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Safety Data Sheet
Sodium Nitrite HQ free flowing (non-food grade)

1. Identification

Product identifier used on the label

Sodium Nitrite HQ free flowing (non-food grade)

Recommended use of the chemical and restriction on use

Recommended use*: for industrial use only
Raw material; Intermediate; corrosion inhibitor; Surface treatment agent
Suitable for use in industrial sector: chemical industry; metal-working

* 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

Molecular formula:	NANO(2)
Chemical family:	inorganic compounds
Synonyms:	Sodium Nitrite

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
Acute Tox.	3 (oral)	Acute toxicity
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Aquatic Acute	1	Hazardous to the aquatic environment - acute

Label elements

Pictogram:

Signal Word:
Danger

Hazard Statement:

H272	May intensify fire; oxidizer.
H319	Causes serious eye irritation.
H301	Toxic if swallowed.
H400	Very toxic to aquatic life.

Precautionary Statements (Prevention):

P273	Avoid release to the environment.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves and eye/face protection.
P270	Do not eat, drink or smoke when using this product.
P264	Wash with plenty of water and soap thoroughly after handling.
P221	Take any precaution to avoid mixing with combustibles ...
P220	Keep/Store away from clothing/combustible materials.

Precautionary Statements (Response):

P310	Immediately call a POISON CENTER or doctor/physician.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P301 + P330	IF SWALLOWED: rinse mouth.
P391	Collect spillage.
P370 + P378	In case of fire: Use water spray for extinction.

Precautionary Statements (Storage):

P405	Store locked up.

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:
TOXIC.
OXIDIZER.
TOXIC IF SWALLOWED.
May cause pulmonary edema.
Avoid contact with the skin, eyes and 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
7632-00-0		sodium nitrite
7632-00-0	>= 75.0 - <= 100.0 %	sodium nitrite

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

CAS Number	Content (W/W)	Chemical name
7632-00-0	> 98.7 %	sodium nitrite

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. Immediate medical attention required.

If on skin:
Wash affected areas thoroughly with soap and water. 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 and then drink plenty of water. Induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

Most important symptoms and effects, both acute and delayed

Symptoms: Overexposure may cause:, vomiting, convulsions, cyanosis, death, coma, methaemoglobinaemia, nausea
Hazards: Risk of pulmonary edema. Symptoms can appear later. Danger of methaemoglobin formation after ingestion.

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 in case of fire. Has a fire-promoting effect due to release of oxygen.

Advice for fire-fighters

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

Further information:
When large quantities of solid substance/product are involved, melting may occur, in which condition, application of water may cause extensive scattering of molten material.

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

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Use breathing apparatus if exposed to vapours/dust/aerosol. Avoid contact with eyes.

Environmental precautions

This product is regulated by CERCLA ('Superfund').

Methods and material for containment and cleaning up

Spills should be contained and placed in suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Keep container tightly sealed. Breathing must be protected when large quantities are decanted without local exhaust ventilation. Processing machines must be fitted with local exhaust ventilation. Protect against moisture. Protect against heat. Do not mix with combustible substances. Handle in accordance with good industrial hygiene and safety practice.

Protection against fire and explosion:
The substance/product is non-combustible. Has a fire-promoting effect due to release of oxygen. Where required Prevent electrostatic charge - sources of ignition should be kept well clear - fire extinguishers should be kept handy.

Conditions for safe storage, including any incompatibilities

Segregate from oxidizable substances. Segregate from acids. Segregate from ammonium salts.

Further information on storage conditions: Keep container tightly closed and in a well-ventilated place. This product is classified as a dangerous substance for storage. The authority permits and storage regulations must be observed. Keep away from food, drink and animal feeding stuffs.

8. Exposure Controls/Personal Protection

Advice on system design:
Provide local exhaust ventilation to control dust.

Personal protective equipment

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

Hand protection:
Suitable materials, polyvinylchloride (Pylox), nitrile rubber (Buna N), chloroprene rubber (Neoprene), Consult with glove manufacturer for testing data.

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

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. Take off immediately all contaminated clothing.

9. Physical and Chemical Properties

Form:	crystalline	
Odour:	faint odour	
Colour:	white to slightly yellow	
pH value:	8 - 9	(100 g/l, 20 °C)
Melting point:	280 °C	
Boiling point:		The substance / product decomposes therefore not determined.
Flammability:	not flammable	
Lower explosion limit:		not applicable
Density:	2.17 g/cm3	(20 °C) (ISO 2811-3)
Relative density:	2.17	(20 °C) Literature data.
Bulk density:	1,100 - 1,300 kg/m3	
Partitioning coefficient n-octanol/water (log Pow):		Study scientifically not justified.
Self-ignition temperature:		not self-igniting
Thermal decomposition:	> 320 °C	
	nitrogen monoxide, nitrogen dioxide, disodium oxide	
Viscosity, dynamic:		Study scientifically not justified.
Solubility in water:		readily soluble

10. Stability and Reactivity

Reactivity
No hazardous reactions if stored and handled as prescribed/indicated.

Oxidizing properties:

Oxidizing.

Chemical stability
The product is chemically stable.

Possibility of hazardous reactions
Hazardous reactions in presence of mentioned substances to avoid.

Conditions to avoid
See MSDS section 7 - Handling and storage.

