ISO9001:2000 Certified

Material Safety Data Sheet
Sodium nitrate

Section 1 - Chemical Product and Company Identification

MSDS Name:
Sodium nitrate
Catalog Numbers:
LC24650
Synonyms:
Cubic niter; Soda niter; Chile saltpeter
Company Identification:
LabChem Inc
200 William Pitt Way
Pittsburgh, PA 15238
Company Phone Number:
(412) 826-5230
Emergency Phone Number:
(800) 424-9300
CHEMTREC Phone Number:
(800) 424-9300

Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7631-99-4	Sodium nitrate	100

Section 3 - Hazards Identification

Emergency Overview

Appearance: White crystals.
Danger! Strong oxidizer. Contact with other material may cause a fire. Causes eye, skin, and respiratory tract irritation. Harmful if swallowed. May cause methemoglobinemia.
Target Organs: Blood, respiratory system, eyes, skin.

Potential Health Effects

Eye:
Causes eye irritation.
Skin:
Causes skin irritation.
Ingestion:
Harmful if swallowed. May cause irritation of the digestive tract. May cause methemoglobinemia, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), convulsions, and death. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis, rapid heart rate and chocolate-brown colored blood.

Inhalation:
Causes respiratory tract irritation. May cause methemoglobinemia, cyanosis, convulsions, tachycardia, dyspnea (labored breathing), and death. The toxicity of nitrates is due to their in-vivo conversion to nitrites, which may lead to methemoglobinemia.

Chronic:
Sodium nitrate may react with secondary or tertiary amines to form nitrosamines (certain nitrosamines are cancer suspect agents).

Section 4 - First Aid Measures

Eyes:
Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:
Get medical aid. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion:
Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:
Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician:
Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Strong oxidizer. Contact with other material may cause fire. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products.

Extinguishing Media:
Use water only!

Autoignition Temperature:
Not available.

Flash Point:
Not applicable.

NFPA Rating:
Not available.

Explosion Limits:
Not available.

Section 6 - Accidental Release Measures

General Information:

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Keep combustibles (wood, paper, oil, etc.,) away from spilled material.

Section 7 - Handling and Storage

Handling:

Use with adequate ventilation. Minimize dust generation and accumulation. Avoid contact with skin and eyes. Empty containers retain product residue, liquid and vapor, and can be dangerous. Keep container tightly closed. Avoid contact with clothing and other combustible materials. Avoid ingestion and inhalation. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage:

Do not store near combustible materials. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Avoid storage on wood floors.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Sodium nitrate	none listed	none listed	none listed

OSHA Vacated PELs:

Sodium nitrate: No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

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Section 9 - Physical and Chemical Properties

Physical State:	Crystals
Color:	White
Odor:	Odorless
pH:	5.5-8.0 (5% aq. solution)
Vapor Pressure:	Not available
Vapor Density:	Not available
Evaporation Rate:	Not available
Viscosity:	Not available
Boiling Point:	380°C
Freezing/Melting Point:	306°C
Decomposition Temperature:	380°C
Solubility in water:	Soluble
Specific Gravity/Density:	900 g/l (20°C)
Molecular Formula:	NNaO3
Molecular Weight:	84.99

Section 10 - Stability and Reactivity

Chemical Stability:

Hygroscopic: absorbs moisture or water from the air.

Conditions to Avoid:

Incompatible materials, dust generation, excess heat, exposure to moist air or water.

Incompatibilities with Other Materials:

Organic materials, combustible materials, reducing agents, easily oxidizable materials, finely powdered metals, fluorine, cyanides.

Hazardous Decomposition Products:

Oxides of nitrogen, oxygen.

Hazardous Polymerization:

Has not been reported.

Section 11 - Toxicological Information

RTECS:

CAS# 7631-99-4: WC5600000

LD50/LC50:

CAS# 7631-99-4:

Oral, mouse: LD50 = 3500 mg/kg;
Oral, rabbit: LD50 = 2680 mg/kg;
Oral, rat: LD50 = 1267 mg/kg

Carcinogenicity:

CAS# 7631-99-4: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

See actual RTECS.

Teratogenicity:

No information found.

Reproductive:
Orl-mus TDL0: 16800 mg/kg (14D male)
Mutagenicity:
Mutagenic effects have occurred in humans.
Neurotoxicity:
No information found.

Section 12 - Ecological Information

Ecotoxicity:
No data available. This material will not cause oxygen depletion in aquatic systems. It has a low potential to affect aquatic organisms, secondary waste treatment microorganisms, and the growth of some plants. It has a moderate potential to affect the germination of some plants. Acute aquatic effects: 96-hour LC50; Fathead minnow: GT 1000 mg/L 96-hour LC50; Water flea: GT 1000 mg/L
Environmental:
Nitrates are predominantly used as fertilizer. Unfortunately, nitrates have a tendency to migrate into groundwater as they do not bind to soil and are extremely soluble. Excessive levels of nitrates in drinking water may cause serious illness and death. Infants are most susceptible to nitrate toxicity. "Blue Baby Syndrome" can occur when the infant's conversion of nitrate to nitrite interferes with the oxygen-carrying capacity of the blood. Symptoms of Blue Baby Syndrome include, but may not be limited to, shortness of breath and bluish colored skin.
Physical:
No information available.
Other:
Do not empty into drains.

Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.

Section 14 - Transport Information

US DOT

Shipping Name: Sodium nitrate
Hazard Class: 5.1
UN Number: UN1498
Packing Group: III

Section 15 - Regulatory Information

US Federal

TSCA:
CAS# 7631-99-4 is listed on the TSCA inventory.
SARA Reportable Quantities (RQ):
None of the chemicals in this material have an RQ.

CERCLA/SARA Section 313:

This material contains Sodium nitrate (listed as Water Dissociable Nitrate Compounds), 100%, (CAS# 7631-99-4) which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

OSHA - Highly Hazardous:

None of the chemicals in this product are considered highly hazardous by OSHA.

US State

State Right to Know:

CAS# 7631-99-4 can be found on the following state right to know lists: New Jersey, Pennsylvania, Massachusetts.

California Regulations:

None.

European/International Regulations

Canadian DSL/NDSL:

CAS# 7631-99-4 is listed on Canada's DSL List.

Canada Ingredient Disclosure List:

CAS# 7631-99-4 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

MSDS Creation Date: November 12, 2007
Revision Date: December 10, 2009

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