

## Material Safety Data Sheet

### SECTION 1 – CHEMICAL PRODUCT AND COMPANY INFORMATION

**Product Name:** Bioxide® S

**Chemical Family:** Sodium Nitrate Solution

**Manufacturer's Name:** Siemens Industry, Inc. - Water Technologies Business Unit

**Address:** 2650 Tallevast Road, Sarasota, FL 34243

**Product/Technical Information Phone Number:** (941) 355.2971

**Medical/Handling Emergency Phone Number:** CHEMTREC (800) 424.9300

24 hours a day

**Transportation Emergency Phone Number:** CHEMTREC (800) 424.9300

24 hours a day

**Issue Date:** December 2003

**Revision Number / Date:** Rev 2 April 2011

### SECTION 2 – COMPOSITION INFORMATION

<u>Chemical Name</u>	<u>Percent by Weight</u>	<u>CAS#</u>
Sodium Nitrate	39%	7631-99-4
Water	61%	7732-18-5

### SECTION 3 – HAZARDS IDENTIFICATION

**Appearance & Odor:** Odorless, colorless liquid.

**Emergency Overview:** May cause skin, eye, respiratory and digestive tract irritation.

**Fire & Explosion Hazards:** Minimal. Gives off irritating or toxic fumes (or gases) in a fire.

**Primary Route(s) of Exposure:** Skin and eye contact, ingestion and inhalation.

**Inhalation – Acute Effects:** Inhalation of vapors or mists may cause mild nasal irritation, coughing, or labored breathing.

**Skin Contact – Acute Effects:** Skin contact may cause redness, irritation, or rash particularly if skin is broken at point of contact.

**Eye Contact – Acute Effects:** Eye contact may cause irritation.

**Ingestion – Acute Effects:** May be harmful if swallowed. Swallowing large amounts may cause dizziness, abdominal cramps, weakness, nausea, vomiting, bloody diarrhea, headaches, and methemoglobin formation.

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### 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. Obtain medical attention.

**Skin Contact First Aid:** Immediately remove clothing from affected area and wash skin with flowing water and soap. Clothing should be washed before reuse. DO NOT instruct person to neutralize affected skin area. Obtain medical attention if irritation persists.

**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. DO NOT instruct person to neutralize. Obtain medical attention if irritation develops.

**Ingestion First Aid:** If victim is alert and not convulsing rinse mouth with water and give water to drink. Qualified personnel may induce vomiting. When 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:** None known.

**Note to Physician:** Treat symptomatically.

### SECTION 5 – FIRE FIGHTING MEASURES

**Flash Point/Method:** Not applicable

**Auto Ignition Temperature:** Not applicable

**Upper/Lower Explosion Limits:** Not applicable

**Extinguishing Media:** Use media appropriate for surrounding material.

**Fire Fighting Procedures:** Remove containers from fire if it is possible to do so without risk. Cool containers exposed to flames with water. Wear appropriate protective clothing and a NIOSH/OSHA approved self-contained breathing apparatus.

**Fire & Explosion Hazards:** Minimal. Gives off irritating or toxic fumes (or gases) in a fire.

**Hazardous Products of Decomposition and/or Combustion:** This solution decomposes on heating producing nitrogen oxides and oxygen, which increases fire hazard.

**NFPA Ratings:** HEALTH- 1 FLAMMABILITY- 0 REACTIVITY- 1 OTHER- OX

### SECTION 6 – ACCIDENTAL RELEASE MEASURES

Wear appropriate personal protective equipment (See Section 8). Stop leak if safe to do so without risk. Ventilate area. If safe to do so, absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Flush area with flooding amounts of water. DO NOT DUMP ON THE GROUND OR INTO ANY BODY OF WATER. All disposal methods

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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.

### SECTION 7 – HANDLING AND STORAGE

**Handling:** Wash thoroughly after handling. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Do not ingest or inhale. Wear all recommended personal protective equipment (See Section 8).

