

1. Identification

Name of the product: **Traceable Buffer Solution pH 10 (Blue)** SDS Code: CC TBS pH 10 4882
Product Identification Number(s): 4882, 4889

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 not 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
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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
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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 16, 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).

1. Identification

Name of the product: **Traceable Buffer Solution pH 7 (Yellow)** SDS Code: CC TBS pH 7 4881
Product Identification Number(s): 4881, 4888

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
	NA*	NA

Contains no ingredients with established exposure limits.

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 yellow 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 16, 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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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 4 (Color Red)**

Product Identification Number(s): 4880, 4887

SDS Code: CC TBS pH 4 4880

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 not 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: Potassium hydrogen phthalate <=1%

Common name: KHP, Potassium biphthalate

Numbers of identity: CAS 877-247 EC 212-889-4

Impurities: None of toxicological significance.

4. First-aid measures

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

IF ON SKIN: Wipe off. Rinse or wash with soap and water when convenient.

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: Possible eye irritation. Skin irritation.

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: None known.

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

Potassium hydrogen phthalate 877-24-7

NE

NE

NE= Not Established

Personal protective equipment

Respiratory protection: No requirement anticipated.

Hand protection: Rubber gloves.

Eye protection: Safety glasses with side-shields.

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 red liquid

Odor: Nil

Odor threshold: Not available

pH-value: 4

Melting point: Not available

Freezing Point: Not available

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): Variable

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.

	Potassium hydrogen phthalate
Oral Toxicity LD 50:	>3200 mg/kg - rat
Dermal Toxicity LD 50:	No data.
Inhalation Toxicity, LC50:	No data.
Eye Irritation (Rabbit)	No data.
Dermal Irritation (Rabbit)	No data.
Chronic Effects on Humans:	No data.

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.

Signs and Symptoms of Exposure: None known.

12. Ecological information

There is no environmental data on the product.

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.

Toxicity to fish:

No data

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
None	Not applicable	Not applicable

The following product components are cited on the lists below:

Chemical Name	CAS Number	List Citations
Potassium hydrogen phthalate	877-24-7	PA, NJ

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 16, 2015

Hazard Categories:	Health	Fire	Pressure	Reactivity	Reference 49 CFR 171.8,
Immediate	Yes	No	No	No	OSHA 29 CFR 1910.1200 and
Delayed	No	No	XXX	XXX	SARA 302/311/312/313.
HMIS Hazard ratings: Health 1 Fire 0 Instability 0 Other B (Goggles, gloves)					
Hazard Ratings: Least: 0 Slight: 1 Moderate: 2 High: 3 Extreme: 4					

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