

Vernier Software & Technology

Material Safety Data Sheet (MSDS)

Section 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Hydrogen Phthalate Vernier pH 4 Buffer Capsules

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Section 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Potassium Hydrogen Phthalate
Synonym: potassium acid phthalate
CAS#: 877-24-7

Section 3 — HAZARDS IDENTIFICATION

Colorless crystals. Odorless.
Moderately toxic by ingestion. Dust is irritating. Avoid body tissue contact.

Section 4 — FIRST AID MEASURES

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give large quantities of water. Call a physician or poison control at once.

Section 5 — FIRE FIGHTING MEASURES

Non flammable solid.

NFPA Code: None established

Section 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Section 7 — HANDLING AND STORAGE

Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool dry place.

Section 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron. Use exhaust ventilation to keep airborne concentrations low.

Potassium hydrogen phthalate (cont.)

Section 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless crystals. Odorless.

Solubility: Soluble in water.

Formula: $\text{KHC}_8\text{H}_4\text{O}_4$

Formula Weight: 204.23

Specific Gravity: 1.636

Section 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.

Shelf life: Indefinite

Section 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritating dust

Chronic effects: N.A.

Target organs: N.A.

ORL-RAT LD₅₀: 3200 mg/kg

IHL-RAT LC₅₀: N.A.

SKN-RBT LD₅₀: N.A.

Section 12 — ECOLOGICAL INFORMATION

Data not yet available

Section 13 — DISPOSAL CONSIDERATIONS

Please consult with state and local regulations.

Section 14 — TRANSPORT INFORMATION

Shipping Name: Not regulated

Hazard Class: N/A

UN Number: N/A

N/A = Not applicable

Section 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (212-889-4).

Section 16 — OTHER INFORMATION

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Vernier Software & Technology

Material Safety Data Sheet (MSDS)

Section 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Potassium Phosphate, monobasic Vernier pH 6 and pH 7 Buffer Capsules (also contain sodium phosphate)

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Section 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Potassium Phosphate, monobasic
Synonym: potassium dihydrogen phosphate
CAS#: 7778-77-0

Section 3 — HAZARDS IDENTIFICATION

Colorless, odorless crystals.
Body tissue irritant. May cause irritation to eyes, skin, and mucous membranes.

Section 4 — FIRST AID MEASURES

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give large quantities of water. Call a physician or poison control at once.

Section 5 — FIRE FIGHTING MEASURES

Non flammable solid.

NFPA Code: None established

Section 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Section 7 — HANDLING AND STORAGE

Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool dry place. Deliquescent.

Section 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron. Use exhaust ventilation to keep airborne concentrations low.

Section 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless, odorless crystals.
Solubility: Soluble in water; insoluble in alcohol. Hygroscopic.
Formula: KH_2PO_4
Formula Weight: 136.09

Specific Gravity: 2.338
Melting Point: 253 C

Section 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers.
Shelf life: Poor; hygroscopic.

Section 11 — TOXICOLOGICAL INFORMATION

Acute effects: Eye irritant
Chronic effects: N.A.
Target organs: N.A.
ORL-RAT LD50: N.A.
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

Section 12 — ECOLOGICAL INFORMATION

Data not yet available

Section 13 — DISPOSAL CONSIDERATIONS

Please consult with state and local regulations.

Section 14 — TRANSPORT INFORMATION

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A
N/A = Not applicable

Section 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-913-4).

Section 16 — OTHER INFORMATION

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Vernier Software & Technology

Material Safety Data Sheet (MSDS)

Section 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Bicarbonate Vernier pH 10 Buffer Capsules (also contains sodium carbonate)

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Section 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Sodium Carbonate
CAS#: 144-55-8

Section 3 — HAZARDS IDENTIFICATION

White powder or crystals (frequently in lumps). Odorless.
Mildly toxic by ingestion. Dust may be irritating to respiratory system.

Section 4 — FIRST AID MEASURES

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Rinse out mouth, give 1 to 2 cups of water or milk, induce vomiting. After vomiting, give mixture of 2 Tbs. of activated charcoal mixed with one cup of water. Call a physician or poison control at once.

Section 5 — FIRE FIGHTING MEASURES

Non-combustible liquid

NFPA Code: None established

Section 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Section 7 — HANDLING AND STORAGE

Store with hydroxides, oxides, silicates and carbonates. Store in a cool dry place.

Section 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron. Use exhaust ventilation to keep airborne concentrations low.

Section 9 — PHYSICAL AND CHEMICAL PROPERTIES

White powder or crystals (frequently in lumps). Odorless.
Solubility: Soluble in water, not alcohol.
Formula: NaHCO₃
Formula Weight: 84.01

Specific Gravity: 2.159
Melting Point: loses carbon dioxide at 270 C

Section 10 — STABILITY AND REACTIVITY

Avoid contact with strong oxidizers and strong acids.
Shelf Life: Stable under dry storage conditions; slowly decomposes in moist air.

Section 11 — TOXICOLOGICAL INFORMATION

Acute effects: Gastrointestinal disturbances, irritating dust
Chronic effects: N.A.
Target organs: N.A.
ORL-RAT LD50: 4220 mg/kg
IHL-RAT LC50: N.A.
SKN-RBT LD50: N.A.

Section 12 — ECOLOGICAL INFORMATION

Data not yet available

Section 13 — DISPOSAL CONSIDERATIONS

Please consult with state and local regulations.

