

Material Safety Data Sheet

SECTION 1 – CHEMICAL PRODUCT AND COMPANY INFORMATION

Product Name: Sodium Nitrate

Chemical Family: Nitrates

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 1.800.424.9300
24 hours a day

Transportation Emergency Phone Number: CHEMTREC 1.800.424.9300
24 hours a day

Issue Date: April 2000

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SECTION 2 – COMPOSITION INFORMATION

<u>Chemical Name</u>	<u>Percent by Weight</u>	<u>CAS#</u>
Sodium Nitrate*	97.0	7631-99-4

*The remaining components are considered non-hazardous by OSHA's Hazard Communication Standard 20 CFR 1200.1910.

SECTION 3 – HAZARDS IDENTIFICATION

Appearance & Odor: White solid pellets.

Emergency Overview: Causes skin, eye, and digestive tract irritation. This substance is a strong oxidant and reacts with combustible and reducing materials, causing a fire and explosion hazard.

Fire & Explosion Hazards: This product is an oxidizer. Keep away from reducing agents and combustible materials. Product will explode if heated to 1,000°F in the presence of reducing agents, organic materials, or mixed with cyanides.

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

Inhalation – Acute Effects: May cause dizziness, abdominal cramps, vomiting, headache, mental impairment, coughing, labored breathing or cyanosis.

Skin Contact – Acute Effects: Skin contact may cause redness and irritation to the skin.

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

Ingestion – Acute Effects: Ingestion may cause abdominal pain and cramps, blue lips or fingernails, blue skin, convulsions, diarrhea, vomiting, weakness, dizziness, headache, labored breathing and collapse.

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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 for 15 minutes with flowing water. Clothing should be discarded or 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 affected skin area. Obtain medical attention.

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: People with ulcerative lesions of the bowel and infants seem to be at special risk following ingestion of nitrates. Individuals with diseases of the kidneys and lungs should also take special precautions from exposure.

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: Small Fires: Use dry chemical, CO₂, water spray or foam. Large Fires: Use water spray, fog, or foam.

Fire Fighting Procedures: Remove containers from fire if it is possible to do so without risk. Cool containers exposed to flames with water. Use NIOSH/OSHA approved self-contained breathing apparatus where this material is involved in a fire.

Fire & Explosion Hazards: This product is an oxidizer. Keep away from reducing agents and combustible materials. Product will explode if heated to 1,000°F in the presence of reducing agents, organic materials, or mixed with cyanides.

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

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

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SECTION 6 – ACCIDENTAL RELEASE MEASURES

Cleanup: Sweep or shovel up product dispose in sanitary landfill.

Disposal: 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 waster generator.

SECTION 7 – HANDLING AND STORAGE

Handling: Wear recommended personal protective equipment (PPE).

Storage: Store this product away from combustible and reducing agents and liquids with low flash points. Storage area should be cool, dry, well ventilated, and fireproof.

General Comments: Wood and empty paper bags used to hold this product should be removed from the premises.

SECTION 8 –PERSONAL PROTECTION/ EXPOSURE CONTROL

Respiratory Protection: Wear NIOSH/OSHA approved dust type respirator.

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

Eye Protection: Use of safety goggles is recommended.

Ventilation Protection: Use general mechanical ventilation.

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 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:

Exposure limits have not been established for this product.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Odor: White pellets

Boiling Point: 380°C

Melting Point: 306.5°C

Specific Gravity: 2.25

Solubility in Water: 92.1 g/100ml @ 25°C

Volatile Percentage: 0

pH: Not determined

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SECTION 10 – STABILITY AND REACTIVITY

Stability: This product is stable under normal use conditions.

Incompatibilities: Keep away from reducing agents and flammable or combustible materials.

Polymerization: Hazardous polymerization will not occur.

Decomposition: Hazardous decomposition produces nitrogen oxides and oxygen.

Conditions to Avoid: This product will explode if heated to 1,000°F in the presence of reducing agents, organic materials, or mixed with cyanides.

SECTION 11 – TOXICOLOGICAL INFORMATION

Inhalation – Acute: Inhalation may cause dizziness, abdominal cramps, vomiting, headache, mental impairment, coughing, labored breathing or cyanosis. Both normal and asthmatic adults who breathed submicronic aerosol of sodium nitrate (up to 1 mg/cu M) for 10 minutes showed no significant changes in lung volume, distribution of ventilation, ear oximetry, dynamic mechanics of breathing and oscillation mechanics of the chest-lung system.

Inhalation – Chronic: No chronic inhalation effects are known.

Skin Contact – Acute: Skin contact may cause redness and irritation to the skin.

Skin Contact – Chronic: No chronic dermal effects are known.

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

Ingestion – Acute: Ingestion may cause abdominal pain and cramps, blue lips or fingernails, blue skin, convulsions, diarrhea, vomiting, weakness, dizziness, headache, labored breathing and collapse. The probable oral lethal dose for a human is 0.5-5 g/kg – between 1 ounce and 1 pint (or 1 pound) for a 70 kg person (150 lbs.).

Ingestion – Chronic: Anemia, methemoglobinemia, nephritis may occur with chronic overexposure. Small repeated doses may cause headache and mental impairment.

Carcinogenicity/Mutagenicity: No carcinogenic or mutagenic properties for this product are known.

Reproductive Effects: No reproductive effects of this product are known.

Neurotoxicity: No neurotoxic effects for this product are known.

Other Effects: No effects of chronic exposure are known at industrial use levels. Constant oral intake of nitrate containing foods or water could lead to the formation of carcinogenic N-Nitroso compounds. Sodium nitrate may cause effects on the blood, resulting in the formation of methaemoglobin. The effects may be delayed.

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

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SECTION 12 – ECOLOGICAL INFORMATION

The ecological effects are not known.

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