Date of issue: 2018/01/19
Date of revision: 2022/10/05

Safety Data Sheet

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

Product identifier:
Product name: Sodium nitrite
SDS No. : 7224E-5

Relevant identified uses of the substance or mixture and uses advised against
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
e-mail address: kagakuhinanzenkanri@kishida.co.jp

Section 2. Hazards identification

GHS classification and label elements of the product
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 (Acute): Category 1
Hazardous to the aquatic environment (Long-term): Category 1

Label elements

Signal word: Danger
HAZARD STATEMENT
May intensify fire; oxidizer
Toxic if swallowed
Causes serious eye irritation
Suspected of causing genetic defects
Suspected of damaging fertility or the unborn child
May cause harm to breast-fed children
Causes damage to organs(blood)
May cause damage to organs through prolonged or repeated exposure(blood)
Very toxic to aquatic life with long lasting effects
PRECAUTIONARY STATEMENT
Prevention

Avoid release to the environment.
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Keep away from clothing and other combustible materials.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash contaminated parts thoroughly after handling.
Wear protective gloves/protective clothing/eye protection/face protection.
Do not eat, drink or smoke when using this product.

Response

In case of fire: Use appropriate media to extinguish.
Collect spillage.
Get medical advice/attention if you feel unwell.
IF exposed or concerned: Get medical advice/attention.
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 advice/attention.
IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.
IF SWALLOWED: Rinse mouth.

Disposal

Dispose of contents/container in accordance with local/national regulation.

Specific Physical and Chemical hazards

Oxidizing material. Organic or combustible material may catch fire in contact with it.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Sodium nitrite
Content (%):98(min)
Chemical formula:$NaNO_2$
Chemicals No, Japan:1-483
CAS No.:7632-00-0
MW:69.00
ECNO:231-555-9

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

Section 4. First-aid measures

Descriptions of first-aid measures

General measures

Get medical advice/attention if you feel unwell.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.
Call a POISON CENTER/doctor/physician if you feel unwell.

IF ON SKIN (or hair)

Take off immediately all contaminated clothing. Rinse skin with water or shower.
If skin irritation or rash occurs: Get medical advice/attention.

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 advice/attention.

IF SWALLOWED

Rinse mouth.
Immediately call a POISON CENTER/doctor/physician.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

In case of fire, use water mist, foam, dry sand to extinguish.

Unsuitable extinguishing media

Inactive gas firefighting equipment
Halogenated firefighting system
Dry-powder firefighting equipment - hydrogen carbonate etc.
Dry-powder firefighting equipment - except for phosphate etc.,hydrogen carbonate etc.
Carbon dioxide extinguisher
Halogenated extinguisher
Dry-powder extinguisher - hydrogen carbonate etc.
Dry-powder extinguisher - except for phosphate etc.,hydrogen carbonate etc.

Specific hazards arising from the substance or mixture

Containers may explode when heated.
Fire may produce irritating, corrosive and/or toxic gases.

Advice for firefighters

Specific fire-fighting measures

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 full face peace operated positive pressure mode.

Section 6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

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

Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.
Avoid raising dust.

Methods and materials for containment and cleaning up

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

Preventive measures

(Exposure Control for handling personnel)

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

(Protective measures against 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.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.
Avoid contact with eyes.

Safety Measures
Wear protective gloves/protective clothing/eye protection/face protection.
When using do not eat, drink or smoke.
Any incompatibilities
See "10.Stability and Reactivity"
Advice on general occupational hygiene
Wash contaminated parts thoroughly after handling.
Do not eat, drink or smoke when using this product.
Storage
Conditions for safe storage
Keep container tightly closed.
Store in a cool, dry place. Do not store in direct sunlight.
Keep under lock and key.
Container and packaging materials for safe handling
Glass
Polyethylene

Section 8. Exposure controls/personal protection

Control parameters
Exposure controls
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
Respiratory protection
Wear respiratory protection.
Hand protection
Wear protective gloves.
Eye protection
Wear eye/face protection.

Section 9. Physical and Chemical Properties

Information on basic 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 or initial boiling point data is not available.
Boiling range data is not available.
Flammability (gases, liquids and solids) 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)
n-Octanol/water partition coefficient: log Pow=-3.7
Vapor pressure data is not available.
Density and/or relative density: 2.2g/cm^3

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

Section 10. Stability and Reactivity

Reactivity

Not available.

