

MATERIAL SAFETY DATA SHEETS

Milwaukee Instruments
2471 Hurt Drive
Rocky Mount, NC 27804
877-283-7837 -- Milwaukee@vol.com

Effective: 06/01/97
Cat. No. M10004B

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For assistance please contact: (508) 699-3075
Fax: (508) 699-3076
Toll Free: (877) 283-7837

SECTION I - PRODUCT IDENTIFICATION

Product Name: pH 4.01 Buffer Solution
Chemical Name: Potassium Hydrogen Phthalate Solution
Formula: KH5C6O4
Formula Weight: 204.22
CAS. Number: 887-24-7
Chemical Family: Organometallic

SECTION II - INGREDIENTS

Potassium Hydrogen Phthalate			
PCT: < 2.0%	Cas No.: 887-24-7	SARA: NA	PEL: Not established
TLV: Not established			
Hazard: NA			
Benzethonium Chloride			
PCT: < 0.01%	Cas No.: 121-54-0	SARA: NA	PEL: Not established
TLV: Not established			
Hazard: NA			
Water			
PCT: < 100%	Cas No.: NA	SARA: NA	PEL: Not established
TLV: Not established			
Hazard: NA			

SECTION III - PHYSICAL DATA

State: Liquid	Appearance: Slightly Soapy
Odor: None	Solubility: Water: NA
Other: NA	Acid: NA
Boiling Point: > 100 C	Vapor Pressure (mm Hg): NA
Melting Point: NA	Vapor Density (air = 1): NA
Specific Gravity: 1.0	Evaporation Rate: NA
pH: NA	
Storage Precautions: None	

* NA/ND - Defined as not applicable or not defined.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA
NFPA Codes: Health: 0 Flammability: 0 Reactivity: 0
Toxic Gases Produced: None
Fire Extinguishing Media: Water, carbon dioxide, foam or dry chemical

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value (TLV/TWA): NA

Toxicity: LD50 (oral-rat): Benzethonium Chloride = 420 mg/kg

This product may: Irritate eyes, skin and respiratory tract. Chronic skin exposure may cause dermatitis. High exposure to eyes may cause conjunctivitis. If swallowed, excess amounts may cause nausea, vomiting, or diarrhea.

Acute Toxicity: NA

Route of Exposure: NA

Target Organs: NA

Chronic Toxicity: ND

Routes of Exposure: NA

Target Organs: ND

Cancer Information: NA

Routes of Exposure: NA

Target Organs: NA

Overexposure: Irritate eyes, skin and respiratory tract. Chronic skin exposure may cause dermatitis. High exposure to eyes may cause conjunctivitis. If swallowed, excess amounts may cause nausea, vomiting, or diarrhea.

Medical conditions aggravated by exposure. Chronic skin exposure may cause dermatitis. High exposure to eyes may cause conjunctivitis.

SECTION VI - PRECAUTIONARY MEASURES

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

Protective equipment: Wear rubber gloves and safety glasses.

SECTION VII - FIRST AID

CALL FOR MEDICAL ASSISTANCE IMMEDIATELY.

If eye contact: Flush thoroughly with running water. Get medical assistance if irritation persists.

If skin contact: Wash exposed area with soap and water. Get medical help if irritation persists.

Ingestion: If large volume is swallowed, give large quantities of water and induce vomiting by touching finger to back of throat. Get medical attention.

SECTION VIII - REACTIVITY DATA

Stability: Stable

Hazardous Polymerization: None

Conditions to Avoid: Heat

Incompatibles: NA

Decomposition of Products: Thermal decomposition may produce toxic oxides of carbon

SECTION IX - SPILL AND DISPOSAL PROCEDURES

In Case of Spill or Release: NA

Disposal Procedure: Dispose of in accordance with all federal, state, and local regulations.

SECTION X - TRANSPORTATION DATA

Proper Shipping Name: NA

Hazard Class: NA

ID: NA

GROUP: NA

SECTION XI - REFERENCES

1) TLV's Threshold Limit Values and Biological Exposure Indices for 1988-1989. American Conference of Governmental Industrial Hygienists, 1988.

2) Air contaminants. Federal Register, Vol. 54, No. 12, Thursday, January 19, 1989, pp2332-2983.

