

SODIUM NITRITE

Section 1: Chemical Product and Company Identification

1.1 Product identifier

Product Name: Sodium Nitrite
Material No. 9054XXXXXXXXXX

1.2 Relevant identified uses of the substance or mixture and uses advised against

Relevant identified uses: Pharma, technical

1.3 Details of the supplier of the safety data sheet

CHEMICAL ELEMENTS UKRAINE, LLC
Khimikov avenue, 74, Cherkassy, 18028, Ukraine
+38 0472 59 02 28
hello@chemelements.life
www.chemelements.life

1.4 Emergency telephone number

+49 40 333 13 237

Section 2: Hazards Identification

2.1 Classification of the substance or mixture

Oxidizing solid, Category 3
Acute toxicity, Category 3, Oral
Eye irritation, Category 2
Short-term (acute) aquatic hazard, Category 1

2.2 Label elements

Pictogram:



Signal Word:

DANGER

Hazard Statements:

H272 May intensify fire; oxidizer
H301 Toxic if swallowed
H400 Very toxic to aquatic life

Precautionary statements:

P221 Take any precaution to avoid mixing with combustibles/....
P210 Keep away from heat, hot surface, sparks, open flames and other ignition sources - No smoking.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P321 Specific treatment (see ... on this label).
P405 Store locked up.
P501 Dispose of contents/container to ...

Section 3: Composition and Information on Ingredients

3.1 Substance

Chemical name: Sodium Nitrite
Formula: NaNO₂
CAS No. 7632-00-0
EC No. 231-555-9

3.2 Hazardous components (REGULATION (EC) No 1272/2008)

Component	CAS No.	WP, %
Sodium Nitrite	7632-00-0	≥98,0

3.5 Mixture

Not applicable

Section 4: First Aid Measures

4.1 Description of first aid measures

Inhalation:	If breathing is disturbed, give moistened oxygen, while breathing stops, give artificial respiration.
Ingestion:	Clear oral surface from product residues. Rinse the stomach through a tube. Next, give a solution of yellow blood salt every 15 minutes. 1 tbsp. spoon, as well as burnt magnesia inside. Symptomatic treatment.
Skin:	Remove contaminated clothing and wash affected skin with soap and water.
Eye contact:	Rinse with running water with a wide open palpebral fissure until symptoms of irritation are resolved.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms:	Severe cyanosis, nausea, vomiting, dizziness, headache, anxiety, cramping or abdominal pain, diarrhea, tachycardia, respiratory arrest, a sharp drop in blood pressure, convulsions, coma, death. Sweating, skin cold to the touch. Increased intraocular and intracranial pressure; in the blood - Heinz bodies.
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4.3 Indication of any immediate medical attention and special treatment needed

No information available

Section 5: Fire fighting measures

5.1 Extinguishing media

Water. Finely dispersed water.

5.2 Special hazards arising from the substance or mixture

Thermal degradation products - sodium oxide, nitrogen oxides.

5.3 Advice for firefighters

Sodium nitrite is an oxidizing agent, does not burn, but supports combustion and can cause ignition of combustible materials. The containers with the substance may explode when heated.

Cool containers with substance in a fire zone with water. Keep a safe distance. In a fire situation, wear self-contained positive pressure breathing apparatus and protective clothing from resistant materials.

Section 6: Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid inhalation and ingestion. Avoid contact with skin, eyes and clothing. Wear protective clothing specified for normal operations (see Section 8).

6.2 Environmental precautions

Avoid release to the environment.

6.3 Methods and materials for containment and cleaning up

Substance collect in a closed identified container, using a dry method. Avoid generation of dusts. Wash off contaminated surface with water and detergents.

6.4 Reference to other sections

Disposal (see Section 13).

Section 7: Handling and Storage

7.1 Precautions for safe handling

Change contaminated clothing immediately; wash hands and face after handling. Not allowed to eat food and store food.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry, ventilated warehouse in the original tightly closed packaging. Avoid exposure to direct sunlight and moisture.

7.3 Specific end use(s)

Food, technical.

Section 8: Exposure Controls/Personal Protection

8.1 Control parameters

Provide adequate ventilation or other engineering controls to keep the airborne concentrations of vapor or mists below the applicable workplace exposure limits. The level of protection and types of controls will vary depending upon potential exposure conditions.

8.2 Exposure controls

Eye/face protection:	Safety glasses with side-shields.
Skin and body protection:	Wear suitable protective clothing (protective gloves, dustproof clothing and special footwear). Recommended Glove material: Nitrile rubber 0,11 mm.
Respiratory Protection:	Recommended Filter type: Filter P3.

