Date of issue: 2018/01/19
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Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier:
- Product name: Sodium nitrite
- SDS No. : 7224E-6

Recommended use of the chemical and restrictions on use
- Research and Development

Details of the supplier of the safety data sheet
- Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.
- Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN
- Division: Chemical Safety Management Department
- Telephone number: +81-6-6946-8061
- FAX: +81-6-6946-1607

Section 2. Hazards identification

Classification of the substance or mixture

PHYSICAL AND CHEMICAL HAZARDS
- Oxidizing solids: Category 3

HEALTH HAZARDS
- Acute toxicity (Oral): Category 3
- Serious eye damage/eye irritation: Category 2A
- Germ cell mutagenicity: Category 2
- Reproductive toxicity: Category 2
- Reproductive toxicity - effects on or via lactation: Additional category
- Specific target organ toxicity - single exposure: Category 1 (blood)
- Specific target organ toxicity - repeated exposure: Category 2 (blood)

ENVIRONMENT HAZARDS
- Hazardous to the aquatic environment, short-term (acute): Category 1
- Hazardous to the aquatic environment, long-term (chronic): Category 1

(Note) GHS classification without description: Not classified/Classification not possible

Label elements

Hazard pictograms:

Signal word: Danger

Hazard statements
- H272 May intensify fire; oxidizer
- H301 Toxic if swallowed
- H319 Causes serious eye irritation
- H341 Suspected of causing genetic defects
- H361 Suspected of damaging fertility or the unborn child
- H362 May cause harm to breast-fed children
- H370 Causes damage to organs (blood)
- H373 May cause damage to organs through prolonged or repeated exposure (blood)

H410 Very toxic to aquatic life with long lasting effects

Precautionary statements

Prevention

P203 Obtain, read and follow all safety instructions before use.
P263 Avoid contact during pregnancy and while nursing.
P273 Avoid release to the environment.
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 Keep away from clothing and other combustible materials.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P264 + P265 Wash hands thoroughly after handling. Do not touch eyes.
P270 Do not eat, drink or smoke when using this product.

Response

P370 + P378 In case of fire: Use appropriate media to extinguish.
P391 Collect spillage.
P308 + P316 IF exposed or concerned: Get emergency medical help immediately.
P318 IF exposed or concerned, get medical advice.
P319 Get medical help if you feel unwell.
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 + P317 If eye irritation persists: Get medical help.
P330 IF SWALLOWED: Rinse mouth.
P301 + P316 IF SWALLOWED: Get emergency medical help immediately.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Specific danger/hazard

Health hazard

See "11. Toxicological Information".

Section 3. Composition/information on ingredients

Substance/mixture:

Substance

Ingredient name	Content (%)	CAS RN	ENCS	Chemical formula
Sodium nitrite	≧98	7632-00-0	1-483	NaNO2

Note : The figures shown above are not the specifications of the product.

Section 4. First aid measures

Descriptions of first aid measures

General measures

IF exposed or concerned, get medical advice.
Get medical help if you feel unwell.

IF exposed or concerned: Get emergency medical help immediately.

IF INHALED

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Get medical help if you feel unwell.

IF ON SKIN

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water or shower.
If skin irritation or rash occurs: Get medical help.

IF IN EYES

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical help.

IF SWALLOWED

Rinse mouth.
IF SWALLOWED: Get emergency medical help immediately.
IF SWALLOWED: Get medical help if you feel unwell.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.
In case of fire, use water mist or loaded liquid, foam, dry sand to extinguish.
*Fire Service Act Group 1 Hazardous Materials

Unsuitable extinguishing media

Carbon Dioxide/ Halon Extinguishing System
Dry Chemical Extinguishing System- Using Hydrogen Carbonates , etc./Others (except for phosphates etc., Hydrogen Carbonates etc.)
Fire Extinguisher Discharging Carbon Dioxide/Halogenide
Fire Extinguisher Discharging Dry Extinguishing agents-Using Hydrogen Carbonates, etc./Others (except for phosphates etc., Carbonates etc.)
*Cabinet Order Concerning the Control of Hazardous Materials (Attached Table 5) Other Group 1 Hazardous Materials

Specific hazards arising from the substance or mixture

Fire may produce irritating, corrosive and/or toxic gases.
Runoff from fire control or dilution water may cause pollution.
See "10.Stability and Reactivity".

