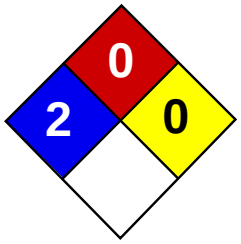

Health	2
Fire	0
Reactivity	0
Personal Protection	E

Material Safety Data Sheet
Sodium nitrate MSDS

Section 1: Chemical Product and Company Identification

Product Name: Sodium nitrate

Catalog Codes: SLS1102, SLS3946, SLS1726

CAS#: 7631-99-4

RTECS: WC5600000

TSCA: TSCA 8(b) inventory: Sodium nitrate

CI#: Not available.

Synonym: Chile saltpeter; soda niter; Sodium saltpeter; Nitric acid, sodium salt; Nitratine

Chemical Name: Sodium Nitrate

Chemical Formula: NaNO3

Contact Information:

Sciencelab.com, Inc.
14025 Smith Rd.
Houston, Texas 77396

US Sales: **1-800-901-7247**
International Sales: **1-281-441-4400**

Order Online: ScienceLab.com

CHEMTREC (24HR Emergency Telephone), call: 1-800-424-9300

International CHEMTREC, call: 1-703-527-3887

For non-emergency assistance, call: 1-281-441-4400

Section 2: Composition and Information on Ingredients

Composition:

Name	CAS #	% by Weight
Sodium nitrate	7631-99-4	100

Toxicological Data on Ingredients: Sodium nitrate: ORAL (LD50): Acute: 1267 mg/kg [Rat]. 2680 mg/kg [Rabbit].

Section 3: Hazards Identification

Potential Acute Health Effects:
Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), of eye contact (irritant), of inhalation. Prolonged exposure may result in skin burns and ulcerations. Over-exposure by inhalation may cause respiratory irritation.

Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. The substance may be toxic to blood. Repeated or prolonged exposure to the substance can produce target organs damage.

Section 4: First Aid Measures

Eye Contact:

Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention if irritation occurs.

Skin Contact:
Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.

Serious Skin Contact: Not available.

Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Serious Inhalation:
Evacuate the victim to a safe area as soon as possible. Loosen tight clothing such as a collar, tie, belt or waistband. If breathing is difficult, administer oxygen. If the victim is not breathing, perform mouth-to-mouth resuscitation. Seek medical attention.

Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

Section 5: Fire and Explosion Data

Flammability of the Product: Non-flammable.

Auto-Ignition Temperature: Not applicable.

Flash Points: Not applicable.

Flammable Limits: Not applicable.

Products of Combustion: Not available.

Fire Hazards in Presence of Various Substances: organic materials, combustible materials

Explosion Hazards in Presence of Various Substances:
Risks of explosion of the product in presence of mechanical impact: Not available. Risks of explosion of the product in presence of static discharge: Not available. Slightly explosive in presence of heat.

Fire Fighting Media and Instructions: Not applicable.

Special Remarks on Fire Hazards:
It may accelerate burning when involved in a fire. Increases the flammability of any combustible material May ignite combustibles (wood, paper, clothing, etc.). Flames up when heated to 540 deg. C. Mixture with charcoal ignites on heating. Contact with combustible or organic materials may cause fire.

Special Remarks on Explosion Hazards:
It will react explosively with hydrocarbons. Interaction of nitrates when heated with amidosulfates(sulfamates) may become explosively violent owing to liberation of dinitrogen oxide and steam. Mixtures of sodium nitrate with powdered aluminum or its oxide were reported to be explosive. Mixtures of sodium nitrate and barium thiocyanate may explode. Mixture with sodium nitrate and powdered antimony explode. Mixture of sodium nitrate and sodium thiosulfate or sodium phosphinate explode.

Section 6: Accidental Release Measures

Small Spill: Use appropriate tools to put the spilled solid in a convenient waste disposal container.

Large Spill:
Oxidizing material. Stop leak if without risk. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal.

Section 7: Handling and Storage

Precautions:
Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Do not ingest. Do not breathe dust. Wear suitable protective clothing. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as reducing agents, combustible materials, organic materials, acids.

Storage:
Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers.

Section 8: Exposure Controls/Personal Protection

Engineering Controls:
Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Personal Protection: Safety glasses. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.

Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

Section 9: Physical and Chemical Properties

Physical state and appearance: Solid. (Granular solid. Powdered solid.)

Odor: Not available.

Taste: Bitter. Saline.

Molecular Weight: 84.99 g/mole

Color: White.

pH (1% soln/water): Not available.

Boiling Point: Decomposition temperature: 380°C (716°F)

Melting Point: 308°C (586.4°F)

Critical Temperature: Not available.

Specific Gravity: Density: 2.26 (Water = 1)

Vapor Pressure: Not applicable.

Vapor Density: Not available.

Volatility: Not available.

Odor Threshold: Not available.

Water/Oil Dist. Coeff.: Not available.

Ionicity (in Water): Not available.

Dispersion Properties: See solubility in water, methanol.

