1. Identification

Product identifier used on the label

**Sodium Nitrate food grade E251**

**Recommended use of the chemical and restriction on use**

Recommended use*: Raw material; process chemical; inorganic salts; Heat transfer agents; Agricultural industry; food additive(s); formulation agent

Suitable for use in industrial sector: chemical industry

* The “Recommended use” identified for this product is provided solely to comply with a Federal requirement and is not part of the seller's published specification. The terms of this Safety Data Sheet (SDS) do not create or infer any warranty, express or implied, including by incorporation into or reference in the seller's sales agreement.

Details of the supplier of the safety data sheet

Company:
BASF Canada Inc.
100 Milverton Drive
Mississauga, ON L5R 4H1, CANADA

Telephone: +1 289 360-1300

Emergency telephone number

CANUTEC (reverse charges): (613) 996-6666
BASF HOTLINE: (800) 454-COPE (2673)

Other means of identification

Chemical family: nitrate

2. Hazards Identification

**According to Hazardous Products Regulations (HPR) (SOR/2015-17)**

**Classification of the product**

<table>
<thead>
<tr>
<th>Ox. Sol.</th>
<th>2</th>
<th>Oxidising solids</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Dam./Irrit.</td>
<td>2A</td>
<td>Serious eye damage/eye irritation</td>
</tr>
</tbody>
</table>

**Label elements**

Pictogram:
Signal Word:
Danger

Hazard Statement:
H272 May intensify fire; oxidizer.
H319 Causes serious eye irritation.

Precautionary Statements (Prevention):
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280 Wear protective gloves and eye/face protection.
P221 Take any precaution to avoid mixing with combustibles ...
P220 Keep/Store away from clothing/combustible materials.
P264 Wash with plenty of water and soap thoroughly after handling.

Precautionary Statements (Response):
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P311 If eye irritation persists: Call a POISON CENTER or doctor/physician.
P370 + P378 In case of fire: Use water spray for extinction.

Precautionary Statements (Disposal):
P501 Dispose of contents/container to hazardous or special waste collection point.

Hazards not otherwise classified

If applicable information is provided in this section on other hazards which do not result in classification but which may contribute to the overall hazards of the substance or mixture. No specific dangers known, if the regulations/notes for storage and handling are considered.

3. Composition / Information on Ingredients

According to Hazardous Products Regulations (HPR) (SOR/2015-17)

<table>
<thead>
<tr>
<th>CAS Number</th>
<th>Weight %</th>
<th>Chemical name</th>
</tr>
</thead>
<tbody>
<tr>
<td>7631-99-4</td>
<td>75.0 - &lt; 100.0%</td>
<td>Sodium nitrate</td>
</tr>
</tbody>
</table>

4. First-Aid Measures

Description of first aid measures

General advice:
Remove contaminated clothing.

If inhaled:
Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Seek medical attention.
If on skin:
Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:
In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. If irritation develops, seek medical attention.

If swallowed:
Rinse mouth immediately and then drink plenty of water, seek medical attention.

Most important symptoms and effects, both acute and delayed
Symptoms: Overexposure may cause: vomiting, methaemoglobinemia, weakness, abdominal cramps, diarrhea, headache

Indication of any immediate medical attention and special treatment needed
Note to physician
Treatment: Treat according to symptoms (decontamination, vital functions), no known specific antidote.

5. Fire-Fighting Measures

Extinguishing media
Suitable extinguishing media:
water spray

Unsuitable extinguishing media for safety reasons:
ABC powder, carbon dioxide

Special hazards arising from the substance or mixture
Hazards during fire-fighting:
nitrogen oxides
The substances/groups of substances mentioned can be released if the product is involved in a fire.

Advice for fire-fighters
Protective equipment for fire-fighting:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Further information:
Substance/product is an oxidizing agent and can supply oxygen to stimulate or accelerate the combustion of organic or other combustible substances/products.

Impact Sensitivity:
Remarks: Based on the chemical structure there is no shock-sensitivity.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Avoid inhalation. Avoid contact with skin and eyes.

Environmental precautions
Do not release untreated into natural waters.

**Methods and material for containment and cleaning up**
For large amounts: Sweep/shovel up. Dispose of absorbed material in accordance with regulations.

### 7. Handling and Storage

**Precautions for safe handling**
Keep container tightly sealed. Ensure suitable air extract/ventilation on process machinery and transportation equipment. Protect against moisture. Protect against heat. Keep away from sources of ignition - No smoking.

Protection against fire and explosion:
The substance/product is non-combustible.

**Conditions for safe storage, including any incompatibilities**
Segregate from oxidizable substances. Segregate from reducing agents. Segregate from ammonium salts.

