Date of issue for the 1st edition : 18/Nov/2014
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Safety Data Sheet

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

Product identifier:
Product name: Sodium sulfide anhydrous
Reference number(SDS):82354jis_J_E1-3
Product type:
Reagent
Relevant identified uses of the substance or mixture and uses advised against
Relevant identified uses of the product: Research and Development
Uses advised against: Do not use for other purposes.
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
FAX: +81-48-989-2787
e-mail address: shiyaku-t@junsei.co.jp

Section 2. Hazards identification

GHS classification and label elements of the product
Classification of the substance or mixture
PHYSICAL AND CHEMICAL HAZARDS
Self-heating substances and mixtures: Category 1
HEALTH HAZARDS
Acute toxicity (Oral): Category 3
Skin corrosion/irritation: Category 1
Serious eye damage/eye irritation: Category 1
Specific target organ toxicity - single exposure: Category 3 (Respiratory tract irritation)
ENVIRONMENT HAZARDS
Hazardous to the aquatic environment, short-term (acute): Category 1
(Note) GHS classification without description: Not classified/Classification not possible
Label elements



Signal word: Danger
HAZARD STATEMENT
H251-Self-heating; may catch fire
H301-Toxic if swallowed
H314-Causes severe skin burns and eye damage
H318-Causes serious eye damage
H335-May cause respiratory irritation
H400-Very toxic to aquatic life
PRECAUTIONARY STATEMENT
Prevention
Avoid release to the environment.
Keep cool.
Do not breathe dust/fume/gas/mist/vapors/spray.

Use only outdoors or in a well-ventilated area.
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

Collect spillage.
Immediately call a POISON CENTER/doctor/physician.
Call a POISON CENTER/doctor/physician if you feel unwell.
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.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
IF SWALLOWED: Immediately call a POISON CENTER/doctor/physician.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

Storage

Store in a well-ventilated place. Keep container tightly closed.
Store locked up.
Maintain air gap between stacks or pallets.
Protect from sunlight.
Store bulk masses greater than specified value at temperatures not exceeding specified values.
Store separately.

Disposal

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

Specific Physical and Chemical hazards

Self-heating material. May catch fire spontaneously.

Section 3. Composition/information on ingredients

Mixture/Substance selection:

Substance

Ingredient name:Sodium sulfide
Content (%):98.0 <
Chemical formula:Na2S
ENCS:1-514
CAS No.:1313-82-2
MW:78.04
EC No.:215-211-5

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

Section 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.

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 INHALED: 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.
Immediately call a POISON CENTER/doctor/physician.
If skin irritation or rash occurs: Get medical advice/attention.
Remove and isolate contaminated clothing and shoes.

IF IN EYES

Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER/doctor/physician.
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.
Immediately call a POISON CENTER/doctor/physician.
IF SWALLOWED: Call a POISON CENTER/doctor/physician if you feel unwell.

Most important symptoms and effects, both acute and delayed

(Symptoms when inhalation or ingestion)

Cough. Burning sensation. Labored breathing. Shortness of breath. Sore throat.
Abdominal pain. Shock or collapse.

(Symptoms when skin and/or eye contact)

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

Indication of any immediate medical attention and special treatment needed

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
Specific treatment is required.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

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

Unsuitable extinguishing media

Do not use direct water jet.

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.

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

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.

Do not touch or walk through spilled material.
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.
Runoff may create fire or explosion hazard.

Methods and materials for containment and cleaning up

Use clean non-sparking tools to collect material and place it into loosely covered plastic containers for later disposal.
Prevent entry into waterways, sewers, basements or confined areas.
Cover with DRY earth, DRY sand, or other non-combustible material followed with plastic sheet to minimize spreading or contact with rain.

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.
Keep out of low areas.

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.

(Exhaust/ventilator)

Exhaust/ventilator should be available.

(Safety treatments)

Avoid contact with skin.
Avoid contact with eyes.

Safety Measures

Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.
Use personal protective equipment as required.
When using do not eat, drink or smoke.

Any incompatibilities

Acids, Oxidizing agents should not be mixed with the chemicals.

