

Safety Data Sheet

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

Product identifier:

Product name: Sodium hypochlorite solution

Reference number(SDS): 33015jis_E-4

Product type:

Reagent

Details of the supplier of the safety data sheet

Manufacturer/Supplier: JUNSEI CHEMICAL CO., LTD.

Address: 1-6, Ohmano-cho, Koshigaya-shi, Saitama 343-0844, Japan

Division: Quality Assurance Department

Telephone number: +81-48-986-6161

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e-mail address: shiyaku-t@junsei.co.jp

2. Hazards identification

GHS classification and label elements of the product

Classification of the substance or mixture

HEALTH HAZARDS

Skin corrosion/irritation: Category 1

Serious eye damage/eye irritation: Category 1

ENVIRONMENT HAZARDS

Hazardous to the aquatic environment (Acute): Category 1

Hazardous to the aquatic environment (Long-term): Category 1

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

Label elements



Signal word: Danger

HAZARD STATEMENT

H314-Causes severe skin burns and eye damage

H318-Causes serious eye damage

H400-Very toxic to aquatic life

H410-Very toxic to aquatic life with long lasting effects

PRECAUTIONARY STATEMENT

Prevention

Avoid release to the environment.

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

Wash contaminated parts thoroughly after handling.

Wear protective gloves, protective clothing or face protection.

Wear eye protection/face protection.

Response

Collect spillage.

Immediately call a POISON CENTER/doctor/physician.

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

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.

Wash contaminated clothing before reuse.

Sodium hypochlorite solution, JUNSEI CHEMICAL CO., LTD., 33015jis_E-4,08/Aug/2022

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

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage

Store locked up.

Disposal

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

3. Composition/information on ingredients**Mixture/Substance selection:****Mixture**

Ingredient name: Sodium hypochlorite

Content (%): (available chlorine) 8 <

Chemical formula: ClNaO

Chemicals No, Japan: 1-237

CAS No.: 7681-52-9

MW: 74.44

ECNO: 231-668-3

Ingredient name: Water

Content (%): Residual quantity of the ingredient mentioned above

Chemical formula: H2O

CAS No.: 7732-18-5

MW: 18.02

ECNO: 231-791-2

4. First-aid measures**Descriptions of first-aid measures****General measures**

Immediately call a POISON CENTER/doctor/physician.

Keep victim warm and quiet.

Call emergency medical service.

Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Effects of exposure (inhalation, ingestion or skin contact) to substance may be delayed.

IF INHALED

Remove person to fresh air and keep comfortable for breathing.

Give artificial respiration if victim is not breathing.

Administer oxygen if breathing is difficult.

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.

Remove and isolate contaminated clothing and shoes.

For minor skin contact, avoid spreading material on unaffected skin.

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. Do NOT induce vomiting.

If victim is conscious, give 1 – 2 glasses of water.

Call a POISON CENTER/doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Burning sensation. Cough. Laboured breathing. Shortness of breath. Sore throat. Abdominal pain. Vomiting.
Shock or collapse. Unconsciousness.

(Symptoms when skin and/or eye contact)

Conjunctival redness of the eyes
Redness of the skin. Pain. Blisters. Severe burns.

5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

The product is non-flammable.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Containers may explode when heated.

Fire may produce irritating, corrosive and/or toxic gases.

Runoff from fire control or dilution water may cause pollution.

Advice for firefighters

Specific fire-fighting measures

Evacuate non-essential personnel to safe area.

Cool container with water spray.

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.

6. Accidental release measures

Personnel precautions, protective equipment and emergency procedures

Keep unauthorized personnel away.

In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.

Ventilate area until material pick up is complete.

Wear proper protective equipment.

PUBLIC SAFETY: Ventilate closed spaces before entering.

Do not touch damaged containers or spilled material unless wearing appropriate protective clothing.

EVACUATION : Spill: See the Table of Initial Isolation and Protective Action Distances for highlighted substances. For non-highlighted substances, increase, in the downwind direction, as necessary, the isolation distance shown under "PUBLIC SAFETY".

Environmental precautions

Avoid release to headsprings, rivers, lakes, ocean and groundwater.

Methods and materials for containment and cleaning up

Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.

※Do NOT absorb in saw-dust or other combustible absorbents.

Preventive measures for secondary accident

Collect spillage.

Stop leak if you can do it without risk.

ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area).

Prevent entry into waterways, sewers, basements or confined areas.

Do not get water inside containers.

Keep out of low areas.