### 8. Exposure Controls/Personal Protection

No occupational exposure limits known.

**Personal protective equipment**

**Respiratory protection:**
Wear a NIOSH-certified (or equivalent) particulate respirator.

**Hand protection:**
Chemical resistant protective gloves (EN 374). Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN 374), polyvinylchloride (PVC) - 0.7 mm coating thickness, nitrile rubber (NBR) - 0.4 mm coating thickness, chloroprene rubber (CR) - 0.5 mm coating thickness, butyl rubber (butyl) - 0.7 mm coating thickness, fluoroelastomer (FKM) - 0.7 mm coating thickness, Supplementary note: The specifications are based on tests, literature data and information of glove manufacturers or are derived from similar substances by analogy. Due to many conditions (e.g. temperature) it must be considered, that the practical usage of a chemical-protective glove in practice may be much shorter than the permeation time determined through testing., Manufacturer's directions for use should be observed because of great diversity of types.

**Eye protection:**
Tightly fitting safety goggles (chemical goggles).

**Body protection:**
Body protection must be chosen depending on activity and possible exposure, e.g. head protection, apron, protective boots, chemical-protection suit.

**General safety and hygiene measures:**
Eye wash fountains and safety showers must be easily accessible. Avoid inhalation of dust. Wear protective clothing as necessary to prevent contact. Keep away from food, drink and animal feeding stuffs. No eating, drinking, smoking or tobacco use at the place of work. Take off immediately all contaminated clothing. Hands and/or face should be washed before breaks and at the end of the shift. Employees should shower at the end of the shift.
9. Physical and Chemical Properties

- **Form:** granules
- **Odour:** faint odour
- **Odour threshold:** not applicable, odour not perceivable
- **Colour:** white
- **pH value:** 8 - 9 (100 g/l, 20 °C)
- **Melting point:** 307 °C
  - Literature data.
- **Boiling point:** Study scientifically not justified.
- **Flash point:** Study scientifically not justified.
- **Flammability:** not highly flammable
  - (other)
- **Lower explosion limit:** For solids not relevant for classification and labelling.
- **Upper explosion limit:** For solids not relevant for classification and labelling.
- **Vapour pressure:** The value has not be determined because of the high melting point.
- **Density:** 2.26 g/cm³
  - (20 °C)
  - Literature data.
- **Relative density:** 2.26
  - Literature data.
- **Bulk density:** approx. 1,300 kg/m³
- **Partitioning coefficient n-octanol/water (log Pow):** Study scientifically not justified.
- **Self-ignition temperature:** Based on its structural properties the product is not classified as self-igniting.
  - Study scientifically not justified.
- **Thermal decomposition:** > 600 °C
  - Oxygen, nitrogen, disodium oxide
- **Viscosity, dynamic:** Study scientifically not justified.
- **Solubility in water:** 874 g/l
  - (20 °C)
- **Molar mass:** 84.99 g/mol
- **Evaporation rate:** The product is a non-volatile solid.

10. Stability and Reactivity

**Reactivity**

- Oxidizing properties:
  - Oxidizing. (Directive 92/69/EEC, A.17)

**Chemical stability**

- Peroxides: The product does not contain peroxides. The product/the substance has not a tendency towards the formation of peroxide.

**Possibility of hazardous reactions**

- Reacts with reducing agents. Reacts with oxidizing agents.

**Conditions to avoid**

- See MSDS section 7 - Handling and storage. Avoid heating while in contact with easily oxidizable materials.
Incompatible materials
reducing agents, oxidizable substances, ammonium compound

Hazardous decomposition products
Decomposition products:
Hazardous decomposition products: disodium oxide

Thermal decomposition:
> 600 °C
Possible thermal decomposition products:
Oxygen, nitrogen, disodium oxide

11. Toxicological information

Primary routes of exposure
Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

Acute Toxicity/Effects

Acute toxicity
Assessment of acute toxicity: There is a risk of damage to the blood (methemoglobinemia) after a single uptake of large quantities.

Oral
Type of value: LD50
Species: rat
Value: 3,430 mg/kg (OECD Guideline 401)

Inhalation
Study does not need to be conducted.

Dermal
Type of value: LD50
Species: rat (male/female)
Value: > 5,000 mg/kg (OECD Guideline 402)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Assessment other acute effects
Assessment of STOT single:
There is a risk of damage to the blood (methemoglobinemia) after a single uptake.

No data available.

Irritation / corrosion
Assessment of irritating effects: Not irritating to the skin. May cause slight irritation to the eyes.

