental precautions:

Prevent spills from entering storm sewers or drains and contact with soil.

Methods and materials for containment and cleaning up:

Vacuum or mop up for possible use or reclaim. Common industrial absorbents may be used.

Dispose as non hazardous waste.

## 7. Handling and storage

Precautions for safe handling:

Avoid contact with eyes. Avoid prolonged or repeated skin contact and breathing mists/vapors.

Conditions for safe storage, including incompatibilities:

Standard safe storage conditions are appropriate: avoid package damage and extremes in temperature: below 32° and above 120°F. Keep package closed tightly.

## 8. Exposure controls / personal protection

Information on the system design:

Product is intended for external use only. Stay up wind, out of any spray developed.

Exposure Limits:	Reference 29CFR 1910.1000 Table Z-1	
Component Name, CAS#	OSHA PEL	ACGIH TLV
	ppm	ppm
Contains no ingredients with established exposure limits.	NA*	NA

NA = Not Applicable

Personal protective equipment

Respiratory protection: No requirement anticipated.

Hand protection: Rubber gloves.

Eye protection: Safety glasses with side-shields as deemed appropriate.

Skin and body protection: Chemical resistant apron or protective suit if splashing or repeated contact with solution is likely.

Hygiene measures : Wash hands and face before breaks and immediately after handling the product.

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

Appearance: Clear colorless liquid

Odor: Nil

Odor threshold: Not available

pH-value: 7

Melting point: Approximately 0 degrees C, 32 degrees F

Freezing Point: Approximately 0 degrees C, 32 degrees F

Initial boiling point: Approximately 100°C.

Flash point: Does not flash.

Evaporation rate: Not available

Flammability (solid, gas): Not applicable

Explosion limits: Not explosive

Vapor pressure: (highest partial vapor pressure) at 20°C: Not available

Vapor density: Not available

Relative density (water=1.00): 1

Auto-ignition temperature: Not available

Solubility: Totally soluble in water at 20°C

Decomposition temperature: Not available

Partition coefficient: Log Kow = Not applicable to mixture.

Viscosity: Like water

## 10. Stability and reactivity

Chemical stability: No decomposition, if used according to specifications.

Possibility of hazardous reactions: None known.

Conditions to avoid: No dangerous conditions known.

Materials to avoid: No common materials present a hazard.  
Hazardous decomposition products: None are known. Also see Section 5.

### 11. Toxicological information

Acute Toxicity: No information available for finished product.

Oral Toxicity LD 50: Data not required.

Dermal Toxicity LD 50: Data not required.

Inhalation Toxicity, LC50: Data not required.

Eye Irritation (Rabbit) Data not required.

Dermal Irritation (Rabbit) Data not required.

Chronic Effects on Humans: Data not required.

No component >0.1% is listed by NTP, IARC, OSHA or ACGIH as a suspect or potential carcinogen.

California Prop. 65 chemicals: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Contains material which may cause damage to the following organs: kidneys, liver, CNS,

**Signs and Symptoms of Exposure:** None known at the levels in the product.

### 12. Ecological information

There is no information on the product.

Persistence and degradability:

This product is 100% inorganic and will not biodegrade.

Bio-accumulative potential: There is no evidence to suggest bioaccumulation will occur.

Mobility: Accidental spillage may lead to penetration in the soil and groundwater. However, there is no evidence that this would cause adverse ecological effects.

Ecotoxicity: The product has not been tested.

Mobility in soil: No data available.

Results of PBT and vPvB assessment: No data available

Other adverse effects: No data available.

### 13. Disposal considerations

Product as supplied is not an unlisted hazardous waste. Do not discharge to sewer.

Dispose in accordance with local, state and federal regulations.

### 14. Transport information

Domestic transport: Not classified as dangerous goods under transport regulations.

Sea transport (IMDG): Not classified as dangerous goods under transport regulations.

Air transport (IATA/CAO): Not classified as dangerous goods under transport regulations.

### 15. Regulatory information

Inventory Status:

All components are on TSCA, EINECS/ELINCS, AICS, and DSL.

U.S. Regulations:

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:

SARA (311/312) HAZARD CATEGORIES: None

Marine pollutant: No

SARA 313: This product contains the following SARA 313 Toxic Release Chemicals.

Chemical Name	CAS Number	Concentration
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None	Not applicable	Not applicable
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The following product components are cited on the lists below:

Chemical Name	CAS Number	List Citations
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No materials which meet reportable criteria.

California Prop. 65 chemicals: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**16. Other information**

MSDS Preparation date: March 12, 2015

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	XXX	XXX		
HMIS Hazard ratings: Health 0 Fire 0 Instability 0 Other B (Goggles, gloves)							
Hazard Ratings: Least: 0 Slight: 1 Moderate: 2 High: 3 Extreme: 4							

HMIS® is a registered trade and service mark of the NPCA.