3) Outside testing

4) In-house information

5) Technical judgment

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

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SECTION I - PRODUCT IDENTIFICATION

Product Name: pH 7.01 Buffer Solution
Chemical Name: NA
Formula: NA
Formula Weight: NA
CAS Number: NA
Chemical Family: Inorganic Salts

SECTION II - INGREDIENTS

Potassium Phosphate, monobasic PCT: < 0.5% TLV: Not established Hazard: NA	Case No.: 7778-77-0	SARA: NA PEL: Not established
Sodium Phosphate, dibasic PCT: < 0.5% TLV: Not established Hazard: NA	Case No.: 7558-79-4	SARA: NA PEL: Not established
Benzethonium Chloride PCT: < 0.01% TLV: Not established Hazard: NA	Case No.: 121-54-0	SARA: NA PEL: Not established
Water PCT: < 100% TLV: Not established Hazard: NA	Case No.: NA	SARA: NA PEL: Not established

SECTION III - PHYSICAL DATA

State: Liquid	Appearance: Slightly Soapy
Odor: None	Solubility: Water: NA
Other: NA	Acid: NA
Boiling Point: > 100 C	Vapor Pressure (mm Hg): NA
Melting Point: NA	Vapor Density (air = 1): NA
Specific Gravity: 1.0	Evaporation Rate: NA
pH: NA	
Storage Precautions: None	

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SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA
NFPA Codes: Health: 0 Flammability: 0 Reactivity: 0
Toxic Gases Produced: None
Fire Extinguishing Media: Water, carbon dioxide, foams or dry chemical

Toxicity: LD50 (oral-rat): Benzethonium = 420 mg/kg:

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value (TLV/TWA): NA
Sodium Phosphate, dibasic = 12930 mg/kg (as heptahydrate)
This product : May irritate eyes, skin, and respiratory tract.
Acute Toxicity: NA
Route of Exposure: NA
Target Organs: NA
Chronic Toxicity: ND
Routes of Exposure: NA
Target Organs: ND
Cancer Information: NA
Routes of Exposure: NA
Target Organs: NA
Overexposure: May irritate skin and eyes, respiratory tract.
Medical conditions aggravated by exposure: None reported.

SECTION VI - PRECAUTIONARY MEASURES

Avoid contact with eyes, skin, and clothing.
Wash thoroughly after handling.
Protective equipment: Adequate ventilation, rubber gloves and safety glasses.

SECTION VII - FIRST AID

CALL FOR MEDICAL ASSISTANCE IMMEDIATELY.
If eye and skin contact: Flush eyes thoroughly with running water. Wash exposed area with soap and water. Get medical help if irritation persists.
Ingestion: NA
Inhalation: NA

SECTION VIII - REACTIVITY DATA

Stability: Stable
Hazardous Polymerization: None
Conditions to Avoid: None
Incompatibles: None
Decomposition of Products: None

SECTION IX - SPILL AND DISPOSAL PROCEDURES

In Case of Spill or Release: NA
Disposal Procedure: Dispose of in accordance with all federal, state, and local regulations.

SECTION X - TRANSPORTATION DATA

Proper Shipping Name: NA
Hazard Class: NA ID: NA GROUP: NA

SECTION XI - REFERENCES

- 1) TLV's Threshold Limit Values and Biological Exposure Indices for 1988-1989. American Conference of Governmental Industrial Hygienists, 1988.
- 2) Air Contaminants, Federal Register, Vol. 54, No. 12 Thursday, January 19, 1989, pp2332-2983.
- 3) Outside Testing
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Milwaukee Instruments
2471 Hurt Drive
Rocky Mount, NC 27804
Ph - 252-443-3630 Fax 252-443-1937
Milwaukee@vol.com

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(508) 699-3075
Fax: (508) 699-3076
Toll Free: (877) 283-7837

SECTION I - PRODUCT IDENTIFICATION

Product Name: pH 10.01 Buffer Solution
Chemical Name: NA
Formula: NA
Formula Weight: NA
CAS. Number: NA
Chemical Family: Inorganic Salts

