MegaChem Limited
11, Tuas Link 1, Singapore 638588
Tel: +65 6933 9999
Fax: +65 6863 2818, 6863 1572
Email: enquiry@sg.megachem.com
GST Regn. No.: M2-0081977-2
Company Regn No.: 198803293M
www.megachem.com

Safety data sheet

Safety data sheet
Date / Revised: 08.05.2023 Version: 12.0
Product: **Sodium Nitrite food grade E250**

(30216106/SDS_GEN_SG/EN)
Date of print: 06.01.2025

1. Substance/preparation and manufacturer/supplier identification

Product name:
Sodium Nitrite food grade E250

Use: food additive(s)

Recommended use: Raw material, Intermediate, food additive(s), corrosion inhibitor, Surface treatment agent

Manufacturer/supplier:
MegaChem Limited
11, Tuas Link 1 Singapore 638588
Telephone: +65 6933 9999
Telefax number: +65 6863 2818
E-mail address: enquiry@sg.megachem.com

Emergency information:
Telephone: +65 6933 9999

2. Hazard identification

Classification of the substance and mixture:
Oxidising solids: Cat.2
Acute toxicity: Cat.3 (oral)
Serious eye damage/eye irritation: Cat.2A
Hazardous to the aquatic environment - acute: Cat.1

M-factor acute: 1

Label elements and precautionary statement:

Pictogram:

Signal Word:
Danger

Hazard Statement:

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

Precautionary Statements (Prevention):

P273	Avoid release to the environment.
P280 + P283	Wear protective gloves and eye/face protection and fire/flame resistant/retardant clothing.
P280	Wear eye and face protection.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P270	Do not eat, drink or smoke when using this product.
P264	Wash contaminated body parts thoroughly after handling.
P221	Take any precaution to avoid mixing with combustibles ...
P220	Keep away from clothing and other combustible materials.

Precautionary Statements (Response):

P310	Immediately call a POISON CENTER or 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.
P337 + P311	If eye irritation persists: Call a POISON CENTER or physician.
P370 + P378	In case of fire: Use water spray for extinction.

Precautionary Statements (Storage):

P405	Store locked up.
P420	Store separately.

Precautionary Statements (Disposal):

P501	Dispose of contents and container to hazardous or special waste collection point.

Other hazards which do not result in classification:
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

Chemical nature

Substance nature: Substance

sodium nitrite
CAS Number: 7632-00-0

NaNO2

Hazardous ingredients

sodium nitrite

Content (W/W): >= 98 % - <= 100 %	Ox. Sol.: Cat. 2
CAS Number: 7632-00-0	Acute Tox.: Cat. 3 (oral)
	Eye Dam./Irrit.: Cat. 2A
	Aquatic Acute: Cat. 1
	M-factor acute: 1

sodium nitrate

Content (W/W): > 0 % - < 3 %	Ox. Sol.: Cat. 2
CAS Number: 7631-99-4	Acute Tox.: Cat. 5 (oral)
	Eye Dam./Irrit.: Cat. 2B

4. First-Aid Measures

General advice:
If the patient is likely to become unconscious, place and transport in stable sideways position (recovery position).

If inhaled:
After inhalation of decomposition products, remove the affected person to a source of fresh air and keep calm. Provide medical aid. Immediately administer a corticosteroid from a controlled/metered dose inhaler.

On skin contact:
Wash thoroughly with soap and water

On contact with eyes:
Immediately wash affected eyes for at least 15 minutes under running water with eyelids held open, consult an eye specialist.

On ingestion:
Immediately rinse mouth and then drink 200-300 ml of water, seek medical attention.

Note to physician:
Symptoms: Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.
Hazards: Risk of pulmonary edema. Symptoms can appear later. Danger of methaemoglobin formation after ingestion.
Treatment: Treat according to symptoms (decontamination, vital functions), treat with toluonium chloride to reverse methaemoglobinanaemia.

5. Fire-Fighting Measures

Suitable extinguishing media:
water spray

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

Specific hazards:
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.

Special protective equipment:
Wear a self-contained breathing apparatus.

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.

6. Accidental Release Measures

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

Environmental precautions:
Do not discharge into the subsoil/soil.Do not discharge into waterways or sewer systems without proper authorization.

Methods for cleaning up or taking up:
For residues: Pick up with suitable appliance and dispose of.

7. Handling and Storage

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.

Storage

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

Suitable materials for containers: Carbon steel (Iron), Stainless steel 1.4541, Stainless steel 1.4571, High density polyethylene (HDPE), Low density polyethylene (LDPE), rubberized
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 and personal protection

Components with occupational exposure limits

No substance specific occupational exposure limits known.

Personal protective equipment

Respiratory protection:
Breathing protection if dusts are formed. Particle filter with high efficiency for solid and liquid particles (e.g. EN 143 or 149, Type P3 or FFP3).

Hand protection:
Chemical resistant protective gloves (EN ISO 374-1)
Suitable materials also with prolonged, direct contact (Recommended: Protective index 6, corresponding > 480 minutes of permeation time according to EN ISO 374-1):
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:
Safety glasses with side-shields (frame goggles) (e.g. EN 166)

Body protection:
Body protection must be chosen depending on activity and possible exposure, e.g. apron, protecting boots, chemical-protection suit (according to EN 14605 in case of splashes or EN ISO 13982 in case of dust).

General safety and hygiene measures:
Handle in accordance with good industrial hygiene and safety practice. Do not breathe dust. 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.