Advice on general occupational hygiene

Wash contaminated parts thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wash contaminated clothing before reuse.

Storage

Conditions for safe storage

Store in a well-ventilated place. Keep container tightly closed.
Store in accordance with local/national regulation.
Store locked up.
Maintain air gap between stacks or pallets.
Store bulk masses greater than specified value at temperatures not exceeding specified values.
Storage temperature upper limit: 10℃
Storage temperature lower limit: 2℃

(Incompatible storage condition)

Protect from sunlight.

Store separately.

Container and packaging materials for safe handling

Keep only in original packaging.

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.

Section 8. Exposure controls/personal protection

Control parameters

Control value and Concentration standard value under ISHA

Not established

Adopted value

JSOH

Not established

ACGIH

Not established

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

Select and wear respiratory protection in accordance with approved standards (e.g. JIS T8150).

Recommended respiratory protection : Self-Contained Breathing Apparatus (SCBA)

Hand protection

Wear protective gloves.

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

Inspect before use and replace worn or damaged gloves.

Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions.

Eye protection

Wear chemical safety goggle.

Wear eye/face protection in accordance with approved standards (e.g. JIS T8147).

Skin and body protection

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

Personal protective equipment for the body and skin should be selected based on the task being performed and the risks involved.

Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state: Solid, or crystals

Color: White ～ Yellow

Odor: Characteristic odor

Odor threshold data is not available.

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: > 480℃
Decomposition temperature: 920 ～ 950℃℃
pH: 13.1(200g/L, 20℃)
Kinematic viscosity data is not available.
Solubility:
Solubility in water: 18.6 g/100 g (20℃)
Solubility in solvent: Slightly soluble in alcohol; insoluble in ether.
n-Octanol/water partition coefficient: log Pow=3.5
Vapor pressure data is not available.
Density and/or relative density: 1.86
Relative vapor density (Air=1) data is not available.
Particle characteristics data is not available.

Section 10. Stability and Reactivity

Reactivity
Reactivity data is not available.
Chemical stability
Stable under normal storage/handling conditions.
Hygroscopic.
Possibility of hazardous reactions
Decomposes on burning. Decomposes on contact with acids or water. This produces toxic and corrosive gases. This increases fire hazard.
The solution in water is a strong base. It reacts violently with acid and is corrosive.
Reacts violently with oxidants.
Conditions to avoid
Contact with incompatible materials.
Open flames. Heating. Sparks. Light. Air. Moisture.
Incompatible materials
Acids, Oxidizing agents
Hazardous decomposition products
Sulfur oxides, Sodium 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: 205 mg/kg (source: NITE)
Acute toxicity (Dermal)
[Product]
Classification not possible (Insufficient data available or no data available).
[Data for components of the product]
No data available.
Acute toxicity (Inhalation)
[Product]
Classification not possible (Insufficient data available or no data available).

[Data for components of the product]
No data available.

Irritant properties

Skin corrosion/irritation

[Product]
Category 1, Causes severe skin burns and eye damage

[Data for components of the product]
[NITE-CHRIP]
Category 1 (source: NITE)

Serious eye damage/irritation

[Product]
Category 1, Causes serious eye damage

[Data for components of the product]
[NITE-CHRIP]
Category 1 (source: NITE)

Sensitization

Respiratory sensitization

[Product]
Classification not possible (Insufficient data available or no data available).

[Data for components of the product]
No data available.

Skin sensitization

[Product]
Classification not possible (Insufficient data available or no data available).

[Data for components of the product]
No data available.

Germ cell mutagenicity

[Product]
Classification not possible (Insufficient data available or no data available).

[Data for components of the product]
No data available.

Carcinogenicity

[Product]
Classification not possible (Insufficient data available or no data available).

[Data for components of the product]
No data available.

Reproductive toxicity

[Product]
Classification not possible (Insufficient data available or no data available).

[Data for components of the product]
No data available.

Specific target organ toxicity (STOT)

STOT-single exposure

[Product]
Category 3, May cause respiratory irritation

[Data for components of the product]
[NITE-CHRIP]
Category 3 (Respiratory tract irritation) (source: NITE)

STOT-repeated exposure

[Product]
Classification not possible (Insufficient data available or no data available).

