SIEMENS

Siemens Industry, Inc.
Water Technologies Business Unit

Material Safety Data Sheet

SECTION 1 – CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: Buffer Salt - pH 7.0
Part Number: none **Chemical Family**: Phosphate Buffer

Manufacturer's Name: Siemens Industry, Inc. - Water Technologies Business Unit
Address: 181 Thorn Hill Road, Warrendale, PA 15086
Product/Technical Information Phone Number: 724-772-0044
Medical/Handling Emergency Phone Number: CHEMTREC 1-800-424-9300
24 hours a day
Transportation Emergency Phone Number: CHEMTREC 1-800-424-9300
24 hours a day
Issue Date: August 18, 2000
Revision Date/Revision Number: April 2011/ Rev 1

SECTION 2 – COMPOSITION INFORMATION

Chemical Name	Percent by Weight	CAS#
Sodium Phosphate Dibasic	30-70	7558-79-4
Potassium Phosphate Monobasic	30-70	7778-77-0
Proprietary Ingredient	<3	proprietary

SECTION 3 – HAZARDS IDENTIFICATION

Appearance & Odor: Yellow powder

Emergency Overview: May cause skin, eye and respiratory tract irritation. Harmful if swallowed or inhaled.

Fire & Explosion Hazards: Not considered a fire or explosion hazard.

Primary Route(s) of Exposure: ingestion, skin contact, eye contact

Inhalation – Acute Effects: May cause mild respiratory tract irritation. Inhalation causes nose, throat and mucous membrane irritation, coughing and/or difficult breathing.

Skin Contact – Acute Effects: Skin contact may cause mild irritation, inflammation and pain. Slowly absorbed by skin, may cause chronic poisoning.

Eye Contact – Acute Effects: Eye contact may cause irritation, redness and pain.

Ingestion – Acute Effects: Ingestion may cause nausea, vomiting, lethargy, diarrhea, abdominal discomfort, blood chemistry effects, heart disturbances and central nervous system effects. Acute overdose by mouth is rare because large single doses usually induce vomiting and because in the absence of pre-existing kidney damage, potassium is rapidly excreted.

SECTION 4 – FIRST AID MEASURES

Inhalation First Aid: Remove affected person from area to fresh air and provide oxygen if breathing is difficult. Give artificial respiration ONLY if breathing has stopped and give CPR ONLY if there is no breathing and no pulse. Obtain medical attention.

Skin Contact First Aid: Immediately remove clothing from affected area and wash skin for 15 minutes with flowing water. Clothing should be discarded or washed before reuse. Obtain medical assistance if irritation develops. DO NOT instruct person to neutralize affected skin area.

Eye Contact First Aid: Immediately irrigate eyes with flowing water continuously for 15 minutes while holding eyes open. Contacts should be removed before or during flushing. Seek medical assistance if irritation develops. DO NOT instruct person to neutralize.

Ingestion First Aid: If victim is alert and not convulsing rinse mouth with water and give plenty of water to drink. If spontaneous vomiting occurs, have affected person lean forward with head down to avoid breathing in of vomitus. Rinse mouth again and give more water to drink. Obtain medical attention.

Medical Conditions Aggravated: Persons with pre-existing skin disorders or eye problems, jaw/tooth abnormalities, or impaired liver, kidney or respiratory function may be more susceptible to the effects of this product.

Note to Physician: Treat patient symptomatically.

SECTION 5 – FIRE FIGHTING MEASURES

Flash Point/Method: not flammable

Auto Ignition Temperature: not applicable

Upper/Lower Explosion Limits: not applicable

Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Fire Fighting Procedures: Firefighters should wear proper protective equipment and self-contained (positive pressure if available) breathing apparatus with full facepiece.

Fire & Explosion Hazards: Not considered a fire or explosion hazard.

Hazardous Products of Decomposition and/or Combustion: Sodium and phosphorus oxides may form when heated to decomposition.

NFPA Ratings:

HEALTH- 1 FLAMMABILITY- 0 REACTIVITY- 0 OTHER- none

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Spill/Leak Procedure: Ventilate area of spill.

Cleanup: Sweep up material with a clean shovel and place into clean, dry container for reclamation or disposal. Clean up spills in a manner that does not disperse dust into the air. Material that cannot be used or chemically reprocessed and empty containers should be

disposed of in accordance with all applicable regulations. Product containers should be thoroughly emptied before disposal.
Regulatory Requirements: All disposal methods must be in compliance with all Federal, State, Local and Provincial laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

Disposal: Material that cannot be used or chemically reprocessed and empty containers should be disposed of in accordance with all applicable regulations. Product containers should be thoroughly emptied before disposal. DO NOT DUMP INTO ANY SEWERS, ON THE GROUND OR INTO ANY BODY OF WATER. All disposal methods must be in compliance with all Federal, State, Local and Provincial laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Generators of waste material are required to evaluate all waste for compliance the RCRA and any local disposal procedures and regulations. NOTE: State and local regulations may be more stringent than federal regulations

SECTION 7 – HANDLING AND STORAGE

Handling: Avoid dispersion into air. Follow good handling and housekeeping practices to minimize spills, generation of airborne dusts, and accumulation of dusts on exposed surfaces.

Storage: Keep in a tightly closed container in a cool, dry, ventilated area.

General Comments: Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

SECTION 8 –PERSONAL PROTECTION/ EXPOSURE CONTROL

Respiratory Protection: Use of a dust mask is recommended.