SECTION II - INGREDIENTS

Sodium Bicarbonate	PCT: < 0.5%	Cas No.: 144-55-8	SARA: NA
	TLV: Not established		PEL: Not established
	Hazard: NA		
Sodium Carbonate	PCT: < 0.5%	Cas No.: 497-19-8	SARA: NA
	TLV: Not established		PEL: Not established
	Hazard: NA		
Water	PCT: < 100%	Cas No.: NA	SARA: NA
	TLV: Not established		PEL: Not established
	Hazard: NA		

SECTION III - PHYSICAL DATA

State: Liquid	Appearance: Slightly Soapy
Odor: None	Solubility: Water: NA
Other: NA	Acid: NA
Boiling Point: > 100 C	Vapor Pressure (mm Hg): NA
Melting Point: NA	Vapor Density (air = 1): NA
Specific Gravity: 1.0	Evaporation Rate: NA
pH: NA	
Storage Precautions: None	

* NA/ND - Defined as not applicable or not defined.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA
NFPA Codes: Health: 0 Flammability: 0 Reactivity: 0
Toxic Gases Produced: None
Fire Extinguishing Media: Water, carbon dioxide, foam or dry chemical

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value (TLV/TWA): NA
Toxicity: LD50 (oral-rat): Sodium Bicarbonate = 4220 mg/kg
This product : May irritate eyes and skin.
Acute Toxicity: NA
Route of Exposure: NA
Target Organs: NA
Chronic Toxicity: ND
Routes of Exposure: NA
Target Organs: ND
Cancer Information: NA
Routes of Exposure: NA
Target Organs: NA
Overexposure: May irritate eyes and skin.
Medical conditions aggravated by exposure: None reported.

SECTION VI - PRECAUTIONARY MEASURES

Avoid contact with eyes, skin and clothing.
Wash thoroughly after handling.
Protective equipment: rubber gloves and safety glasses.

SECTION VII - FIRST AID

CALL FOR MEDICAL ASSISTANCE IMMEDIATELY.
If eye contact: Flush thoroughly with running water. Get medical help if irritation persists.
If skin contact: Wash exposed area immediately with plenty of soap and water.
Ingestion: NA
Inhalation: NA

SECTION VIII - REACTIVITY DATA

Stability: Stable
Hazardous Polymeration: None
Conditions to Avoid: None
Incompatibles: NA
Decomposition of Products: NA

SECTION IX - SPILL AND DISPOSAL PROCEDURES

In Case of Spill or Release: NA
Disposal Procedure: Dispose of in accordance with all federal, state, and local regulations.

SECTION X - TRANSPORTATION DATA

Proper Shipping Name: NA
Hazard Class: NA ID: NA GROUP: NA

SECTION X. - REFERENCES

- 1) TLV's Threshold Limit Values and Biological Exposure Indices for 1988-1989. American Conference of Governmental Industrial Hygienists. 1988.
- 2) Air Contaminants. Federal Register, Vol. 54, No. 12, Thursday, January 19, 1989. pp2332-2983.
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SECTION I - PRODUCT IDENTIFICATION

Product Name: 1,413 uS Standard Solution
Chemical Name: Potassium Chloride, aqueous solution
Formula: KCl
Formula Weight: 74.55
CAS. Number: 7447-40-7
Chemical Family: Inorganic Salt

SECTION II - INGREDIENTS

Potassium Chloride			
PCT: < 5%	Cas No.: 7447-40-7	SARA: NA	
TLV: Not established		PEL: Not established	
Hazard: NA			
Water			
PCT: < 100%	Cas No.: NA	SARA: NA	
TLV: Not established		PEL: Not established	
Hazard: NA			

SECTION III - PHYSICAL DATA

State: Liquid	Appearance: Clear and Colorless
Odor: None	Solubility: Water: NA
Other: NA	Acid: NA
Boiling Point: > 100 C	Vapor Pressure (mm Hg): NA
Melting Point: NA	Vapor Density (air = 1): NA
Specific Gravity: 1.0	Evaporation Rate: NA
pH: NA	
Storage Precautions: None	

* NA/ND - Defined as not applicable or not defined.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

Flash Point: NA
NFPA Codes: Health: NA Flammability: NA Reactivity: NA
Toxic Gases Produced: None
Fire Extinguishing Media: NA

SECTION V - HEALTH HAZARD DATA

Threshold Limit Value (TLV/TWA): NA
Toxicity: LD50 (oral-rat): NA
This product : Is Irritating to eyes.

