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 US 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

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:



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.

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

Emergency overview

DANGER:
OXIDIZER. CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.
MAY BE HARMFUL IF SWALLOWED.
INGESTION MAY CAUSE GASTRIC DISTURBANCES.
MAY CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION.
Do not get in eyes, on skin, or on clothing.
Avoid inhalation of dusts.
Use with local exhaust ventilation.
Wear a NIOSH-certified (or equivalent) particulate respirator.
Wear NIOSH-certified chemical goggles.
Wear chemical resistant protective gloves.
Wear protective clothing.
Eye wash fountains and safety showers must be easily accessible.

3. Composition / Information on Ingredients

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

CAS Number	Content (W/W)	Chemical name
7631-99-4	>= 75.0 - <= 100.0	Sodium nitrate

%

According to Regulation 1994 OSHA Hazard Communication Standard; 29 CFR Part 1910.1200

CAS Number	Content (W/W)	Chemical name
7631-99-4	99.6 %	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.

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

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.

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: 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

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.

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	
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	
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	

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.

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, methaemoglobinaemia, weakness, abdominal cramps, diarrhea, headache

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.

Additional information

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

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): Chronic; Fire

EPCRA 313:

CAS Number	Chemical name
7631-99-4	Sodium nitrate

CERCLA RQ	CAS Number	Chemical name
100 LBS	7632-00-0	sodium nitrite

State regulations

State RTK	CAS Number	Chemical name

MA, NJ, PA 7631-99-4 Sodium nitrate

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: 2014/12/18

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