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.

(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.

Use personal protective equipment as required.

When using do not eat, drink or smoke.

May ignite combustibles (wood, paper, oil, clothing, etc.).

Any incompatibilities

Acids, Reducing agents, Combustible substances (organic substances) should not be mixed with the chemicals.

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.

Wash contaminated clothing before reuse.

Storage

Conditions for safe storage

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

Keep cool. Protect from sunlight.

Store in accordance with local/national regulation.

Store locked up.

Storage temperature upper limit: 10°C

Storage temperature lower limit: 2°C

Container and packaging materials for safe handling data is not available.

Specific end use(s)

See information in Section 7.1 and 7.2 for handling and storage recommendations. See

Section 8 for exposure controls and personal protection recommendations.

8. Exposure controls/personal protection

Control parameters

Control value in MHLW is not available.

Adopted value

Adopted value in JSOH is not available.

Adopted value in ACGIH is not available.

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.

Wear positive pressure self-contained breathing apparatus (SCBA).

Hand protection

Wear protective gloves. Recommended material(s): neoprene, nitrile, butyl rubber, viton, PVC, impermeable or chemical resistant rubber

Consult with your glove and/or personnel equipment manufacturer for selection of appropriate compatible materials.

Eye protection

Wear chemical safety goggle.

Wear eye/face protection.

Skin and body protection

Wear impervious clothing and boots in case of repeated or prolonged treatment.

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

Physical state: Liquid

Color: Clear slightly yellow

Odor: Characteristic odor

Odor threshold data is not available.

Melting point/Freezing point: $-30^{\circ}\text{C} \sim -20^{\circ}\text{C}$

Boiling point or initial boiling point data is not available.

Boiling range data is not available.

Flammability (gases, liquids and solids): Non-flammable

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

Flash point: Non-flammable

Auto-ignition temperature data is not available.

Decomposition temperature data is not available.

Self-Accelerating Decomposition Temperature/SADT data is not available.

pH: $11.5 \leq \text{pH}$ (Strong basic)

Dynamic viscosity data is not available.

Kinematic viscosity data is not available.

Solubility:

Solubility in water: 293g/liter(20°C)

Solubility in solvent data is not available.

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

Vapor pressure: $2 \sim 2.5 \text{ kPa}$ (20°C)

Vapor density data is not available.

Density and/or relative density: $1.20 \sim 1.25 \text{ g/ml}$ (20°C)

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

Relative density of the Vapor/air – mixture at 20°C (Air = 1) data is not available.

Particle characteristics data is not available.

Other information

Critical temperature data is not available.

Evaporation rate data is not available.

VOC data is not available.

10. Stability and Reactivity**Reactivity**

Reactivity data is not available.

Chemical stability

Stable under normal storage/handling conditions.

Possibility of hazardous reactions

Decomposes on heating and on contact with acids. Decomposes under the influence of light.

This produces toxic and corrosive gases.

The substance is a strong oxidant. It reacts violently with combustible and reducing materials. This generates fire and explosion hazard.

The solution in water is a strong base. It reacts violently with acid and is corrosive.

Attacks copper and its compounds and light metals.

Conditions to avoid

Contact with incompatible materials.

Light, Heat.

Incompatible materials

Acids, Reducing agents, Combustible substances (organic substances)

Hazardous decomposition products

Sodium oxides, Chlorine gas, Oxygen gas, Chlorides.

11. Toxicological Information**Information on toxicological effects****Acute toxicity****Acute toxicity (Oral)**

[GHS Cat. Japan, base data]

(Sodium hypochlorite)

male rat LD50=5230mg/kg (aqueous solution, effective chlorine concentration: 12.5%)

(REACH Registration dossier, Access on Oct. 2020)

Acute toxicity (Dermal)

[GHS Cat. Japan, base data]

(Sodium hypochlorite)

rabbit LD50 >20000mg/kg (aqueous solution, effective chlorine concentration: 12.5%)

(REACH Registration dossier, Access on Oct. 2020)

Irritant properties**Skin corrosion/irritation**

[GHS Cat. based on pH]

11.5 ≤ pH, accordingly Skin corrosion/irritation: Category 1

[GHS Cat. Japan, base data]

(Sodium hypochlorite)

5–10% liquid : irritation, 10% or more : corrosive (EURAR, 2007)

Serious eye damage/irritation

[GHS Cat. based on pH]

11.5 ≤ pH, accordingly Serious eye damage/eye irritation: Category 1

[GHS Cat. Japan, base data]

(Sodium hypochlorite)

skin corrosion/irritation cat.1 (GHS classification results by MHLW)

Allergenic and sensitizing effects data is not available.

