



Safety Data Sheet

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

Product identifier:

Product name: Sodium chlorite

SDS No. : 7127E-3

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

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 2

HEALTH HAZARDS

Acute toxicity (Oral): Category 3

Acute toxicity (Dermal): Category 2

Acute toxicity (Inhalation): Category 2

Skin corrosion/irritation: Category 2

Serious eye damage/eye irritation: Category 1

Germ cell mutagenicity: Category 2

Specific target organ toxicity – single exposure: Category 2 (respiratory system, kidneys)

Specific target organ toxicity – repeated exposure: Category 2 (blood, heart)

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



Signal word: Danger

HAZARD STATEMENT

H272 May intensify fire; oxidizer

H301 Toxic if swallowed

H310 Fatal in contact with skin

H330 Fatal if inhaled

H315 Causes skin irritation

H318 Causes serious eye damage

H341 Suspected of causing genetic defects



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H371 May cause damage to organs (respiratory system, kidneys)

H373 May cause damage to organs through prolonged or repeated exposure (blood, heart)

H410 Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

P202 Do not handle until all safety precautions have been read and understood.

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.

P284 In case of inadequate ventilation wear respiratory protection.

P271 Use only outdoors or in a well-ventilated area.

P262 Do not get in eyes, on skin, or on clothing.

P264 Wash contaminated parts thoroughly after handling.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P280 Use personal protective equipment as required.

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.

P314 Get medical advice/attention if you feel unwell.

P308 + P313 IF exposed or concerned: Get medical advice/attention.

P310 Immediately call a POISON CENTER/doctor/physician.

P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor/physician.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

P361 + P364 Take off immediately all contaminated clothing and wash it before reuse.

P362 + P364 Take off contaminated clothing and wash it before reuse.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P330 IF SWALLOWED: Rinse mouth.

P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.

Storage

P403 Store in a well-ventilated place. P233 Keep container tightly closed.

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/national regulation.

Specific adverse human health effects

See "11. Toxicological Information".

**Section 3. Composition/information on ingredients**

Mixture/Substance selection:

Substance

Ingredient name	Content (%)	CAS No.	Chemicals No, Japan	Chemical formula
Sodium chlorite	≥80	7758-19-2	1-238	NaClO ₂

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

Impurities

Sodium chlorate ≤4.0% (CAS No.7775-09-9)

Sodium hydroxide ≤3.0% (CAS No.1310-73-2)

Other ≤13% (CAS No. Non-disclosure)

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

Take off immediately all contaminated clothing. Rinse skin with water or shower.

Wash with plenty of soap and water.

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 – other (except for phosphate etc.,hydrogen carbonate etc.)

Carbon dioxide extinguisher

Halogenated extinguisher

Dry-powder extinguisher – hydrogen carbonate etc.

Dry-powder extinguisher – other (except for phosphate etc.,hydrogen carbonate etc.)

**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**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 piece operated positive pressure mode.

Section 6. Accidental release measures**Personnel 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

- 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

- Do not handle until all safety precautions have been read and understood.
- Use only outdoors or in a well-ventilated area.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Wash hands et al thoroughly after handling.
- When using do not eat, drink or smoke.

Any incompatibilities

- See "10.Stability and Reactivity".

**Advice on general occupational hygiene**

- Do not get in eyes, on skin, or on clothing.
- Wash contaminated parts thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Take off immediately all contaminated clothing and wash it before reuse.

Storage**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.

Container and packaging materials for safe handling

- Glass
- Polyethylene
- etc.

Section 8. Exposure controls/personal protection**Control parameters****Adopted value**

- (Sodium hydroxide)
- ACGIH(1992) STEL: C 2mg/m³ (URT, eye & skin irr)

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.

Skin and body protection

- Wear protective clothing.

Section 9. Physical and Chemical Properties**Information on basic physical and chemical properties**

Physical state: Crystals or powder

Color: White to off-white

Odor: Odorless

Melting point/Freezing point: (decomposes) 180 through 200°C

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: 390g/L (17°C)

Solubility in solvent data is not available.

n-Octanol/water partition coefficient data is not available.

Vapor pressure data is not available.

Density and/or relative density: 2.5 g/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

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

(Sodium chlorite)

Decomposes at 200° C. This produces toxic and corrosive fumes. This generates fire and explosion hazard. The substance is a strong oxidant. It reacts violently with combustible and reducing materials. Reacts violently with acids, ammonium compounds, phosphorus, sulfur and sodium dithionate. This generates explosion hazard. (ICSC 1045)

Conditions to avoid

Contact with incompatible materials.

