



SODIUM NITRATE
 Material Safety Data Sheet
 Mallinckrodt Inc.
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Effective Date: 08-08-85

PRODUCT IDENTIFICATION:

Synonyms: Nitratine; nitric acid, sodium salt
 Formula CAS No.: 7631-99-4
 Molecular Weight: 84.99
 Hazardous Ingredients: Chemical Formula: NaNO_3
 Not Applicable.

PRECAUTIONARY MEASURES
 DANGER! STRONG OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.
 HARMFUL IF SWALLOWED. CAUSES IRRITATION.

Keep from contact with clothing and other combustible materials.
 Store in a tightly closed container.
 Remove and wash contaminated clothing promptly.
 Avoid contact with eyes, skin and clothing.
 Wash thoroughly after handling.

EMERGENCY/FIRST AID

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. In case of contact, immediately flush skin or eyes with plenty of water for at least 15 minutes. In all cases call a physician.

SEE SECTION 5.

DOT Hazard Class: Oxidizer

Physical Data

SECTION 1

Appearance: Colorless, transparent crystals or white powder
 Odor: Odorless.

Solubility: 81.5 g/100 g water @ 15°C (59°F)

Boiling Point: Decomposes @ 380°C (716°F)

Vapor Density (Air=1): No information found.

Melting Point: 308°C (586°F)

Vapor Pressure (mm Hg): No information found.

Specific Gravity: 2.26

Evaporation Rate: No information found.

Fire and Explosion Information

SECTION 2

Fire: Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.

Explosion:

Explosive with shock, heat or friction. Sodium Nitrate decomposes explosively when heated > 538°C (1000°F).

Fire Extinguishing Media:

Use any means suitable for extinguishing surrounding fire. Water spray may be used to keep fire exposed containers cool.

Special Information:

Wear full protective clothing and breathing equipment for high-intensity fire or potential explosion conditions. This oxidizing material can increase the flammability of adjacent combustible materials.

Reactivity Data

SECTION 3

Stability:

Stable under ordinary conditions of use and storage.

Hazardous Decomposition Products:

Emits nitrous oxides when heated to decomposition.

Hazardous Polymerization:

Will not occur.

Incompatibilities:

1
 Reacts with acids to emit toxic fumes of nitrogen dioxide. Contact with the following may cause an explosion: barium rhodanide, boron phosphide, cyanides, sodium thiosulfate, sodium hypophosphite, sulfur plus charcoal, powdered aluminum and aluminum oxide. Fibrous organic material such as jute, wood, and similar cellulosic materials can become highly combustible by nitrate impregnation.

Leak/Spill Disposal Information

SECTION 4

Spills: Clean up spills in a manner that does not disperse dust into the air. Pick-up spill for recovery or disposal and place in a closed container. (If spilled material is intermixed with combustibles it may be desirable to wet with water and mix with wet sand before pick-up for disposal).
 Disposal: Whatever cannot be saved for reclamation may be delivered to an approved waste disposal facility.
 Small amounts of residue may be flushed to sewer with plenty of water.
 Ensure compliance with local, state and federal regulations.

Health Hazard Information

A. Exposure/Health Effects

Inhalation:

Inhalation of dust irritates the respiratory tract. Symptoms may include coughing, shortness of breath.

Ingestion:

May cause gastroenteritis and abdominal pains. Purging and diuresis can be expected. Rare cases of nitrates being converted to the more toxic nitrites have been reported, mostly with infants.

Skin Contact:

May cause irritation, symptoms including redness, itching, and pain.

Eye Contact:

May cause irritation, symptoms including redness, itching, and pain.

Chronic Exposure:

Under some circumstances methemoglobinemia occurs in individuals when the nitrate is converted by bacteria in the stomach to nitrite. Nausea, vomiting, dizziness, rapid heart beat, irregular breathing, convulsions, coma, and death can occur should this conversion take place.

Aggravation of Pre-existing Conditions:

Workers with a history of kidney or lung disease may be more susceptible to the effects of this substance.

B. FIRST AID

Inhalation:

Remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion:

If swallowed, induce vomiting immediately by giving two glasses of water and sticking finger down throat. Never give anything by mouth to an unconscious person. Call physician immediately.

Skin Exposure:

Remove any contaminated clothing. Wipe off excess from skin. Wash skin with soap and water for at least 15 minutes. Get medical attention if irritation develops or persists

Eye Exposure:

Wash eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

C. TOXICITY DATA (RTECS, 1982)

No LD50/LC50 information found relating to normal routes of occupational exposure. Mutation references cited.

Occupational Control Measures

SECTION 6

Airborne Exposure Limits:

None established.

Ventilation System:

A local exhaust system which captures the contaminant at its source is recommended to prevent dispersion of the contaminant into the workroom air.

Personal Respirators:

(NIOSH Approved)

For conditions of use where exposure to the dust is apparent, a dust/mist respirator may be worn. For emergencies, a self-contained breathing apparatus may be necessary.

Skin Protection:

Rubber or neoprene gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure.

Eye Protection:

Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Contact lenses should not be worn when working with this material.

Maintain eye wash fountain and quick-drench facilities in work area.

Storage and Special Information

SECTION 7

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Separate from combustible, organic or other readily oxidizable materials.

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