Mutagenic effects data is not available.

Carcinogenic effects data is not available.

Reproductive toxicity data is not available.

STOT**STOT—single exposure**

[cat.3 (resp. irrit.)]

[GHS Cat. Japan, base data]

(Sodium hypochlorite) respiratory tract irritation (AICIS IMAP, 2014; EURAR, 2007)

STOT-repeated exposure data is not available.
Aspiration hazard data is not available.
Information on other hazards
Data on the preparation itself is not available.

12. Ecological Information

Ecotoxicity

Aquatic toxicity

H400-Very toxic to aquatic life

H410-Very toxic to aquatic life with long lasting effects

Hazardous to the aquatic environment (Acute)

[GHS Cat. Japan, base data]

(Sodium hypochlorite) Crustacea (Ceriodaphnia reticulata) LC50=0.005mg FAC/L/24hr (EU-RAR, 2007)

Hazardous to the aquatic environment (Long-term)

[GHS Cat. Japan, base data]

(Sodium hypochlorite) Fish NOEC=0.005mgTRC/L/134days (EU-RAR, 2007)

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.

Additional data

Data on the preparation itself is not available.

FAC = free available chlorine

TRC= total residual chlorine

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.

14. Transport Information

UN No., UN CLASS

UN No. or ID No.: 1791

UN Proper Shipping Name : HYPOCHLORITE SOLUTION

Class or division (Transport hazard class) : 8

Packing group : III

ERG GUIDE No.: 154

IMDG Code (International Maritime Dangerous Goods Regulations)

UN No.: 1791

Proper Shipping Name : HYPOCHLORITE SOLUTION

Class or division : 8

Packing group : III

IATA Dangerous Goods Regulations

UN No.: 1791

Proper Shipping Name : HYPOCHLORITE SOLUTION

Class or division : 8

Hazard labels : Corrosive

Packing group : III

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 hypochlorite

Hazardous to the aquatic environment – long-term hazard: cat.1, 2

Sodium hypochlorite

Maritime transport in bulk according to IMO instruments

Noxious Liquid ; Cat. Y

Sodium hypochlorite(Y-212)

Non Noxious Liquid ; Cat. OS

Water(OS-18)

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

7681-52-9; 7732-18-5

All components are listed or exempted.

Other regulatory information

We are not able to check up the regulatory information with regard to the substances in your country or region, therefore, we request this matter would be filled by your responsibility.

Regulatory information with regard to this substance in your country or in your region should be examined by your own responsibility.

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

Regulatory information in this section are limited to intentional ingredient(s), but does not contain information on non-intentional ingredients or impurities which are not informed by supplier(s).

Chemical safety assessment

Advice on safe handling for this product can be found in sections 7 and 8 of this SDS.

16. Other information

GHS classification and labelling

H314–Skin Corr. 1: H314 Causes severe skin burns and eye damage

H318–Eye Dam. 1: H318 Causes serious eye damage

H400–Aquatic Acute 1: H400 Very toxic to aquatic life

H410–Aquatic Chronic 1: H410 Very toxic to aquatic life with long lasting effects

Reference Book

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)

JIS Z 7252 : 2019

JIS Z 7253 : 2019

2021 Recommendation on TLVs (JSOH)

Supplier's data/information

Chemicals safety data management system "GHS Assistant" Version 4.18 (<https://www.asahi-ghs.com/>)

NITE Chemical Risk Information Platform "NITE-CHRIIP"

(https://www.nite.go.jp/en/chem/chrip/chrip_search/systemTop)

GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.0) (Mar. 2020, METI)

Definitions and Abbreviations

SDS (Safety Data Sheet)

LD50 (Lethal Dose, 50%)

LC50 (Lethal Concentration, 50%)

IARC (International Agency for Research on Cancer)

ACGIH (American Conference of Governmental Industrial Hygienists)

EPA (US Environmental Protection Agency)

NTP (US National Toxicology Program)

JSOH (Japan Society for Occupational Health)

EU (European Union)

EC50 (Effective Concentration, 50%)

NOEC (No Observed Effect Concentration)

BOD (Biochemical Oxygen Demand)

COD (Chemical Oxygen Demand)

BCF (Bioconcentration Factor)

anh (anhydride)

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 2020).