9. Physical and Chemical Properties

Form:	crystalline
Colour:	white to slightly yellow
Odour:	odourless

Odour threshold:	Not determined due to potential health hazard by inhalation.	
pH value:	approx. 7 - 9 (100 g/l) The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.	
Melting point:	280 °C	(other)
Boiling point:	(1,013.25 hPa) The substance / product decomposes therefore not determined.	
Flash point:	Study scientifically not justified.	
Evaporation rate:	The product is a non-volatile solid.	
Flammability (solid/gas):	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.	
Thermal decomposition:	> 320 °C nitrogen monoxide, nitrogen dioxide, disodium oxide	
Self heating ability:	It is not a substance capable of spontaneous heating.	
Explosion hazard:	Based on the chemical structure there is no indication of explosive properties.	
Fire promoting properties:	Oxidizing.	(UN Test O.1 (oxidizing solids))
Radioactivity:		not radioactive for transport purposes
Vapour pressure:	Study scientifically not justified.	
Density:	2.17 g/cm3 (20 °C) Literature data.	
Relative density:	2.17 (20 °C) Literature data.	
Bulk density:	1,100 - 1,300 kg/m3	(other)
Solubility in water:	readily soluble	

Hygroscopy: hygroscopic
Partitioning coefficient n-octanol/water (log Pow):
Study scientifically not justified.
Surface tension:
Based on chemical structure, surface activity is not to be expected.

Viscosity, dynamic:
Study scientifically not justified.

10. Stability and Reactivity

Conditions to avoid:
See SDS section 7 - Handling and storage.

Thermal decomposition: > 320 °C
nitrogen monoxide, nitrogen dioxide, disodium oxide

Substances to avoid:
reducing agents, oxidizable substances, ammonium salts, amines, amine compounds, acids

Corrosion to metals: Corrosive effects to metal are not anticipated.
In the presence of water or moisture metal corrosion cannot be excluded.

Hazardous reactions:
Hazardous reactions in presence of mentioned substances to avoid.
The product is stable if stored and handled as prescribed/indicated. Reacts with organic substances.

Hazardous decomposition products:
disodium oxide
nitrogen oxides

Chemical stability:
The product is chemically stable.

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

11. Toxicological Information

Routes of exposure

Acute oral toxicity

Experimental/calculated data:
LD50rat (oral): 180 mg/kg

Acute inhalation toxicity

(by inhalation):Study scientifically not justified.

Acute dermal toxicity

(dermal):Study scientifically not justified.

Assessment of acute toxicity

Of high toxicity after single ingestion. There is a risk of damage to the blood (methemoglobinemia) after a single uptake.

Symptoms

Information, i.e. additional information on symptoms and effects may be included in the GHS labeling phrases available in Section 2 and in the Toxicological assessments available in Section 11.

Irritation

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

Experimental/calculated data:
Skin corrosion/irritation rabbit: non-irritant (OECD Guideline 404)

Serious eye damage/irritation rabbit: Irritant. (OECD Guideline 405)

Respiratory/Skin sensitization

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

Experimental/calculated data:
Study scientifically not justified.

Germ cell mutagenicity

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.

Developmental toxicity

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.

Specific target organ toxicity (single exposure)

There is a risk of damage to the blood (methemoglobinemia) after a single uptake.

Repeated dose toxicity and Specific target organ toxicity (repeated exposure)

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

Aspiration hazard

No aspiration hazard expected.

12. Ecological Information

Ecotoxicity

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 (other, 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.

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

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

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

Mobility

Assessment transport between environmental compartments:
The substance will not evaporate into the atmosphere from the water surface.
Adsorption to solid soil phase is not expected.

Persistence and degradability

Assessment biodegradation and elimination (H2O):
Not applicable for inorganic substances.

Elimination information:
not applicable

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

Information on Stability in Water (Hydrolysis):
not applicable

Bioaccumulation potential

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

Bioaccumulation potential:
Because of the n-octanol/water distribution coefficient (log Pow) accumulation in organisms is not to be 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

Contact manufacturer regarding recycling.
Check for possible recycling.
Contact waste centre regarding recycling.

Contaminated packaging:
Contaminated packaging should be emptied as far as possible and disposed of in accordance with official regulations after being thoroughly cleaned.

14. Transport Information

Domestic transport:

UN number or ID number:	UN 1500
UN proper shipping name:	SODIUM NITRITE
Transport hazard class(es):	5.1, 6.1, EHSM

Packing group:	III
Environmental hazards:	yes
Special precautions for user:	None known

Sea transport
IMDG

UN number or ID number:	UN 1500
UN proper shipping name:	SODIUM NITRITE
Transport hazard class(es):	5.1, 6.1, EHSM
Packing group:	III
Environmental hazards:	yes Marine pollutant: YES
Special precautions for user:	EmS: F-A; S-Q

Air transport
IATA/ICAO

UN number or ID number:	UN 1500
UN proper shipping name:	SODIUM NITRITE
Transport hazard class(es):	5.1, 6.1
Packing group:	III
Environmental hazards:	No Mark as dangerous for the environment is needed
Special precautions for user:	None known

15. Regulatory Information

Other regulations

16. Other Information

This product is of industrial quality and unless otherwise specified or agreed intended exclusively for industrial use.Any other intended applications should be discussed with the manufacturer.

Vertical lines in the left hand margin indicate an amendment from the previous version.

The data contained in this safety data sheet are based on our current knowledge and experience and describe the product only with regard to safety requirements. This safety data sheet is neither a Certificate of Analysis (CoA) nor technical data sheet and shall not be mistaken for a specification agreement. Identified uses in this safety data sheet do neither represent an agreement on the corresponding contractual quality of the substance/mixture nor a contractually designated use. It is the responsibility of the recipient of the product to ensure any proprietary rights and existing laws and legislation are observed.