

Material Safety Data Sheet

Sodium nitrite

Section 1 – PRODUCT AND COMPANY IDENTIFICATION

1. Product Identifier	Sodium nitrite; Nitrous acid, sodium salt
2. Recommended Use & Uses advised against	Uses for Laboratory and R&D only
3. Information of Supplier	SAMCHUN PURE CHEMICAL CO.,LTD ADDRESS; (Mogok-dong) 117, Sandan-ro 16Beon-gil, Pyeongtaek-si, Gyeonggi-do, Korea Emergency Phone; 82-31-668-0700/3 Department; Safety & Environment dep. Web site; http://www.samchun.com

Section 2 – HAZARDS and DANGER IDENTIFICATION

1.GHS Classification· Identification	Oxidizing solid	Category3
	Acute toxic(Oral)	Category3
	Specific Target Organ Toxicity (Single Exposure)	Category2
	Specific Target Organ Toxicity (Repeated Exposure)	Category2
	Acute Aquatic Toxicity	Category1

2. Label and Mark including Precautionary Statement

◦Label elements



◦Signal word

Danger

◦Hazard · Danger statement

H272 May intensify fire; oxidizer
H301 Toxic if swallowed
H371 May cause damage to organs (Cardiovascular system, blood)
H373 May cause damage to organs (blood) through prolonged or repeated exposure
H400 Very toxic to aquatic life

◦Precautionary statement

Precaution P210 Keep away from heat/sparks/open flames/hot surfaces. . No smoking.
P220 Keep/Store away from clothing/.../combustible materials.
P221 Take any precaution to avoid mixing with combustibles/...
P280 Wear protective gloves/protective clothing/eye protection/face protection
P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P273 Avoid release to the environment

Measures

P370+P378 In case of fire: Use (Section 5. explosions, according to the fire-fighting extinguishing agent suitable method) for extinction
P321 Specific treatment (see Section 4. on this label).
P330 Rinse mouth.

- Measures** P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
P308+P311 If exposed or concerns, call a poison center or physician
P314 Get medical advice/attention if you feel unwell.
P391 Collect spillage
- Storage** P405 Store locked up
- Dispose** P501 Dispose of contents/container under related law and regulations

3. Other Hazard-Risk which are not included in the classification criteria

NFPA index(0~4steps) : Health=4, Fire=0, Reaction=0

Section 3 – COMPOSITION AND INFORMATION ON INGREDIENTS

Chemical Name	Other Name	CAS No.	Content (%)
Sodium nitrite	Nitrous acid, sodium salt	7632-00-0	100

Section 4 – FIRST AID MEASURES

- 1. Eye Contact** Rinse immediately with plenty of water, also under the eyelids, for at least 15minutes, Immediate medical attention is required.
- 2. Skin Contact** Take off contaminated cloths and shoes immediately, wash with plenty Of water and soap for at least 15minutes.
- 3. Inhalation** Move to fresh air immediately, if breathing is difficult, induce artificial respiration and immediate medical treatment is required.
- 4. Ingestion** Do not induce vomiting and Call a physician immediately.
- 5. Immediate medical attention and Notes for physician** Let physician aware material and take protection measures.

Section 5 – FIRE-FIGHT MEASURES

- 1. Suitable extinguish media** Use alcohol foam, carbon dioxide or water spray for digestion related to this material.
Use dry sand or earth for digestion.
Inappropriate Extinguishing Media: N/A
- 2. Special hazards arising from the substance** Thermal decomposition products: nitrogen oxides, sodium oxide
- 3. Special protective equipment and Precautions for fire-fighters** Move a container away from fire place, available not being dangerous
Cool the container with water spray for long time, after extinguishing
No direct contact with material by water. In case of big fire, mass watering in fine spray and decrease vapor. Spray in safety distance, avoid inhaling of material-itself and burnings, position in opposite wind and escape low area.

Section 6 – ACCIDENTAL RELEASE MEASURES

- 1. Personal precautions and Emergency procedures** Don't touch leakages and avoid inhale and skin contact, ventilate and use air respiratory in closed room, remove ignition source.
- 2. Environmental precautions** Minimize leak/spill, collect and keep leak/spill in container
- 3. Methods and material for containment and cleaning up** Remove residue with high-efficient cleaner

Section 7 – HANDING AND STORAGE

- 1. Precautions for safe Handling** Skin contact, inhalation of vapors and prevent intrusion to the eye, all containers will be grounded.
- 2. Conditions for safe storage** Keep container tightly closed in a dry, cool and well-ventilated place.
Keep away from incompatible materials.
See NFPA430 codes for liquid and solid oxide storage.
Avoid contact with water or moisture.
Avoid storing on wooden floors

Section 8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

1. Occupational exposure limit, biological exposure limit

National law of Safety management of

N/A

2. Appropriate Engineering controls Check conditions of exposure criteria, operation local ventilation during work

3. Personal protective equipment

- **Respiratory protection** Because it is concerned about the harmfulness of human body due to chemical substances, it is recommended to wear respiratory protective equipment with dust mask or dust filter in consideration of physical and chemical characteristics during handling.
Respiratory protection should be certified by the Health and Safety Authority. If this affects the life or health concerns or other unknown concentrations, depending on the work environment should wear supplied-air respirator, air respirator
- **Eye-protection** Wear safety glasses to protect from the hazardous liquid products.
Install fractional eye wash facilities and showers near work area.
- **Hand protection** Wear safety gloves for handling chemicals as they may cause human health hazards.
- **Skin and body protection** Wear chemical protective clothing when handling, as it is likely to harm human health due to chemicals