Contact with fire source.

Incompatible materials

Acids, Reducing agents, Ammonium compounds, Phosphorus, Sulfur, Sodium dithionate

Combustible materials

Hazardous decomposition products

Chlorine compounds

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]

[GHS Cat. Japan, base data]

(Sodium chlorite)

rat LD50=165mg/kg (RTECS, 2003)

Acute toxicity (Dermal)

[Product]

Category 2, Fatal in contact with skin

[Data for components of the product]



Sodium chlorite, 7127E-3, 2023/04/21

[GHS Cat. Japan, base data]
(Sodium chlorite)
rabbit LD50=107.2mg/kg (IUCLID, 2000)

Acute toxicity (Inhalation)

[Product]
Category 2, Fatal if inhaled
[Data for components of the product]
[GHS Cat. Japan, base data]
(Sodium chlorite)
mist: rat LC50=0.23mg/L (RTECS, 2003)

Irritant properties

Skin corrosion/irritation

[Product]
Category 2, Causes skin irritation
[Data for components of the product]
[GHS Cat. Japan, base data]
(Sodium chlorite)
human relatively stronger irritation (HSDB, 2002 et al)
(Sodium hydroxide)
pig/rabbit severe necrosis (ACGIH 7th, 2001 et al)

Serious eye damage/irritation

[Product]
Category 1, Causes serious eye damage
[Data for components of the product]
[GHS Cat. Japan, base data]
(Sodium chlorite)
human/rabbit irritation (ICSC(J), 2000)
(Sodium hydroxide)
rabbit corrosive (SIDS, 2009)

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]
[GHS Cat. Japan, base data]
(Sodium chlorite)
cat. 2; mouse : IRIS, 2000

Carcinogenicity

[Data for components of the product]
[IARC]
(Sodium chlorite)
Group 3 : Not classifiable as to its carcinogenicity to humans

Reproductive toxicity data is not available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]
Category 2, May cause damage to organs
[Data for components of the product]
[cat.1]
[GHS Cat. Japan, base data]



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(Sodium hydroxide)
respiratory system (PATTY 5th, 2001)

[cat.2]

[GHS Cat. Japan, base data]
(Sodium chlorite)
respiratory system, kidneys (RTECS, 2003)

STOT-repeated exposure

[Product]

Category 2, May cause damage to organs through prolonged or repeated exposure

[Data for components of the product]

[cat.2]

[GHS Cat. Japan, base data]
(Sodium chlorite)
blood, heart (ATSDR, 2004; RTECS, 2003)

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)

[GHS Cat. Japan, base data]
(Sodium chlorite)
Crustacea (Daphnia magna) EC50=0.0146ppm/ 48hr (Aquire, 2003)
(Sodium chlorate)
Crustacea (Daphnia magna) EC50 > 100mg/L/48hr (Pesticide Reg., 2004)
(Sodium hydroxide)
Crustacea (Ceriodaphnia reticulata) LC50=40.4mg/L/48hr (SIDS, 2004)

Water solubility

(Sodium chlorite)
39 g/100 ml (17°C) (ICSC, 2000)
(Sodium chlorate)
10 g/100 ml (PHYSPROP_DB, 2005)
(Sodium hydroxide)
109 g/100 ml (20°C) (ICSC, 2010)

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

Bioaccumulative potential data is not available.

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 as industrial waste. Accordance with local/national regulation.

Section 14. Transport Information

UN Number or ID Number : 1496

UN Proper Shipping Name :

SODIUM CHLORITE

Class or division (Transport hazard class) : 5.1

Packing group : II

ERG GUIDE No.: 143

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : 1496

UN Proper Shipping Name :

SODIUM CHLORITE

Class or division (Transport hazard class) : 5.1

Packing group : II

IATA (Dangerous Goods Regulations)

UN Number or ID Number : 1496

UN Proper Shipping Name :

SODIUM CHLORITE

Class or division (Transport hazard class) : 5.1

Hazard labels : Oxidizer

Packing group : II

Environmental hazards

Marine pollutants (yes/no) : yes

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 hydroxide; Sodium chlorite; Sodium chlorate

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 22nd edit., 2021 UN



Sodium chlorite, 7127E-3, 2023/04/21

IMDG Code, 2020 Edition (Incorporating Amendment 40-20)

IATA Dangerous Goods Regulations (64th Edition) 2023

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).