



# Material Safety Data Sheet

Sodium Nitrate

## Section 1. Chemical product and company identification

**Trade name** : Sodium Nitrate  
**Manufacturer** : Yara North America, Inc  
100 North Tampa Street  
Suite 3200  
P.O. Box 24926  
Tampa, FL 33623  
USA  
Tel: +1 813 222 5700  
Fax: +1 813 875 5735

**Validation date** : 2005-08-19.  
**Print date** : 2005-08-19.  
**Responsible name** : Bill Easterwood  
**In case of emergency** : Additional Product Information: 813-222-5700  
or Chemtrec 24-hours Emergency Resonse: 1-800-424-9300

## Section 2. Composition, information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>% by weight</u>
sodium nitrate (NaNO <sub>3</sub> )	7631-99-4	100

## Section 3. Hazards identification

**Physical state** : Solid.  
**Emergency overview** : Warning!  
OXIDIZER.  
MAY BE HARMFUL IF SWALLOWED.  
CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.  
Do not ingest. Store in a dry, cool and well-ventilated area. Avoid contact with combustible materials. Wash thoroughly after handling.

### Potential acute health effects

**Eyes** : Slightly irritating to the eyes.  
**Skin** : Slightly irritating to the skin.  
**Inhalation** : Slightly irritating to the respiratory system.  
**Ingestion** : Harmful if swallowed.  
**Carcinogenic effects** : No known significant effects or critical hazards.  
**Mutagenic effects** : No known significant effects or critical hazards.  
**Reproduction toxicity** : No known significant effects or critical hazards.

See toxicological information (section 11)

## Section 4. First aid measures

**Eye contact** : Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Skin contact** : Wash skin thoroughly with soap and water or use recognized skin cleanser. Get medical attention if irritation occurs. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse.

## Sodium Nitrate

- Inhalation** : Move exposed person to fresh air. Keep person warm and at rest. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if symptoms occur. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Move exposed person to fresh air. Keep person warm and at rest. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

## Section 5. Fire fighting measures

- Flammability of the product** : Non-flammable.
- Products of combustion** : These products are nitrogen oxides (NO, NO<sub>2</sub> etc.). Some metallic oxides.
- Fire-fighting media and instructions** : Use water only in flooding quantities. Do NOT use chemical extinguisher or foam or attempt to smother the fire with steam or sand.
- The product itself is not combustible but it can support combustion, even in absence of air. On heating it melts and further heating can cause decomposition, releasing toxic fumes containing nitrogen oxides. It has high resistance to detonation. Heating under strong confinement can lead to explosive behaviour. Contamination by substances such as carbonaceous materials; chromates; zinc, copper and their alloys; chlorates, chlorides, alkalis and reducing agents decrease the resistance to detonation.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment. Do not touch or walk through spilled material.
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.
- Methods for cleaning up** : If emergency personnel are unavailable, carefully scoop up spilled materials and use a non-sparking or explosion-proof means to transfer material to an appropriate container for disposal by incineration. Avoid creating dusty conditions and prevent wind dispersal.

## Section 7. Handling and storage

- Handling** : Do not ingest. Avoid contact with eyes. Store in tightly-closed container. Avoid contact with combustible materials. Wash thoroughly after handling.
- Storage** : Keep container tightly closed. Keep container in a cool, well-ventilated area. Separate from acids, alkalis, reducing agents and combustibles.

## 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, fumes or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
- Personal protection**

## Sodium Nitrate

- Eyes** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.  
Recommended: safety glasses with side-shields .
- Skin** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory** : Use a properly fitted, particulate filter respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.  
>8 hour(s) (breakthrough time): butyl rubber , natural rubber (latex) , nitrile rubber .

**Personal protective equipment (Pictograms)** :



- Personal protection in case of a large spill** : Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be adequate. Consult a specialist before handling this product.

Consult local authorities for acceptable exposure limits.

## Section 9. Physical and chemical properties

- Physical state** : Solid.
- Color** : White.
- Odor** : Odorless.
- Molecular formula** :  $\text{NaNO}_3$
- Boiling/condensation point** : Decomposition temperature:  $379.85^\circ\text{C}$  ( $715.7^\circ\text{F}$ )
- Melting/freezing point** :  $306.65^\circ\text{C}$  ( $584^\circ\text{F}$ )
- Specific gravity** : 2.26 (Water = 1)
- Solubility** : Soluble in cold water.

