

Safety Data Sheet

Sodium Nitrate food grade E251

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Version: 3.0

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(30216103/SDS_GEN_US/EN)

1. Identification

Product identifier used on the label

Sodium Nitrate food grade E251

Recommended use of the chemical and restriction on use

Recommended use*: for industrial use only

* 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 CORPORATION
100 Park Avenue
Florham Park, NJ 07932, USA

Telephone: +1 973 245-6000

Emergency telephone number

CHEMTREC: 1-800-424-9300
BASF HOTLINE: 1-800-832-HELP (4357)

Other means of identification

Chemical family: nitrate

2. Hazards Identification

According to Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Classification of the product

Ox. Sol.	2	Oxidising solids
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation

Label elements

Pictogram:

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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 Regulation 2012 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

<u>CAS Number</u>	<u>Weight %</u>	<u>Chemical name</u>
7631-99-4	75.0 - < 100.0%	Sodium nitrate

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.

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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, methaemoglobinaemia, 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

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Do not release untreated into natural waters.

Methods and material for containment and cleaning up

For large amounts: Do not use saw-dust or other combustible substances as an absorbant during cleanup. Sweep/shovel up. Place into suitable container for disposal.

See MSDS section 10 - Stability and reactivity. Avoid raising dust.

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:

Warning: Bags made of polyethylene may create electrostatic discharges capable of igniting combustible dust clouds and ambient flammable gases or vapors. Do not handle in flammable atmospheres.

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.

Advice on system design:

Provide adequate exhaust ventilation to control work place concentrations.

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.

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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. Remove contaminated clothing. Avoid all contact with the substance.

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/cm ³ (20 °C) Literature data.
Relative density:	2.26 Literature data.
Bulk density:	approx. 1,300 kg/m ³
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.

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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

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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, methaemoglobinaemia, weakness, abdominal cramps, diarrhea, headache

12. Ecological Information

Toxicity

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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 tshawytscha* (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.

Additional information

Other ecotoxicological advice:

Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

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13. Disposal considerations

Waste disposal of substance:

Do not discharge substance/product into sewer system. Dispose of in accordance with national, state and local regulations.

14. Transport Information

Land transport

USDOT

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 TSCA, US released / listed

Food TSCA, US released / exempt

EPCRA 311/312 (Hazard categories): Acute; Fire

EPCRA 313:

<u>CAS Number</u>	<u>Chemical name</u>
7631-99-4	Sodium nitrate

<u>CERCLA RQ</u>	<u>CAS Number</u>	<u>Chemical name</u>
100 LBS	7632-00-0	sodium nitrite

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NFPA Hazard codes:

Health : 2 Fire: 0 Reactivity: 1 Special:

HMIS III rating

Health: 2 Flammability: 0 Physical hazard: 1

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

Acute Tox.	5 (oral)	Acute toxicity
Ox. Sol.	2	Oxidising solids
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation

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.

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