[Data for components of the product]
No data available.

Aspiration hazard

[Product]

Classification not possible (Insufficient data available or no data available).

[Data for components of the product]

No data available.

Section 12. Ecological Information

Ecotoxicity

Aquatic toxicity

[Product]

Category 1, Very toxic to aquatic life

[Data for components of the product]

Hazardous to the aquatic environment, short-term (acute)

[NITE-CHRIP]

Crustacea (Daphnia pulex) 48-hour LC50: 0.55 mg/L (source: NITE)

Water solubility

[Data for components of the product]

18.6 g/100 g (20℃) (source: HSDB)

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

[Data for components of the product]

log Pow: -3.5 (source: ICSC, 2002)

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., UN CLASS

UN Number or ID Number : 1385

UN Proper Shipping Name :

SODIUM SULPHIDE, ANHYDROUS or SODIUM SULPHIDE with less than 30% water of crystallization

Class or division (Transport hazard class) : 4.2

Packing group : II

ERG GUIDE No.: 135

IMDG Code (International Maritime Dangerous Goods Regulations)

UN Number or ID Number : 1385

UN Proper Shipping Name :

SODIUM SULPHIDE, ANHYDROUS or SODIUM SULPHIDE with less than 30% water of crystallization

Class or division (Transport hazard class) : 4.2

Packing group : II

IATA (Dangerous Goods Regulations)

UN Number or ID Number : 1385

UN Proper Shipping Name :
SODIUM SULPHIDE, ANHYDROUS or SODIUM SULPHIDE with less than 30% water of crystallization
Class or division (Transport hazard class) : 4.2
Hazard labels : Spont. comb.
Packing group : II

Environmental hazards
Marine pollutants (yes/no) : yes

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable to Transport in bulk according to Annex II of MARPOL and the IBC Code

MARPOL Annex V - HME (Harmful to the Marine Environment)
Hazardous to the aquatic environment - short-term (acute): cat.1
Sodium sulfide

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
1313-82-2
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.

Section 16. Other information

GHS classification and labelling
H251-Self-Heating Substances and Mixtures, Category 1: H251 Self-heating: may catch fire
H301-Acute toxicity, Category 3: H301 Toxic if swallowed
H314-Skin corrosion/irritation, Category 1: H314 Causes severe skin burns and eye damage
H318-Serious eye damage/eye irritation, Category 1: H318 Causes serious eye damage
H335-STOT - single exposure, Category 3, Respiratory tract irritation: H335 May cause respiratory irritation.
H400-Hazardous to the aquatic environment, short-term (acute), Category 1: H400 Very toxic to aquatic life

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 (66th Edition) 2025
2020 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2025 TLVs and BEIs. (ACGIH)
JIS Z 7252 : 2019
JIS Z 7253 : 2019

2024 Recommendation on TLVs (JSOH)
Notification No. 0111-1 (January 11, 2022), Chemical Hazards Control Division, Industrial Safety and Health Department, Labour Standards Bureau, MHLW in Japan
Supplier's data/information
Chemicals safety data management system "GHS Assistant" Version 4.32 (https://www.asahi-ghs.com/)
NITE Chemical Risk Information Platform "NITE-CHRIP" (https://www.chem-info.nite.go.jp/chem/chrip/chrip_search/systemTop)
GHS Classification Guidance for Enterprises 2019 Revised Edition (Ver. 2.1) (May. 2024, METI)

Abbreviations and acronyms

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)
METI (Ministry of Economy, Trade and Industry in Japan)
MHLW (Ministry of Health, Labour and Welfare in Japan)
MOE (Ministry of the Environment in Japan)
JSOH (Japan Society for Occupational Health)
ISHA (Industrial Safety and Health Act in Japan)
CSCL (Chemical Substances Control Law in Japan)
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 Data published in Japan (National Institute of Technology and Evaluation (NITE) Chemical Risk Information Platform (NITE-CHRIP), up to FY2023).