Chemical stability

Hygroscopic (absorbs moisture from the air).

Possibility of hazardous reactions

May explode on heating above 530° C. 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, Combustible materials, Aluminium, Ammonium compounds, Amines

Hazardous decomposition products

Nitrogen oxides

Section 11. Toxicological Information

Information on toxicological effects

Acute toxicity

Acute toxicity (Oral)

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium nitrite)

rat LD50=77-150mg/kg (SIDS, 2005)

Irritant properties

Skin corrosion/irritation data is not available.

Serious eye damage/irritation

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium nitrite)

rabbit moderate irritation (SIDS, 2005)

Allergenic and sensitizing effects data is not available.

Germ cell mutagenicity

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium nitrite)

cat. 2; IARC 94, 2010

Carcinogenic effects data is not available.

Reproductive toxicity

[Data for components of the product]

[GHS Cat. Japan, base data]

(Sodium nitrite)

cat. 2; SIDS, 2005

(Sodium nitrite)

cat. add; SIDS, 2005

Specific target organ toxicity (STOT)

STOT-single exposure

[Data for components of the product]
[cat.1]
[GHS Cat. Japan, base data]
(Sodium nitrite)
blood (SIDS, 2005)
STOT-repeated exposure
[Data for components of the product]
[cat.2]
[GHS Cat. Japan, base data]
(Sodium nitrite)
blood (NTP TR 495, 2001)
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
[Data for components of the product]
Hazardous to the aquatic environment (Acute)
[GHS Cat. Japan, base data]
(Sodium nitrite)
Fish (rainbow trout) LC50=0.54mg/L/96hr (SIDS, 2006)
Water solubility
(Sodium nitrite)
82 g/100 ml (20℃) (ICSC, 2000)
Persistence and degradability
Persistence and degradability data is not available.
Bioaccumulative potential
[Data for components of the product]
(Sodium nitrite)
log Pow=-3.7 (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

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging
Waste treatment methods
Avoid release to the environment.
Dispose of contents/container in accordance with local/national regulation.

Section 14. Transport Information

UN No. or ID No.: 1500
UN Proper Shipping Name :
SODIUM NITRITE
Class or division (Transport hazard class) : 5.1
Subsidiary hazard(s) : 6.1
Packing group : III
ERG GUIDE No.: 140

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 1500
Proper Shipping Name :
SODIUM NITRITE
Class or division : 5.1
Subsidiary hazard(s) : 6.1
Packing group : III

IATA Dangerous Goods Regulations

UN No.: 1500
Proper Shipping Name :
SODIUM NITRITE
Class or division : 5.1
Subsidiary hazard(s) : 6.1
Hazard labels : Oxidizer & Toxic
Packing group : III
Special provisions No.: A803

Environmental hazards

MARPOL Annex III - Prevention of pollution by harmful substances

Marine pollutants (yes/no) : yes

MARPOL Annex V - Prevention of pollution by garbage discharge

Hazardous to the aquatic environment - acute hazard: cat.1
Sodium nitrite
Hazardous to the aquatic environment - long-term hazard: cat.1, 2
Sodium nitrite

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

Sodium nitrite

Other regulatory information

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

Section 16. Other information

GHS classification and labelling

Oxidising Solids, Category 3: H272 May intensify fire; oxidiser
Acute toxicity, Category 3: H301 Toxic if swallowed
Serious eye damage/eye irritation, Category 2A: H319 Causes serious eye irritation
Germ cell mutagenicity, Category 2: H341 Suspected of causing genetic defects
Reproductive toxicity, Category 2: H361 Suspected of damaging fertility or the unborn child
Reproductive toxicity - effects on or via lactation, Additional category : H362 May cause harm to breast-fed children

STOT - single exposure, Category 1: H370 Causes damage to organs
STOT - Repeated exposure, Category 2: H373 May cause damage to organs through prolonged or repeated exposure
Hazardous to the aquatic environment, short-term (acute), Category 1: H400 Very toxic to aquatic life
Hazardous to the aquatic environment, long-term (chronic), Category 1: H410 Very toxic to aquatic life with long lasting effects

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 21th edit., 2019 UN
IMDG Code, 2018 Edition (Incorporating Amendment 39-18)
IATA Dangerous Goods Regulations (62nd Edition) 2021
2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2022 TLVs and BEIs. (ACGIH)
Supplier's data/information

General Disclaimer

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 Japan official data (NITE published in 2021).