Note: The information in this SDS was obtained from current reputable and competent sources.

However, the data is provided without warranty, expressed or implied, regarding its correctness or accuracy. It is the user's responsibility to determine safe conditions for the use of this product and to assume liability for loss, injury, damage or expense resulting from improper use of this product.

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is a greater potential for large-scale or prolonged exposure, in accordance with requirements of the U.S. Government's Occupational Safety and Health Administration (OSHA).

**1. Identification**

Name of the product: **Traceable Buffer Solution pH 10** SDS Code: CC TBS pH 10 4282  
Product Identification Number(s): 4282, 4283, 4289

Recommended use: Calibration and storage of pH meters/ probes.

The various codes indicate the conductivity of the various standards covered by this safety data sheet.

Use not recommended: No hazardous use known.

**2. Hazard(s) identification**

Emergency overview

OSHA Hazards:

Signal word: None (Hazards do reach threshold required for least severe category.)

Pictogram: None (Hazards do not reach threshold required for least severe category.)

May cause skin irritation

May cause eye irritation

Contains no hazardous ingredients which need to be disclosed per applicable regulations.

**3. Composition / Information on ingredients**

Chemical identity: Contains no hazardous ingredients above their cut off concentration limits.

Common name: Not applicable

Numbers of identity: Not applicable

Impurities: None of toxicological significance.

**4. First-aid measures**

P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

P302+352 IF ON SKIN: Wash with soap and water

P303+361+353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing.

Rinse skin with water.

P304+341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing

P305+351+338 IF IN EYES: Rinse continuously with water for several minutes.

Remove contact lenses if present and easy to do; continue rinsing.

Most important symptoms and effects, both acute and delayed: Mild eye discomfort.

Indication of any immediate medical attention and special treatment needed when necessary:

**5. Firefighting measures**

Suitable extinguishing media : Product is not flammable.

Use equipment appropriate for the main cause of a fire.

Precautions: Special protective equipment for firefighters: No special protective equipment required.

Flash point: Does not flash.

Autoignition temperature: Does not ignite.

Specific hazards in case of fire: Product vapors generated, mainly 1-propanol.

Special protective equipment and precaution for fire fighters:

Wear self contained breathing apparatus for fire fighting if necessary.

**6. Accidental release measures**

Personal precautions:

Spill may be slippery. Avoid breathing vapors.

Environmental precautions:

Prevent spills from entering storm sewers or drains and contact with soil.

Methods and materials for containment and cleaning up:

Vacuum or mop up for possible use or reclaim. Common industrial absorbents may be used.

Dispose as non hazardous waste.

## 7. Handling and storage

Precautions for safe handling:

Avoid contact with eyes. Avoid prolonged or repeated skin contact and breathing mists/vapors.

Conditions for safe storage, including incompatibilities:

Standard safe storage conditions are appropriate: avoid package damage and extremes in temperature: below 32° and above 120°F. Keep package closed tightly.

## 8. Exposure controls / personal protection

Information on the system design:

Product is intended for external use only. Stay up wind, out of any spray developed.

Exposure Limits:	Reference 29CFR 1910.1000 Table Z-1	
Component Name, CAS#	OSHA PEL	ACGIH TLV
	ppm	ppm
Contains no ingredients with established exposure limits.	NA*	NA

NA = Not Applicable

Personal protective equipment

Respiratory protection: No requirement anticipated.

Hand protection: Rubber gloves.

Eye protection: Safety glasses with side-shields as deemed appropriate.

Skin and body protection: Chemical resistant apron or protective suit if splashing or repeated contact with solution is likely.

Hygiene measures : Wash hands and face before breaks and immediately after handling the product.

Handle in accordance with good industrial hygiene and safety practice.

## 9. Physical and chemical properties

Appearance: Clear colorless liquid

Odor: Nil

Odor threshold: Not available

pH-value: 10

Melting point: Approximately 0 degrees C, 32 degrees F

Freezing Point: Approximately 0 degrees C, 32 degrees F

Initial boiling point: Approximately 100°C.

Flash point: Does not flash.

Evaporation rate: Not available

Flammability (solid, gas): Not applicable

Explosion limits: Not explosive

Vapor pressure: (highest partial vapor pressure) at 20°C: Not available

Vapor density: Not available

Relative density (water=1.00): 1

Auto-ignition temperature: Not available

Solubility: Totally soluble in water at 20°C

Decomposition temperature: Not available

Partition coefficient: Log Kow = Not applicable to mixture.

Viscosity: Like water

## 10. Stability and reactivity

Chemical stability: No decomposition, if used according to specifications.

Possibility of hazardous reactions: None known.

Conditions to avoid: No dangerous conditions known.

Materials to avoid: No common materials present a hazard.  
Hazardous decomposition products: None are known. Also see Section 5.