Incompatible materials
reducing agents, oxidizable substances, ammonium salts, amines, amine compounds, acids

Hazardous decomposition products

Decomposition products:
Hazardous decomposition products: disodium oxide, nitrogen oxides

Thermal decomposition:
> 320 °C
Possible thermal decomposition products:
nitrogen monoxide, nitrogen dioxide, 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: Of high toxicity after single ingestion. There is a risk of damage to the blood (methemoglobinemia) after a single uptake.

Oral
Type of value: LD50
Species: rat
Value: 180 mg/kg

Inhalation
Study scientifically not justified.

Dermal
Study scientifically not justified.

Irritation / corrosion
Assessment of irritating effects: Not irritating to the skin. Eye contact causes irritation.

Skin
Species: rabbit
Result: non-irritant
Method: OECD Guideline 404

Eye
Species: rabbit
Result: Irritant.
Method: OECD Guideline 405

Sensitization
Assessment of sensitization: There is no evidence of a skin-sensitizing potential.

Study scientifically not justified.

Aspiration Hazard
No aspiration hazard expected.

Chronic Toxicity/Effects

Repeated dose toxicity
Assessment of repeated dose toxicity: After repeated administration the prominent effect is damage of the blood (methemoglobin formation).

Genetic toxicity

Information on: sodium nitrite
Assessment of mutagenicity: The data available on mutagenic action are not consistent.

Carcinogenicity
Assessment of carcinogenicity: In long-term studies in rats and mice in which the substance was given by drinking-water, a carcinogenic effect was not observed. Under certain conditions nitrites can enhance the formation of nitrosamines in vivo. 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: In animal studies the substance did not cause malformations. Animal studies gave no indication of a developmental toxic effect at doses that were not toxic to the parental animals. After the uptake of small doses toxicity to development will not be expected in humans.

Symptoms of Exposure

Overexposure may cause:, vomiting, convulsions, cyanosis, death, coma, methaemoglobinaemia, nausea

12. Ecological Information

Toxicity

Aquatic toxicity
Assessment of aquatic toxicity:
Very toxic (acute effect) 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) 0.54 - 26.3 mg/l, Salmo gairdneri, syn. O. mykiss (Flow through.)

Aquatic invertebrates
LC50 (96 h) 4.93 mg/l, aquatic crustacea (static)
Literature data.

EC50 (48 h) 15.4 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)
The statement of the toxic effect relates to the analytically determined concentration.

Aquatic plants
EC50 (72 h) > 100 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)
The statement of the toxic effect relates to the analytically determined concentration.

Chronic toxicity to fish
No observed effect concentration (31 d) 6.16 mg/l, Ictalurus punctatus, syn: I. robustus (Flow through.)

Chronic toxicity to aquatic invertebrates
No observed effect concentration (80 d) 9.86 mg/l, aquatic crustacea (Daphnia test chronic, static)

Assessment of terrestrial toxicity
Study scientifically not justified.

Microorganisms/Effect on activated sludge

Toxicity to microorganisms
OECD Guideline 209 static
activated sludge, domestic/EC10 (3 h): 210 mg/l
The details of the toxic effect relate to the nominal concentration.

other static
other protozoa/EC50 (48 h): 421 mg/l

Persistence and degradability

Assessment biodegradation and elimination (H2O)
Inorganic product which cannot be eliminated from water by biological purification processes. Can be oxidized to nitrate, or be reduced to nitrogen, by microorganisms.

Assessment of stability in water
Study technically not feasible.

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:

Do not allow to enter soil, waterways or waste water channels. Do not release untreated into natural waters. 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.

Container disposal:
Dispose of in a licensed facility. Recommend crushing, puncturing or other means to prevent unauthorized use of used containers.

14. Transport Information

Land transport
USDOT

Hazard class:	5.1
Packing group:	III
ID number:	UN 1500
Hazard label:	5.1, 6.1, EHSM
Proper shipping name:	SODIUM NITRITE

Sea transport
IMDG

Hazard class:	5.1
Packing group:	III
ID number:	UN 1500
Hazard label:	5.1, 6.1, EHSM
Marine pollutant:	YES
Proper shipping name:	SODIUM NITRITE

Air transport
IATA/ICAO

Hazard class:	5.1
Packing group:	III
ID number:	UN 1500
Hazard label:	5.1, 6.1
Proper shipping name:	SODIUM NITRITE

15. Regulatory Information

Federal Regulations

Registration status:
Chemical TSCA, US released; restriction on use / listed

TSCA § 5 final Significant New Use Restriction (SNUR)
40 CFR 721.4740

EPCRA 311/312 (Hazard categories): Acute;

EPCRA 313:

CAS Number	Chemical name
7632-00-0	sodium nitrite

Reportable Quantity for release: 100 lb

State regulations

State RTK	CAS Number	Chemical name
MA, NJ, PA	7632-00-0	sodium nitrite

NFPA Hazard codes:
Health : 2 Fire: 0 Reactivity: 1 Special:

HMIS III rating
Health: 3¤ Flammability: 0 Physical hazard: 1

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

Ox. Sol.	2	Oxidising solids
Acute Tox.	3 (oral)	Acute toxicity
Eye Dam./Irrit.	2A	Serious eye damage/eye irritation
Aquatic Acute	1	Hazardous to the aquatic environment - acute

16. Other Information

SDS Prepared by:
BASF NA Product Regulations
SDS Prepared on: 2014/12/22

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