**Storage:** Store away from food, beverages, and incompatible materials.

**General Comments:** Rinse empty containers with water only.

### SECTION 8 –PERSONAL PROTECTION/ EXPOSURE CONTROL

**Respiratory Protection:** None required under normal use conditions.

**Skin Protection:** Wear rubber gloves and other protective clothing such as coveralls and rubber boots as appropriate to prevent skin contact.

**Eye Protection:** Wear safety glasses with side shields or goggles. Faceshield recommended when connecting and disconnecting piping.

**Ventilation Protection:** None required under normal use conditions. If vapors or mist form use adequate general and mechanical exhaust ventilation.

**Other Protection:** Recommend means of washing the eyes with a gentle flow of cool to tepid water be readily available in all areas where this material is handled or stored. Employees should wash their hands and face before eating, drinking, or using tobacco products. Educate and train employees on the safe handling of this product.

**Exposure Limits:** Exposure limits have not been established for this product.

### SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

**Appearance & Odor:** Odorless, colorless liquid.

**Vapor Pressure:** Not applicable

**Vapor Density (Air=1):** Not applicable

**Boiling Point:** (of solution) 220° F

**Melting Point:** Not applicable

**Specific Gravity:** 1.3 (10.9 lbs/gal) @20°C

**Solubility in Water:** Complete

**Volatile Percentage:** Not determined

**pH:** Not determined

**Flash Point/method:** Not applicable

**Auto Ignition Temperature:** Not applicable

**Upper/Lower Explosion Limits:** Not applicable

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### SECTION 10 – STABILITY AND REACTIVITY

**Stability:** This product is stable under normal use conditions.

**Incompatibilities:** Incompatible with reducing materials, cyanides, organic matter, sulfites, and metabisulfites.

**Polymerization:** Hazardous polymerization will not occur.

**Decomposition:** This solution decomposes on heating producing nitrogen oxides and oxygen, which increases fire hazard.

**Conditions to Avoid:** Avoid evaporation to dryness. Heat and acids will cause release of nitrogen oxides.

### SECTION 11 – TOXICOLOGICAL INFORMATION

**Inhalation – Acute:** Inhalation of vapors or mists may cause mild nasal irritation, coughing, or labored breathing.

**Inhalation – Chronic:** There are no known chronic inhalation effects.

**Skin Contact – Acute:** Skin contact may cause redness, irritation, or rash particularly if skin is broken at point of contact.

**Skin Contact – Chronic:** There are no known chronic dermal effects.

**Eye Contact – Acute:** Eye contact may cause irritation.

**Ingestion – Acute:** May be harmful if swallowed. Swallowing large amounts may cause dizziness, abdominal cramps, weakness, nausea, vomiting, bloody diarrhea, headaches, and methemoglobin formation.

**Ingestion – Chronic:** There are no known chronic ingestion effects.

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

**Reproductive Effects:** There are no known reproductive effects.

**Neurotoxicity:** May cause general depression, headache, and mental impairment.

**Other Effects:** The substance may cause effects on the blood, resulting in formation of methemoglobin when ingested. Constant oral intake of nitrate containing foods or water could lead to the formation of carcinogenic N-Nitroso compounds.

**Target Organs:** Target organs include the skin, eyes, digestive tract, and respiratory system.

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### SECTION 12 – ECOLOGICAL INFORMATION

The ecological effects are not known. Safely store product to prevent inadvertent release to the environment and water supplies.

### SECTION 13 – DISPOSAL CONSIDERATIONS

Material that cannot be used, or chemically reprocessed for use, and empty containers should be disposed of in accordance with all applicable regulations. Product containers should be thoroughly emptied before disposal. Generators of waste material are required to evaluate all waste for compliance with 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:** Non-regulated

### SECTION 15 – REGULATORY INFORMATION

CERCLA SECTION 103 (40CFR302.4): no

RQ: none

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:** Legal Entity name change 04/01/11