Solubility:

Easily soluble in hot water. Soluble in cold water. Partially soluble in methanol. Very slightly soluble in acetone. Very slightly soluble in glycerol. Very soluble in liquid Ammonia. Solubility in water: 92.1g/100 ml @ 25 deg. C.; 180 g/100 ml @ 100 deg. C. Solubility in Methanol: 1 g dissolves in 300 ml Methanol 1 gram dissolves in 125 ml Alcohol, 52 ml boiling Alcohol, 3470 ml absolute Alcohol.

Section 10: Stability and Reactivity Data

Stability: The product is stable.

Instability Temperature: Not available.

Conditions of Instability: Incompatible materials

Incompatibility with various substances:
Highly reactive with combustible materials, organic materials. Reactive with reducing agents, acids.

Corrosivity: Non-corrosive in presence of glass.

Special Remarks on Reactivity:
Fibrous organic material is oxidized in contact with sodium nitrate above 160 deg. C and will ignite below 220 C. Wood and similar cellulosic materials are rendered highly combustible by nitrate imgregnation. Reacts with acids to emit toxic fumes of nitrogen dioxide. Also incompatible with boron phosphide, barium rhodanide, cyanides, sodium thiosulfate, hypophosphites such as sodium hypophosphite, sulfur plus charcoal, antimony, chlorides, aluminum and stannous chloride, esters, powdered metals such as zinc or aluminum or aluminum oxide, isothiocyanates, thiocyanates, phosphorus, organic materials, combustible materials, acids, pyrosulfites, sulfides, amides, bisulfites, hydrazine, ammonium sulfate, amides, amines, phospham. Sodium nitrate + amines may for nitroasmines which have been proven to be carcinogenic in aminal tests.

Special Remarks on Corrosivity: Not available.

Polymerization: Will not occur.

Section 11: Toxicological Information

Routes of Entry: Inhalation. Ingestion.

Toxicity to Animals: Acute oral toxicity (LD50): 1267 mg/kg [Rat].

Chronic Effects on Humans:
MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. May cause damage to the following organs: blood.

Other Toxic Effects on Humans:
Hazardous in case of ingestion. Slightly hazardous in case of skin contact (irritant), of inhalation.

Special Remarks on Toxicity to Animals: Not available.

Special Remarks on Chronic Effects on Humans:
May affect genetic material (mutagenic). May cause adverse reproductive effects based on animal test data. May cause cancer based on animal test data.

Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: Causes skin irritation with redness, itching, and pain Eyes: Causes eye irritaton with redness, itching, and pain. Inhalation: Causes respiratory tract and mucous membrane irritation. Symptoms may include coughing, shortness of breath. Ingestion: May be harmful if swallowed. Clinical signs associated with nitrate poisoning include: Gastroenteritis, abdominal pain, nausea, vomiting, diarrhea, metabolis acidosis, muscular weakness, dizziness, fatigue, headache, mental impairment, incoordination, convulsions, accelerated heart rate, orthostatic hypotension, dyspnea, and in severe cases, methemoglobinemia due to inadequate oxygenation of the blood leading to progressive cyanosis, and coma. Cyanosis is first visible as a bluish discoloration of the mucous membranes and unpigmented areas of the body. Purging and diuresis can be expected. Rare cases of nitrates being converted into more toxic nitrites

Section 12: Ecological Information

Ecotoxicity: Not available.

BOD5 and COD: Not available.

Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.

Toxicity of the Products of Biodegradation: The products of degradation are less toxic than the product itself.

Special Remarks on the Products of Biodegradation: Not available.

Section 13: Disposal Considerations

Waste Disposal:
Waste must be disposed of in accordance with federal, state and local environmental control regulations.

Section 14: Transport Information

DOT Classification: CLASS 5.1: Oxidizing material.

Identification: : Sodium nitrate UNNA: 1498 PG: III

Special Provisions for Transport: Marine Pollutant

Section 15: Other Regulatory Information

Federal and State Regulations:
Connecticut hazardous material survey.: Sodium nitrate Rhode Island RTK hazardous substances: Sodium nitrate Pennsylvania RTK: Sodium nitrate Massachusetts RTK: Sodium nitrate New Jersey: Sodium nitrate TSCA 8(b) inventory: Sodium nitrate

Other Regulations:
OSHA: Hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200). EINECS: This product is on the European Inventory of Existing Commercial Chemical Substances.

Other Classifications:

WHMIS (Canada):
CLASS C: Oxidizing material. CLASS D-2B: Material causing other toxic effects (TOXIC).

DSCL (EEC):
R8- Contact with combustible material may cause fire. R22- Harmful if swallowed. S17- Keep away from combustible material. S36- Wear suitable protective clothing.

HMIS (U.S.A.):

Health Hazard: 2

Fire Hazard: 0

Reactivity: 0

Personal Protection: E

National Fire Protection Association (U.S.A.):

Health: 2

Flammability: 0

Reactivity: 0

Specific hazard:

Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Safety glasses.

Section 16: Other Information

References: Not available.

Other Special Considerations: Not available.

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