Advice for firefighters

Special extinguishing method

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.
Wear protective gloves/protective clothing/eye protection/face protection.
Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unauthorized personnel away.

Ventilate area until material pick up is complete.
Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses, low areas or rivers. To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for containment and cleaning up

Liquid: Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.
Solid: Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

Section 7. Handling and storage

Precautions for safe handling

Engineering measures

(Measures to prevent operator exposure)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Measures to prevent fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep away from clothing and other combustible materials.

(Local ventilation/general ventilation)

Exhaust/ventilator should be available.

(Precautions)

Avoid contact with skin.
Avoid contact with eyes.

Advice on safe handling

Obtain, read and follow all safety instructions before use.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and contaminated parts thoroughly after handling.
When using do not eat, drink or smoke.

Avoidance of contact

See Section 10: Stability and Reactivity.

Advice on general occupational hygiene

Avoid contact during pregnancy and while nursing.
Wash hands thoroughly after handling.
Do not touch eyes.
Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Conditions for safe storage

Keep container tightly closed.
Store locked up. (P405)
Store in a cool, dry place. Do not store in direct sunlight.
Storage in accordance with local/national regulation.

Safe packaging material

Use closed unbreakable containers.

Section 8. Exposure controls/personal protection

Control parameters

Permissible concentration

Administrative Control Levels and Concentration standard value

Not established

Occupational exposure limit values

The Japan Society for Occupational Health

(Other inorganic and organic dust (third class dust))

JSOH Respirable dust 2mg/m3, Total dust 8mg/m3

Appropriate engineering controls

Do not use in areas without adequate ventilation.

Eye wash station should be available.

Washing facilities should be available.

Individual protection measures, such as personal protective equipment

Recommend to use protective equipment in conformity with the standards.

Use appropriate protective equipment in accordance with local/national regulation.

Respiratory protection

Wear respiratory protection (dust-proof mask/gas mask). Select chemical cartridge corresponding to type of gases when using a gas mask.

Hand protection

Wear impervious protective glove.

Eye/face protection

Wear eye/face protection. Wear safety goggles in cases gas is generated.

Skin and body protection

Wear protective clothing.

Section 9. Physical and Chemical Properties

Physical state: Crystalline powder or powder

Color: White to light yellow

Odor: Odorless

Melting point/Freezing point data is not available.

Boiling point, initial boiling point, or boiling range data is not available.

Flammability data is not available.

Lower and upper explosion limit/flammability limit data is not available.

Flash point data is not available.

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

pH data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: 82g/100ml (20°C)

Solubility in solvent data is not available.

Partition coefficient n-octanol/water (log value): -3.7

Vapor pressure data is not available.

Density and/or relative density: 2.2g/cm3

Relative vapor density (Air=1) data is not available.

Particle characteristics data is not available.

Other information

Other information is not available.

Section 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Deliquescent materials.

Possibility of hazardous reactions

May explode on heating above 530℃. Decomposes on contact with acids. This produces toxic fumes of nitrogen oxides. The substance is a strong oxidant. It reacts with combustible and reducing materials. This generates fire and explosion hazard. The solution in water is a weak base. Reacts with aluminium, ammonium compounds and amines.(ICSC 1120)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Acids, Reducing agents, Aluminium, Ammonium compounds, Amines, Combustible materials

Hazardous decomposition products

Nitrogen oxides

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Product]

Category 3, Toxic if swallowed

[Data for components of the product]

[NITE-CHRIP]

rat LD50: 77 mg/kg (source: NITE)

Skin corrosion/irritation data is not available.