Section 9: Physical and Chemical Properties

Form:	Solid
Appearance:	White or yellowish white crystals
Odour:	Odourless.
Melting Point:	280°C
Boiling point:	320°C
Decomposition temperature:	>320°C decomposes to NO, NO ₂ , N ₂ , Na ₂ O
Solubility in Water:	820 g/l (20°C)
Solubility in Organic Solvents:	It is slightly soluble in diethyl ether (0,3 wt.% at 20°C); sparingly soluble in methanol (4,4 wt.% at 20°C); ethanol 3 wt.% at 20°C. Extremely soluble in ammonia and pyridine.
Specific Gravity:	2,26 g/cm ³ (20°C)
pH:	pH 8–9 (100 g/l, H ₂ O, 20°C)
Flammability:	Explodes: 537°C
Molecular Weight:	69,0
Partition coefficient: n-octanol/water:	Log P _{ow} =-3,7 (25°C)
Vapor pressure:	Not applicable

Section 10: Stability and Reactivity Data

10.1 Reactivity

Oxidizing agent. It is oxidized, reduced, reacts with acids and alkalis, acid chlorides, amides, amines, forms complexes. Hygroscopic substance. It does not polymerize.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature). Hygroscopic.

10.3 Possibility of hazardous reactions

No information available.

10.4 Conditions to avoid

Dust generation. Moisture. Incompatibles. Direct sunlight.

10.5 Incompatible materials

Acetanilide, chlorates, iodides, mercury salts, sulfites, tannic acid. On contact: reducing agents, oxidizing agents. During joint storage: acids, organic substances. When used as containers: flammable substances, organic substances.

10.6 Hazardous decomposition products

See 5.2

Section 11: Toxicological Information

Acute Toxicity:	LD ₅₀ =85 mg/kg (oral, rat). LD ₅₀ =186 mg/kg (oral, rabbits). LD ₅₀ =158 mg/kg (intraperitoneally, mouse). LD ₅₀ =330 mg/kg (oral, dog). LD ₅₀ =65 mg/kg (intravenous, rat).
Inhalation:	Yes
Skin:	Yes (rat, mild to moderate irritant)
Eye:	Yes (rabbit, standard Draize test, 50 mg/24 h).

SAFETY DATA SHEET

Carcinogenicity:	People: this information is not available. Animals: Carcinogen with RTECS criteria (TDL ₀ =100 g/kg, 2 years, at intervals, orally, rat-tumor of the liver; TDL ₀ =2 g/kg, 2 years, without interruption, oral, mouse-tumor of the respiratory system).
Mutagenicity:	Yes (Ames test, Salmonella typhimurium, Escherichia coli,, without metabolic activation, in vitro chromosome aberration test, Chinese hamster cells; sister chromatid exchange disorder test).
Reproductive toxicity:	Yes (TDL ₀ =660 mg/kg, orally, rat, 1-22 days after mating, embryo death).
Specific target organ toxicity - single exposure:	No information available
Specific target organ toxicity - repeated exposure:	No information available
Aspiration hazard:	No information available
Systemic effects:	See 4.2

Section 12: Ecological Information

12.1 Acute toxicity

For fish: LC₅₀=17,1 mg/l (Phoxinus phoxinus, 24 hours). LC₅₀=1,45 mg/l (Oncorhynchus mykiss, 48 hours). LC₅₀=0,54-26,3 mg/l (Oncorhynchus mykiss, 96 hours).
For Daphnia magna: LC₅₀=48 mg/l (96 hours). LC₅₀=15,4 mg/l (48 hours). EC₅₀=87-144 mg/l (24 hours).
For algae: EC>100 mg/l (Desmodesmus subspicatus, 72 hours). NOEC=100 mg/l (Desmodesmus subspicatus, 72 hours).

12.2. Persistence and degradability

Stability in abiotic conditions (τ_{1/2}):>30 days (extremely stable). Transformation Products: Nitrates.

12.3 Bioaccumulative potential

No information available

12.4. Mobility in soil

No information available

12.5 Results of PBT and vPvB assessment

No information available

12.6 Other adverse effects

No information available

Section 13: Disposal Considerations

Whatever cannot be saved for recovery or recycling should be disposed of according to relevant local, state and federal government regulations.

Section 14: Transport Information

14.1 UN number

1500

14.2 UN proper shipping name

SODIUM NITRITE

14.3 Transport hazard class(es)

Land transport (ADR/RID): UN 1500, Transport hazard class(es) 5.1, Packaging group III.

Air transport (IATA): UN 1500, Transport hazard class(es) 5.1, Packaging group III.

Sea transport (IMDG): UN 1500, Transport hazard class(es) 5.1, Packaging group III.

14.4 Packaging group:

III

Section 15: Other Regulatory Information

Chemical Safety Assessment: No information

Section 16: Other Information

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