Skin Protection: Wear appropriate dust resistant clothing and rubber gloves.

Eye Protection: Safety glasses with side shields are recommended for any type of handling. Where eye contact or dusty conditions may be likely, dust tight goggles are recommended.

Ventilation Protection: Use general or local exhaust.

Other Protection: Safety showers, with quick opening valves which stay open, and eye wash fountains, or other means of washing the eyes with a gentle flow of cool to tepid tap water, should be readily available in all areas where this material is handled or stored.
Water should be supplied through insulated and heat-traced lines to prevent freeze-ups in cold weather.

Exposure Limits:
Sodium Phosphate Dibasic and Potassium Phosphate Monobasic:
OSHA PEL-TWA: 15 mg/m3 total dust, 5 mg/m3 respirable fraction for nuisance dusts
ACGIH TLV-TWA: 10 mg/m3 total dust containing no asbestos and <1% crystalline silica for Particulates Not Otherwise Classified (PNOC).

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Yellow powder

Vapor Pressure: NA*

Vapor Density (Air=1): NA

Boiling Point: NA

Melting Point: ND**

Specific Gravity: ND

Solubility in Water: Complete

Volatile Percentage: ND

pH: ND

Flash Point/method: NA

Auto Ignition Temperature: NA

Upper/Lower Explosion Limits: NA

Other: ND

*NA=Not applicable
**ND=Not determined

SECTION 10 – STABILITY AND REACTIVITY

Stability: Stable under ordinary conditions of use and storage.

Incompatibilities: acids, alkaloids, lead acetate, antipyrine, chloral hydrate, resorcinol, pyrogallol, and metals

Polymerization: Will not occur.

Decomposition: Sodium and phosphorus oxides may form when heated to decomposition.

Conditions to Avoid: incompatible materials

SECTION 11 – TOXICOLOGICAL INFORMATION

Inhalation – Acute: May cause mild respiratory tract irritation. Inhalation causes nose, throat and mucous membrane irritation, coughing and/or difficult breathing.

Inhalation – Chronic: May sequester calcium and cause calcium phosphate deposits in the kidneys. Chronic inhalation may induce systemic phosphorous poisoning. Liver damage, kidney damage, jaw/tooth abnormalities, blood disorders and cardiovascular effects can result.

Skin Contact – Acute: Skin contact may cause mild irritation, inflammation and pain. Slowly absorbed by skin, may cause chronic poisoning.

Skin Contact – Chronic: Repeated or prolonged skin contact may cause dermatitis.

Eye Contact – Acute: Eye contact may cause irritation, redness and pain.

Ingestion – Acute: Ingestion may cause nausea, vomiting, lethargy, diarrhea, abdominal discomfort, blood chemistry effects, heart disturbances and central nervous system effects.

Acute overdose by mouth is rare because large single doses usually induce vomiting and because in the absence of pre-existing kidney damage, potassium is rapidly excreted. Symptoms of potassium overdose include paresthesias of the extremities, listlessness, mental confusions, weakness or heaviness of the legs, flaccid paralysis, cold skin, gray pallor, peripheral vascular collapse with fall in blood pressure, cardiac arrhythmias, and heart blockage. The toxicity of phosphates is because of their ability to sequester calcium. The Sodium Phosphate Dibasic oral LD50 (rat) is 17 gm/kg.

Ingestion – Chronic: May sequester calcium and cause calcium phosphate deposits in the kidneys. Chronic ingestion may induce systemic phosphorous poisoning. Liver damage, kidney damage, jaw/tooth abnormalities, blood disorders and cardiovascular effects can result.

Carcinogenicity/Mutagenicity: There are no known carcinogenic/mutagenic effects.

Reproductive Effects: There are no known reproductive effects.

Neurotoxicity: There are no known neurotoxic effects.

Other Effects: There are no other known toxic effects.

Target Organs: This product will affect the skin, eyes, respiratory system, digestive system, liver, kidneys, heart and blood.

SECTION 12 – ECOLOGICAL INFORMATION

There is no known ecological information.

SECTION 13 – DISPOSAL CONSIDERATIONS

Spill/Leak Procedure: Ventilate area of spill.

Cleanup: Sweep up material with a clean shovel and place into clean, dry container for reclamation or disposal. Clean up spills in a manner that does not disperse dust into the air. Material that cannot be used or chemically reprocessed and empty containers should be disposed of in accordance with all applicable regulations. Product containers should be thoroughly emptied before disposal.

Regulatory Requirements: All disposal methods must be in compliance with all Federal, State, Local and Provincial laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator.

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for compliance the RCRA and any local disposal procedures and regulations. NOTE: State and local regulations may be more stringent than federal regulations.

SECTION 14 – TRANSPORTATION INFORMATION

DOT Shipping Description: Not regulated by D.O.T.

SECTION 15 – REGULATORY INFORMATION

CERCLA SECTION 103 (40CFR302.4): yes RQ: 5000 lbs [Sodium Phosphate Dibasic]
SARA SECTION 302 (40CFR355.30): no
SARA SECTION 304 (40CFR355.40): no
SARA SECTION 313 (40CFR372.65): no
OSHA PROCESS SAFETY (29CFR1910.119): no
CALIFORNIA PROPOSITION 65: no

SECTION 16 – OTHER INFORMATION

Disclaimer: The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the user thereof. It is the buyer's responsibility to ensure that its activities comply with federal, state, provincial and local laws.

Revision Indicator: April 2011, Revised Section 1 (Updated manufacturer's name)