Serious eye damage/irritation

[Product]

Category 2A, Causes serious eye irritation

[Data for components of the product]

[NITE-CHRIP]

Category 2A (source: NITE)

Allergenic and sensitizing effects data is not available.

Germ cell mutagenicity

[Product]

Category 2, Suspected of causing genetic defects

[Data for components of the product]

[NITE-CHRIP]

Category 2 (source: NITE)

Carcinogenic effects data is not available.

Reproductive toxicity

[Product]

Category 2, Suspected of damaging fertility or the unborn child

Additional category, May cause harm to breast-fed children

[Data for components of the product]
[NITE-CHRIP]
Category 2, Additional category (source: NITE)

Specific target organ toxicity - single exposure
[Product]
Category 1, Causes damage to organs
[Data for components of the product]
[NITE-CHRIP]
Category 1 (blood) (source: NITE)

Specific target organ toxicity - repeated exposure
[Product]
Category 2, May cause damage to organs through prolonged or repeated exposure
[Data for components of the product]
[NITE-CHRIP]
Category 2 (blood) (source: NITE)

Aspiration hazard data is not available.

Information on other hazards
May cause lung disorders by massive inhalation of powdered substance.
-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

Section 12. Ecological Information

Toxicity

Aquatic toxicity
[Product]
Category 1, Very toxic to aquatic life
Category 1, Very toxic to aquatic life with long lasting effects
[Data for components of the product]
Hazardous to the aquatic environment, short-term (acute)
[NITE-CHRIP]
Fish (Oncorhynchus mykiss) 96-hour LC50: 0.54 mg/L (source: NITE)
Hazardous to the aquatic environment, long-term (chronic)
[NITE-CHRIP]
Crustacea (Penaeus monodon) NOEC: > 1 mg/L (source: NITE)
Algae (Desmodesmus subspicatus) NOEC: > 1 mg/L (source: NITE)

Water solubility
82 g/100 mL (20℃) (source: ICSC, 2000)

Persistence and degradability
Persistence and degradability data is not available.

Bioaccumulative potential
[Data for components of the product]
log Pow: -3.7 (source: ICSC, 2000)

Mobility in soil
Mobility in soil data is not available.

Other adverse effects
Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Waste treatment methods

Waste from residues

Avoid release to the environment.

Dispose of contents/container as industrial waste. Accordance with local/national regulation.

Section 14. Transport Information

UNRTDG

UN number : UN1500

UN Proper Shipping Name : SODIUM NITRITE

Transport hazard class(es) : 5.1

Subsidiary hazard(s) : 6.1

Packing group : III

IMDG Code (International Maritime Dangerous Goods Regulations)

UN number : UN1500

UN Proper Shipping Name : SODIUM NITRITE

Transport hazard class(es) : 5.1

Subsidiary hazard(s) : 6.1

Packing group : III

IATA (Dangerous Goods Regulations)

UN number : UN1500

UN Proper Shipping Name : SODIUM NITRITE

Transport hazard class(es) : 5.1

Subsidiary hazard(s) : 6.1

Hazard labels : Oxidizer & Toxic

Packing group : III

Environmental hazards

Marine pollutants (yes/no) : yes

Environmentally hazardous substance/mixture (yes/no) : yes

ERG GUIDE No.: 141

Section 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Applicable

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

Section 16. Other information

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN Recommendations on the TRANSPORT OF DANGEROUS GOODS 23rd edit., 2023 UN IMDG Code, 2024 Edition (Incorporating Amendment 42-24)

IATA Dangerous Goods Regulations (67th Edition) 2026
2024 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2026 TLVs and BEIs. (ACGIH)
JIS Z 7252 : 2025
JIS Z 7253 : 2025
Recommendation of occupational exposure limits (2024-2025) (JSOH)
Supplier's data/information

General Disclaimer

All chemicals have unknown hazard. Handle the product with care.
This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.
The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.
The GHS classification data given here is based on current Data published in Japan (National Institute of Technology and Evaluation (NITE) Chemical Risk Information Platform (NITE-CHRIP), up to FY2024).