Section 9 – PHYSICAL AND CHEMICAL PROPERTIES

1. Physical state and color	Solid(White to Yellow)	2. Odor	Odorless
3. threshold	N/A	4. pH	~9
5. Melting/Freezing point	271°C	6. Boiling point/range	320°C
7. Flashing point	N/A	8. Evaporation speed	N/A
9. Flammability(solid, gas)	N/A	10. Flash or Explosion limit upper / lower	N/A
11. Vapor pressure	N/A	12. Solubility	Soluble
13. Vapor density	2.4	14. Gravity	2.168
15. n-octanol-water Partition coefficient	3.7	16. Self ignition temp(°C)	N/A
17. Cracking temp(°C)	N/A	18. Viscosity	N/A
19. Molecular Weight	69		

Section 10 – STABILITY AND REACTIVITY

- 1. Chemical stability and Possibility of Hazardous Reactions** Strong fire: oxidizing agent
Contact with other combustible materials may cause fire.
Residues after drying may act as oxidizing agents
Vigorous polymerization may cause fire and explosion.
That can ignite combustibles (wood, paper, oil, clothing, etc.)
Containers may explode when heated
Leakage may present a fire / explosion hazard.
Some may explode on fire or on heating Explosive with heat or contamination
Some react explosively with hydrocarbons (fuels).
Vapors, inhalation of material, ingestion, and contact may cause serious injury, burn, and death.
- 2. Conditions to Avoid** Contact with combustible material may ignite or explode.
Avoid contact with prohibited substances.
- 3. Incompatible Materials** Combustible materials, metals, reducing agents, acids, metal salts, cyanide
- 4. Hazardous Decomposition Products** Thermal decomposition products: sodium oxide, nitrogen oxides

Section 11 – TOXICOLOGICAL INFORMATION

1. Information on the likely routes of exposure.

May cause irritation, dyspnea, headache, dizziness, cyanosis, blood disorders, and death

May cause irritation, blood pressure change, nausea, vomiting, diarrhea, stomach pain, dyspnea, irregular heartbeat, headache, dizziness, loss of orientation, tingling sensation, blurred vision, pupil dilation, cyanosis, blood disorders and death

May cause irritation

2. Health hazard information

◦Acute toxic	Oral : LD50 180mg/kg Rat Skin : N/A Inhalation : LC50 0.0055mg/l 4hr Rat
◦Serious skin corrosive / irritation	May cause skin irritation.
◦Serious eye damage / irritation	Causes eye irritation. (Conjunctivitis, corneal injury)
◦Respiratory sensitization	Respiratory tract irritation
◦Skin sensitization	N/A
◦Carcinogenicity	N/A
◦Germ cell Mutagenicity	Mouse dominant lethal test result: negative Rat and mouse bone marrow micronucleus test results: negative Mouse peripheral blood nuclear test result: negative
◦Reproductive toxic	Reproductive and teratogenic effects in the rat and mouse function is not verified
◦Specific target organ toxicity (single exposure)	In people, cardiovascular (blood pressure reduction, etc.) Affects blood (such as methohemoglobinemia)
◦Specific target organ toxicity (repeated exposure)	Methemoglobinemia is reported in rats
◦Aspiration hazard	N/A

Section 12 – ECOLOGICAL INFORMATION

1.Acquatic and Terrestrial eco toxicity	Fish toxicity : LC50 0.36mg/l 96hr Invertebrate toxicity : EC50 18.11mg/l 48hr Sea algae : EC50 159mg/l 72hr
2.Persistence and degradability	Persistence : N/A Degradability : N/A
3.Bioaccumulative potential	Concentrations : N/A Bioaccumulative : N/A
4.Mobility in soil	N/A
5.Other adverse effects	Very toxic to aquatic organisms

Section 13 – Disposable considerations

1.Waste methods	Dispose in accordance with local regulations.
2.Waste warning	Isolate waste away from prohibitive mixture substance.

Section 14 – TRANSPORT INFORMATION

1. UN No.	1500
2.Proper shipping Name	Sodium nitrite
3.Hazard class	5.1
4.Packing group	III
5.Marine pollutant	N/A
6.Particular safety Measures for	Fire emergency : F-A

Section 15 – REGULATORY INFORMATION

1. Occupation safety and health acts	Non-described
2. Chemical Substances Control Act	Toxic
3. National law of Safety management of hazardous material	1 Class Nitrite salts 300Kg
4. National law of management of Wastes	Designated Waste
5. Other domestic and foreign law	EU classification information (confirmed classification result): O; R8T; R25N; R50 EU classification information (Risk phrases): R8, R25, R50 EU classification information (Safety phrases): S1 / 2, S45, S61

Section 16 – OTHER INFORMATION

1. Material source	A chemical information MSDS Safety and Health Agency National Institute of Environmental Research Chemical Information Systems Korea Industrial Technology National Fire Hazardous Materials Information System
1. The 1st edition	2002.07.30
2. Revision and The final revision	7 / 2019.01.03

. Other references

* The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.