

Material Safety Data Sheet

SECTION 1 – CHEMICAL PRODUCT AND COMPANY INFORMATION

Product: Bioxide AE 48

Chemical Family: Odor Control Compound

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: February 2007

Revision Number / Date: Rev 2 April 2011

SECTION 2 – COMPOSITION INFORMATION

<u>Chemical Name</u>	<u>Percent by Weight</u>	<u>CAS#</u>
Sodium Nitrite	28-44	7632-00-0
Sodium Nitrate	0.1-20	7631-99-4
Water	Balance	7732-18-5

SECTION 3 – HAZARDS IDENTIFICATION

Appearance & Odor: Clear pale yellow liquid. Odorless

Emergency Overview: Liquid and mists will irritate the eyes, skin, and respiratory tract. Do not allow the liquid to evaporate to dryness. Harmful and possible fatal if large quantities are swallowed.

Fire & Explosion Hazards: Not flammable.

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

Inhalation – Acute Effects: Inhalation of mist may cause irritation of the respiratory tract. Inhalation of large amounts may cause cyanosis, marked fall in blood pressure, collapse, coma, and possibly death.

Skin Contact – Acute Effects: Contact with liquid or mist may cause irritation.

Eye Contact – Acute Effects: Contact with liquid or mist may cause irritation.

Ingestion – Acute Effects: Harmful if swallowed. May cause irritation of the gastrointestinal tract. Ingestion of large amounts may cause poisoning and may be fatal.

SECTION 4 – FIRST AID MEASURES

Inhalation First Aid: Remove affected person to fresh air and provide oxygen if breathing is difficult. Give artificial respiration ONLY if breathing has stopped. Obtain medical attention.

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Skin Contact First Aid: Immediately remove clothing from affected area and wash skin with flowing water. Clothing should be washed before reuse. 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. Obtain medical attention if irritation persists.

Ingestion First Aid: If victim is alert, rinse mouth with water and give lots of water to drink. If spontaneous vomiting occurs, have affected person lean forward with head down to avoid breathing in vomitus. Rinse mouth again and give more water to drink. Administer oxygen if cyanosis (blue skin) develops provided a qualified person administers the oxygen. Obtain medical attention immediately.

Medical Conditions Aggravated: None known

Note to Physician: Sodium nitrite, a component of this product, forms methemoglobin in the blood stream. Treat 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 flooding amounts of water in early fire stages. Carbon dioxide may also be used. DO NOT use ammonium phosphate dry chemical.

Fire Fighting Procedures: Firefighters should wear full protective clothing and a NIOSH/OSHA approved self-contained breathing apparatus, as nitrogen oxides may be present.

Fire & Explosion Hazards: If evaporated to dryness, residue is an oxidizer and can stimulate or accelerate combustion of organic or other combustible materials.

Hazardous Products of Decomposition and/or Combustion: If evaporated, the residue is a dangerous fire risk when heated to 1000° F, and may explode. This residue is also likely to yield on heating toxic brown fumes of nitrogen oxides. These are corrosive and oxidizing.

NFPA Ratings: HEALTH - 2 FLAMMABILITY - 0 REACTIVITY - 1

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. Do not use organic materials, such as wood shavings, wood dust, or paper, to absorb spills. Flush area with flooding amounts of water.

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DO NOT DUMP 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.

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 breathe mists or vapors. Keep away from combustible materials. Wear all recommended personal protective equipment (See Section 8).

Storage: Protect from physical damage. Store in a cool place away from combustible materials and wooden floors. Keep containers tightly closed. Secondary containment for all storage tanks is recommended. Keep product from freezing. Do not store in areas where the liquid may evaporate

SECTION 8 –PERSONAL PROTECTION/ EXPOSURE CONTROL

Respiratory Protection: If use conditions generate mists or vapors wear a NIOSH-approved respirator with mist or nitrogen oxide gas cartridges.

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

Eye Protection: Wear chemical goggles. Wear a faceshield when connecting and disconnecting piping or if splashing is likely. Do not wear contact lenses.

Ventilation Protection: Under normal use conditions general exhaust ventilation should be adequate. If use conditions generate vapors or mists use local 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.

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

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: Clear pale yellow liquid. Odorless

Vapor Pressure: Not applicable

Vapor Density (Air=1): Not applicable

Boiling Point: 120° C

Freezing Point: - 12° C

Specific Gravity: 1.31 – 1.37 @ 70° F

Solubility in Water: Complete

Volatile Percentage: Not applicable

pH: 9-10

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SECTION 10 – STABILITY AND REACTIVITY

Stability: Normally stable. Avoid heat, especially heating to dryness, which increases the probability and the hazard of oxidizing reactions.

Incompatibilities: Reducing agents, e.g. cyanides, thiocyanates, thiosulfates, ammonium salts can cause vigorous reactions, sometimes explosive. Some combustibles, organics, and water-reactive substances, such as oleum cause exothermic reactions. Acids: material decomposed even by weak acids with evolution of brown fumes of N_2O_3 . It is slowly oxidized to sodium nitrate when exposed to air.

Polymerization: Hazardous polymerization will not occur.

Decomposition: If evaporated, the residue is a dangerous fire risk when heated to 1000° F, and may explode. This residue is also likely to yield on heating toxic brown fumes of nitrogen oxides. These are corrosive and oxidizing.

Conditions to Avoid: High temperatures.

SECTION 11 – TOXICOLOGICAL INFORMATION

Toxicological Data: Toxicological data for this product have not been developed. However, for its individual components:

Sodium nitrite: Oral (rat) LD50 = 132 mg/kg; Inhalation (rat) LC50 = 5.5 mg/m³

Sodium nitrate: Oral (rat) LD50 = 1267 mg/kg.

Chronic Effects: There are no known chronic effects of this product. However, possible chronic effects of sodium nitrite, a component of this product, include reproductive and fetal effects including fetal toxicity in pregnant animals fed toxic doses. Possible chronic effects of sodium nitrate, another component of this product, include possible reactions with secondary and tertiary amines to form nitrosamines, some of which are suspect cancer agents.

SECTION 12 – ECOLOGICAL INFORMATION

The ecological effects of this product are not known. However, for the sodium nitrite component: Minnows exhibited no effects when exposed for 24 hr in fresh water containing 17.1 ppm.

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 Name:

Environmentally Hazardous Substance, n.o.s., 9, UN3082, III

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SECTION 15 – REGULATORY INFORMATION

OSHA: Health hazard

CERCLA Hazardous Material: yes RQ: sodium nitrite = 100 lb (23 gallons of solution)

SARA Section 311/312:

Acute health = yes

Chronic health = no

Fire hazard = no

Pressure release hazard = no

Reactivity hazard = no

SARA Section 313:

Sodium nitrite CAS 7632-00-0 28 – 44 %

OSHA Process Safety Standard: 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