## Section 10. Stability and reactivity

- Stability and reactivity** : Stable under recommended storage and handling conditions (see section 7).

## Section 11. Toxicological information

<u>Ingredient name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
sodium nitrate ( $\text{NaNO}_3$ )	LD50	1267 mg/kg	Oral	Rat
	LD50	2680 mg/kg	Oral	Rabbit

- Other toxic effects on humans** : Hazardous in case of eye contact (irritant).

**Sodium Nitrate****Section 12. Ecological information**

<u>Ingredient name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
sodium nitrate (NaNO <sub>3</sub> )	Lepomis macrochirus (LC50)	96 hour(s)	9000 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	9400 mg/l
	Lepomis macrochirus (LC50)	96 hour(s)	10000 mg/l

**Toxicity of the products of biodegradation** : The products of degradation are less toxic than the product itself.



**Special remarks on the products of biodegradation** : The product does not show any bioaccumulation phenomena. The product is not expected to harm the environment when used properly according to directions.

**Section 13. Disposal considerations**

**Waste disposal** : The generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Consult your local or regional authorities.

**Section 14. Transport information**

<u>Regulatory information</u>	<u>UN number</u>	<u>Proper shipping name</u>	<u>Class</u>	<u>Packing group</u>	<u>Label</u>	<u>Additional information</u>
<b>DOT Classification</b>	UN1498	SODIUM NITRATE	5.1	III		<p><b>Limited quantity</b> Yes.</p> <p><b>Packaging instruction</b> <b>Passenger aircraft</b> Quantity limitation: 25 kg</p> <p><b>Cargo aircraft</b> Quantity limitation: 100 kg</p> <p><b>Special provisions</b> A1, A29, IB8, IP3</p>
<b>TDG Classification</b>	UN1498	SODIUM NITRATE	5.1	III		-

## Section 15. Regulatory information

- HCS Classification** : Oxidizing material
- U.S. Federal regulations** : TSCA 8(b) inventory: sodium nitrate (NaNO<sub>3</sub>)  
 SARA 302/304/311/312 extremely hazardous substances: No products were found.  
 SARA 302/304 emergency planning and notification: No products were found.  
 SARA 302/304/311/312 hazardous chemicals: sodium nitrate (NaNO<sub>3</sub>)  
 SARA 311/312 MSDS distribution - chemical inventory - hazard identification: sodium nitrate (NaNO<sub>3</sub>): Fire hazard, Delayed (chronic) health hazard  
 Clean Water Act (CWA) 307: No products were found.  
 Clean Water Act (CWA) 311: No products were found.  
 Clean Air Act (CAA) 112 accidental release prevention: No products were found.  
 Clean Air Act (CAA) 112 regulated flammable substances: No products were found.  
 Clean Air Act (CAA) 112 regulated toxic substances: No products were found.

### SARA 313

- |  | <u>Product name</u>                   | <u>CAS number</u> | <u>Concentration</u> |
|--|---------------------------------------|-------------------|----------------------|
| <b>Form R - Reporting requirements</b> | : sodium nitrate (NaNO <sub>3</sub> ) | 7631-99-4         | 100                  |
| <b>Supplier notification</b>           | : sodium nitrate (NaNO <sub>3</sub> ) | 7631-99-4         | 100                  |
- SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.
- State regulations** : Pennsylvania RTK: sodium nitrate (NaNO<sub>3</sub>): (generic environmental hazard)  
 Massachusetts RTK: sodium nitrate (NaNO<sub>3</sub>)  
 New Jersey: sodium nitrate (NaNO<sub>3</sub>)

## Section 16. Other information

<b>Hazardous Material Information System (U.S.A.)</b>	<b>Health</b>	1
	<b>Fire hazard</b>	0
	<b>Reactivity</b>	3

<b>National Fire Protection Association (U.S.A.)</b>	<b>Health</b>	1	<b>Flammability</b>	0
			<b>Instability</b>	3
			<b>Special</b>	OX

- Date of issue** : 2005-08-19.
- Date of previous issue** : No previous validation.
- Version** : 1

 Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.