Skin
Species: rabbit
Result: non-irritant
Method: OECD Guideline 404
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

**Eye**
Species: rabbit  
Result: Slightly irritating.  
Method: OECD Guideline 405

**Sensitization**
Assessment of sensitization: Skin sensitizing effects were not observed in animal studies.

Mouse Local Lymph Node Assay (LLNA)
Species: mouse  
Result: Non-sensitizing.  
Method: OECD Guideline 429

**Aspiration Hazard**  
Study does not need to be conducted.

**Chronic Toxicity/Effects**

**Repeated dose toxicity**  
Assessment of repeated dose toxicity: The substance may cause damage to the hematological system after repeated ingestion.

**Genetic toxicity**  
Assessment of mutagenicity: The data available on mutagenic action are not consistent.

**Carcinogenicity**  
Assessment of carcinogenicity: In long-term studies in rats in which the substance was given by feed, a carcinogenic effect was not observed. Under certain conditions the substance can form nitrosamines. Nitrosamines are carcinogenic in animal studies.

**Reproductive toxicity**  
Assessment of reproduction toxicity: The results of animal studies gave no indication of a fertility impairing effect.

**Teratogenicity**  
Assessment of teratogenicity: No indications of a developmental toxic / teratogenic effect were seen in animal studies.

**Symptoms of Exposure**

Overexposure may cause: vomiting, methaemoglobinemia, weakness, abdominal cramps, diarrhea, headache

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**12. Ecological Information**

**Toxicity**

Aquatic toxicity  
Assessment of aquatic toxicity: There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations.
Toxicity to fish
LC50 (96 h) 7,950 mg/l, Oncorhynchus tschawytscha (static)
Literature data. Nominal concentration.

Aquatic invertebrates
EC50 (24 h) 8,609 mg/l, Daphnia magna (Daphnia test acute, static)

Aquatic plants
EC50 (10 d) > 1,700 mg/l (chlorophyll content), algae (static)
The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

Chronic toxicity to fish
Study scientifically not justified.

Chronic toxicity to aquatic invertebrates
Study scientifically not justified.

Assessment of terrestrial toxicity
Study scientifically not justified.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
OECD Guideline 209 aquatic
activated sludge, domestic/EC10 (3 h): 180 mg/l

Persistence and degradability

Assessment biodegradation and elimination (H2O)
Not applicable for inorganic substances. Can be oxidized to nitrate, or be reduced to nitrogen, by microorganisms.

Assessment of stability in water
According to structural properties, hydrolysis is not expected/probable.
Study scientifically not justified.

Bioaccumulative potential

Assessment bioaccumulation potential
Accumulation in organisms is not to be expected.

Mobility in soil

Assessment transport between environmental compartments
Adsorption to solid soil phase is not expected.

13. Disposal considerations

Waste disposal of substance:
Incinerate or dispose of in a licensed facility. Observe all local regulations.

14. Transport Information

Land transport
Safety Data Sheet
Sodium Nitrate food grade E251

Revision date: 2016/06/17
Version: 2.0

TDG
Hazard class: 5.1
Packing group: III
ID number: UN 1498
Hazard label: 5.1
Proper shipping name: SODIUM NITRATE

Sea transport
IMDG
Hazard class: 5.1
Packing group: III
ID number: UN 1498
Hazard label: 5.1
Marine pollutant: NO
Proper shipping name: SODIUM NITRATE

Air transport
IATA/ICAO
Hazard class: 5.1
Packing group: III
ID number: UN 1498
Hazard label: 5.1
Proper shipping name: SODIUM NITRATE

15. Regulatory Information

Federal Regulations
Registration status: Chemical DSL, CA released / listed

According to Controlled Products Regulations (CPR) (SOR/88-66)
WHMIS classification: D2B: Materials Causing Other Toxic Effects - Toxic material

Assessment of the hazard classes according to UN GHS criteria (most recent version):

<table>
<thead>
<tr>
<th>Hazard Field</th>
<th>Hazard Class</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute Tox.</td>
<td>5 (oral)</td>
<td>Acute toxicity</td>
</tr>
<tr>
<td>Ox. Sol.</td>
<td>2</td>
<td>Oxidising solids</td>
</tr>
<tr>
<td>Eye Dam./Irrit.</td>
<td>2A</td>
<td>Serious eye damage/eye irritation</td>
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</table>

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2016/06/17

We support worldwide Responsible Care® initiatives. We value the health and safety of our employees, customers, suppliers and neighbors, and the protection of the environment. Our
commitment to Responsible Care is integral to conducting our business and operating our facilities in a safe and environmentally responsible fashion, supporting our customers and suppliers in ensuring the safe and environmentally sound handling of our products, and minimizing the impact of our operations on society and the environment during production, storage, transport, use and disposal of our products.

END OF DATA SHEET