Section 14 — TRANSPORT INFORMATION

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A
N/A = Not applicable

Section 15 — REGULATORY INFORMATION

Not listed

Section 16 — OTHER INFORMATION

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Material Safety Data Sheet (MSDS)

Section 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Carbonate Vernier pH 10 Buffer Capsules (also contains sodium bicarbonate)

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Section 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Sodium carbonate, anhydrous
Synonym: soda ash
CAS#: 497-19-8

Section 3 — HAZARDS IDENTIFICATION

White, odorless crystals or powder.
Mildly toxic by ingestion. Irritating to body tissues. Avoid all body tissue contact.

Section 4 — FIRST AID MEASURES

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give no more than 1-2 cups of water for dilution. Do not induce vomiting. Call a physician or poison control at once.

Section 5 — FIRE FIGHTING MEASURES

Non flammable solid.
When heated to decomposition, emits toxic fumes of Na₂O.
Fire Fighting Instructions: Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive mode.
NFPA Code: None established

Section 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Section 7 — HANDLING AND STORAGE

Store with hydroxides, oxides, silicates and carbonates.
Store in a cool dry place. Deliquescent.

Section 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron. Use exhaust ventilation to keep airborne concentrations low.

Section 9 — PHYSICAL AND CHEMICAL PROPERTIES

White, odorless crystals or powder. Specific Gravity: 2.53
Soluble in water and glycerol; not in alcohol. Hygroscopic. Melting Point: 851 C
Formula: Na₂CO₃
Formula Weight: 105.99

Section 10 — STABILITY AND REACTIVITY

Avoid contact with acids, aluminum. Reacts vigorously with fluorine.
Shelf Life: Hygroscopic, keep tightly closed.

Section 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant ORL-RAT LD50: 4090 mg/kg
Chronic effects: N.A. IHL-RAT LC50: 2300 mg/m³/2H
Target organs: N.A. SKN-RBT LD50: N.A.

Section 12 — ECOLOGICAL INFORMATION

Data not yet available

Section 13 — DISPOSAL CONSIDERATIONS

Please consult with state and local regulations.

Section 14 — TRANSPORT INFORMATION

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A
N/A = Not applicable

Section 15 — REGULATORY INFORMATION

Not listed

Section 16 — OTHER INFORMATION

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Material Safety Data Sheet (MSDS)

Section 1 — CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Sodium Phosphate, dibasic Vernier pH 6 and pH 7 Buffer Capsules (also contain potassium phosphate)

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Section 2 — COMPOSITION, INFORMATION ON INGREDIENTS

Sodium Phosphate, dibasic, anhydrous
Synonym: DSP, disodium hydrogen phosphate
CAS#: 7558-79-4

Section 3 — HAZARDS IDENTIFICATION

Colorless, translucent crystals or powder. Odorless.
Mildly toxic by ingestion. Body tissue irritant. Avoid all body tissue contact.

Section 4 — FIRST AID MEASURES

Call a physician, seek medical attention for further treatment, observation and support after first aid.
Inhalation: Remove to fresh air at once. If breathing has stopped give artificial respiration immediately.
Eye: Immediately flush with fresh water for 15 minutes.
External: Wash continuously with fresh water for 15 minutes.
Internal: Give large quantities of water. Call a physician or poison control at once.

Section 5 — FIRE FIGHTING MEASURES

Non flammable solid.
When heated to decomposition, emits toxic fumes of PO_x and Na₂O.
Fire Fighting Instructions: Use triclass, dry chemical fire extinguisher. Firefighters should wear PPE and SCBA with full facepiece operated in positive mode.
NFPA Code: None established

Section 6 — ACCIDENTAL RELEASE MEASURES

Restrict unprotected personnel from area. Sweep up, place in sealed bag or container and dispose. Ventilate area and wash spill site after material pickup is complete. See Sections 8 and 13 for further information.

Section 7 — HANDLING AND STORAGE

Store with acetates, halides, sulfates, sulfites, thiosulfates and phosphates. Store in a cool dry place. Deliquescent.

Section 8 — EXPOSURE CONTROLS, PERSONAL PROTECTION

Avoid contact with eyes, skin and clothing. Wear chemical splash goggles, chemical-resistant gloves and chemical-resistant apron.
Use exhaust ventilation to keep airborne concentrations low.

Section 9 — PHYSICAL AND CHEMICAL PROPERTIES

Colorless, translucent crystals or powder. Odorless.
Solubility: Soluble in water; very soluble in alcohol.
Formula: Na₂HPO₄
Formula Weight: 141.96

Section 10 — STABILITY AND REACTIVITY

Avoid contact with strong acids.
Shelf life: Hygroscopic, keep tightly closed.

Section 11 — TOXICOLOGICAL INFORMATION

Acute effects: Irritant	ORL-RAT LD50: 17 gm/kg
Chronic effects: N.A.	IHL-RAT LC50: N.A.
Target organs: N.A.	SKN-RBT LD50: N.A.

Section 12 — ECOLOGICAL INFORMATION

Data not yet available

Section 13 — DISPOSAL CONSIDERATIONS

Please consult with state and local regulations.

Section 14 — TRANSPORT INFORMATION

Shipping Name: Not regulated
Hazard Class: N/A
UN Number: N/A
N/A = Not applicable

Section 15 — REGULATORY INFORMATION

TSCA-listed, EINECS-listed (231-448-7).

Section 16 — OTHER INFORMATION

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