### 11. Toxicological information

Acute Toxicity: No information available for finished product.

Oral Toxicity LD 50: Data not required.

Dermal Toxicity LD 50: Data not required.

Inhalation Toxicity, LC50: Data not required.

Eye Irritation (Rabbit) Data not required.

Dermal Irritation (Rabbit) Data not required.

Chronic Effects on Humans: Data not required.

No component >0.1% is listed by NTP, IARC, OSHA or ACGIH as a suspect or potential carcinogen.

California Prop. 65 chemicals: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Contains material which may cause damage to the following organs: kidneys, liver, CNS,

**Signs and Symptoms of Exposure:** None known at the levels in the product.

### 12. Ecological information

There is no information on the product.

Persistence and degradability:

This product is 100% inorganic and will not biodegrade.

Bio-accumulative potential: There is no evidence to suggest bioaccumulation will occur.

Mobility: Accidental spillage may lead to penetration in the soil and groundwater. However, there is no evidence that this would cause adverse ecological effects.

Ecotoxicity: The product has not been tested.

Mobility in soil: No data available.

Results of PBT and vPvB assessment: No data available

Other adverse effects: No data available.

### 13. Disposal considerations

Product as supplied is not an unlisted hazardous waste. Do not discharge to sewer.

Dispose in accordance with local, state and federal regulations.

### 14. Transport information

Domestic transport: Not classified as dangerous goods under transport regulations.

Sea transport (IMDG): Not classified as dangerous goods under transport regulations.

Air transport (IATA/CAO): Not classified as dangerous goods under transport regulations.

### 15. Regulatory information

Inventory Status:

All components are on TSCA, EINECS/ELINCS, AICS, and DSL.

U.S. Regulations:

U.S. Superfund Amendments and Reauthorization Act (SARA) Title III:

SARA (311/312) HAZARD CATEGORIES: None

Marine pollutant: No

SARA 313: This product contains the following SARA 313 Toxic Release Chemicals.

Chemical Name	CAS Number	Concentration
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None	Not applicable	Not applicable
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The following product components are cited on the lists below:

Chemical Name	CAS Number	List Citations
---------------	------------	----------------

No materials which meet reportable criteria.

California Prop. 65 chemicals: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

#### 16. Other information

MSDS Preparation date: March 12, 2015

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	XXX	XXX	
HMIS Hazard ratings: Health 0 Fire 0 Instability 0 Other B (Goggles, gloves)					
Hazard Ratings: Least: 0 Slight: 1 Moderate: 2 High: 3 Extreme: 4					

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Note: The information in this SDS was obtained from current reputable and competent sources.

However, the data is provided without warranty, expressed or implied, regarding its correctness or accuracy. It is the user's responsibility to determine safe conditions for the use of this product and to assume liability for loss, injury, damage or expense resulting from improper use of this product.

This SDS is designed for workplace employees, emergency personnel and for other conditions and situations where there is a greater potential for large-scale or prolonged exposure, in accordance with requirements of the U.S. Government's Occupational Safety and Health Administration (OSHA).



## 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 7.416  
**Product Number(s):** 4286 and 4285

**Date:** March 2013

## 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 7.416  
**Product Number(s):** 4286 and 4285

**Date:** March 2013

## 11. Toxicological Information

<b>Component Animal Toxicology</b>	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---		
<b>Ingredient</b>	<b>Known</b>	<b>Anticipated</b>
Sodium Phosphate, Dibasic CAS #7558-79-4	No	No
Potassium Phosphate Monobasic CAS #7778-77-0	No	No
		<b>IARC Category</b>
		None
		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

THE PURPOSE OF THIS MSDS IS TO PROVIDE SAFE HANDLING INFORMATION FOR USERS OF THE PRODUCT. IT IS NOT INTENDED TO, NOR DOES IT, PROVIDE COMPLETE OR EXTENSIVE TRANSPORTATION, DISPOSAL, REGULATORY OR TOXICOLOGICAL DATA ON THE PRODUCT OR ITS COMPONENTS. USERS WHO REQUIRE THIS INFORMATION ARE REFERRED TO RELEVANT LOCAL, STATE AND FEDERAL REGULATIONS FOR THE INGREDIENTS OF INTEREST.

THIS MATERIAL SAFETY DATA SHEET (MSDS) HAS BEEN PREPARED IN COMPLIANCE WITH THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD, 29 CFR 1910.1200. THE INFORMATION IN THIS MSDS SHOULD BE PROVIDED TO ALL WHO WILL USE, HANDLE, STORE, TRANSPORT, OR OTHERWISE BE EXPOSED TO THIS PRODUCT. WE BELIEVE THIS INFORMATION TO BE ACCURATE, RELIABLE, AND UP TO DATE, BUT MAKE NO WARRANTY THAT IT IS.

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