MATERIAL SAFETY DATA SHEET

SODIUM NITRATE

Company Identification

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1. Product Identification

Product Name: Sodium Nitrate

Chemical Name: Sodium Nitrate

CAS No.: 7631-99-4

Chemical Composition: $NaNO_3$

2. Composition / Information on Ingredients

Ingredient	CAS No.	Percent	Hazardous
Sodium Nitrate	7631-99-4	100%	Hazardous

3. Hazards Identification

Emergency Overview

Sodium Nitrate is a white, odorless, powder substance that is not flammable, combustible, or explosive and has low acute oral and dermal toxicity.

Potential Ecological Effects

Large amounts of Sodium Nitrate can be harmful to plants and other species.

Accidental releases to the environment should be minimized.

Potential Health Effects

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.

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.

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.

Inhalation

If inhaled, remove to fresh air.

If not breathing, give artificial respiration.

If breathing is difficult, give oxygen.

Get medical attention.

Cancer

Sodium Nitrate is not a known carcinogen.

Reproductive / Developmental

Animal ingestion studies in several species, at high doses, indicate that borates cause reproductive and developmental effects.

A human study of occupational exposure to borate dust showed no adverse effect on reproduction.

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.

5. Fire Fighting Measures

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.

6. Accidental Release

General

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.

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.

8. Exposure Controls / Personal Protection

Ventilation System

Use local exhaust ventilation to keep airborne concentrations of Sodium Nitrate dust below permissible exposure levels.

Personal Protection (NIOSH Approved)

Where airborne concentrations are expected to exceed exposure limits, NIOSH/MSHA certified respirators should be used.

Eye goggles and gloves are not required for normal industrial exposures, but may be warranted if environment is excessively dusty.

9. Physical and Chemical Properties

Appearance: White crystalline powder

Odor: Odorless

Solubility: 92.1 g/100 ml @ 25°C; 180 g/100 ml @ 100°C

Molecular Weight: 84.99 g/mole

Melting Point: 308°C (586.4°F)

Vapor Pressure: Not available

Specific Gravity: Density: 2.26 (Water = 1)

10. Stability and Reactivity

Stability:

Sodium Nitrate is a stable product.

Hazardous Decomposition:

None.

Incompatibilities Material & Condition to Avoid:

Reaction with strong reducing agents, such as metal hydrides or alkali metals, will generate hydrogen gas, which could create an explosive hazard.

11. Toxicological Information

Acute Toxicity

Ingestion:

Low acute oral toxicity.

Skin / Dermal:

Low acute dermal toxicity.

Sodium Nitrate is poorly absorbed through intact skin.

Inhalation:

Low acute inhalation toxicity.

Skin Irritation:

Non-irritant.

Eye Irritation:

Years of occupational exposure to Sodium Nitrate indicates no adverse effects on human eye.

Therefore, Sodium Nitrate is not considered to be a human eye irritant in normal industrial use.

Sensitization:

Sodium Nitrate is not a skin sensitizer.

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.

13. Disposal Considerations

Waste Disposal

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

14. Transport Information
Domestic (Land, D.O.T.)
Proper Shipping Name: SODIUM NITRATE
Hazard Class: 5.1
UN/NA: UN1498

Packing Group: III
Information reported for product/size: 100LB

International (Water, I.M.O.)
Proper Shipping Name: SODIUM NITRATE
Hazard Class: 5.1
UN/NA: UN1498
Packing Group: III
Information reported for product/size: 100LB

15. Regulatory Information

OSHA / Cal OSHA:

This MSDS document meets the requirements of both OSHA and Cal OSHA.

OSHA Carcinogen:

Sodium Nitrate is not listed.

16. Other Information

NFPA Ratings

Health: 1

Flammability: 0

Reactivity: *(Not specified in the original document.)*

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