SECTION I NAME
Product: Sodium Nitrate
Chemical Synonyms: Nitrate of Soda
Formula: NaNO₃
Unit Size: up to 60 Kg.
C.A.S. No.: 7631-99-4

SECTION II INGREDIENTS OF MIXTURES
Principal Component(s) | % | TLV Units
--- | --- | ---
Sodium Nitrate | 100% | None established.

NFPA HAZARD RATING:
- Health: 1
- Fire: 0
- Reactivity: 3

HARMFUL IF SWALLOWED. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE OR EXPLOSION.

SECTION III PHYSICAL DATA
Melting Point (°F) | 307°C (584°F)
Boiling Point (°F) | 730°F (392°C)
Vapor Pressure (mm Hg) | Negligible as solid.
Vapor Density (Air=1) | Data not listed.
Solubility in Water | 73 grams per 100 mL water at 20°C.
Appearance & Odor | White crystals, granules, powder, prills; no odor.

SECTION IV FIRE AND EXPLOSION HAZARD DATA
Flammable Limits in Air:
- Not applicable.
Flammable Limits by Volume:
- N/A

Extinguisher Media:
- Dry chemical, water spray, CO₂ or foam.

SPECIAL FIREFIGHTING PROCEDURES
Use flooding amounts of water in early stages of fire. When large quantities are involved in fire, nitrate may fuse or melt, in which condition application of water may result in extensive scattering of molten material. Treat as CLASS A fire. In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and protective clothing.

(2004 EMERGENCY RESPONSE GUIDEBOOK, RSRA P 5800.9, GUIDE PAGE NO. 140)

UNUSUAL FIRE AND EXPLOSION HAZARDS
Oxidizing material. If sodium nitrate is in contact with easily oxidizable substances, violent combustion or explosion may result upon ignition from any source. Increases the flammability of any combustible substance.

SECTION V HEALTH HAZARD DATA
Threshold Limited Value:
- Not established (ACGIH 1992-93).

Effects of Overexposure:
- May cause eye, skin, respiratory and digestive tract irritation. Causes methemoglobinemia, characterized by cyanosis, headache, weakness, dizziness, staggering, drowsiness, nausea, vomiting, confusion, stupor, increased heart rate, convulsions, coma and death. Target organs: Red blood cells.

Emergency and First Aid Procedures:
- INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
- SKIN: Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.
- EYES: Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.
- CALL PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

SECTION VI REACTIVITY DATA
Stability:
- Unstable

Incompatibility (Materials to Avoid):
- Combustible materials, reducing agents, strong acids and flammable materials.

Hazardous Decomposition Products:
- Yields toxic gases and oxides of nitrogen when involved in fire.

Hazardous Polymerization Conditions:
- May Occur
- Will Not Occur
- Not applicable.

SECTION VII SPILL OR LEAK PROCEDURES
Steps to be taken in case material is released or spilled:
- Ventilate area. Sweep up and place in a suitable container for proper disposal. Do not allow to remain in contact with combustibles. Flush spill area with water.

Waste Disposal Method:
- Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only.
- Dissolve in water and flush to sewer with large amounts of water.

SECTION VIII SPECIAL PROTECTION INFORMATION
Respiration Protection (Specify Type):
- None should be needed in normal laboratory handling. Under dusty conditions, a standard NIOSH/MSHA-approved particulate respirator is desirable.

Ventilation:
- Local Exhaust: Recommended
- Mechanical (General): Recommended
- Other: No

Protective Gloves:
- Rubber gloves
- Eye Protection: Chemical safety glasses

Other Protective Equipment:
- Goggles, smock, apron, eye wash station, proper gloves, ventilation hood

SECTION IX SPECIAL PRECAUTIONS
Precautions to be Taken in Handling & Storing:
- Store in a cool, dry place away from combustible, organic or other readily oxidizable materials. Immediately remove and dispose of any spilled nitrate.
- Keep container tightly closed when not in use.

Other Precautions:
- Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.
- Remove and wash contaminated clothing promptly.

Revision No. 8
Date: 01/01/07
Approved: James A. Bertsch
Chemical Safety Coordinator: JAB

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