

SAFETY DATA SHEETS

According to the UN GHS revision 8

Version: 1.0

Creation Date: July 15, 2019

Revision Date: July 15, 2019



YATAI CHEMICAL CORP

1. SECTION 1: Identification

1.1. GHS Product identifier

Product name Disodium sulphide

1.2. Other means of identification

Other names Sodium sulfide; Disodium sulfide;

1.3. Recommended use of the chemical and restrictions on use

Identified uses Dyes, Functional fluids (closed systems), Intermediates, Oxidizing/reducing agents, Pigments, Process regulators, Processing aids, not otherwise listed, Processing aids, specific to petroleum production, Solids separation agents
Uses advised against no data available

1.4. Supplier's details

Company Yatai Chemical Corp
Address Room 20A5, No.585, Longhua West Road, Shanghai, China
Telephone 0086-21-64563115

1.5. Emergency phone number

Emergency phone number 0086-21-64563115
Service hours Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

2. SECTION 2: Hazard identification

2.1. Classification of the substance or mixture

Acute toxicity - Category 4, Oral
Acute toxicity - Category 3, Dermal
Skin corrosion, Sub-category 1B
Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1

2.2. GHS label elements, including precautionary statements

Pictogram(s)



Signal word Danger
Hazard statement(s) H302 Harmful if swallowed H311 Toxic in contact

with skinH314 Causes severe skin burns and eye damageH400 Very toxic to aquatic life

Precautionary statement(s)

Prevention

P264 Wash ... thoroughly after handling.P270 Do not eat, drink or smoke when using this product.P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...P260 Do not breathe dust/fume/gas/mist/vapours/spray.P273 Avoid release to the environment.

Response

P301+P317 IF SWALLOWED: Get medical help.P330 Rinse mouth.P302+P352 IF ON SKIN: Wash with plenty of water/...P316 Get emergency medical help immediately.P321 Specific treatment (see ... on this label).P361+P364 Take off immediately all contaminated clothing and wash it before reuse.P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.P363 Wash contaminated clothing before reuse.P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.P391 Collect spillage. P405 Store locked up. P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

Storage

Disposal

2.3. Other hazards which do not result in classification

no data available

3. SECTION 3: Composition/information on ingredients

3.1. Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Disodium sulphide	Disodium sulphide	1313-82-2	215-211-5	100%

4. SECTION 4: First-aid measures

4.1. Description of necessary first-aid measures

Medical attention is required. Consult a doctor. Show this safety data sheet (SDS) to the doctor in attendance.

If inhaled

Fresh air, rest. Refer for medical attention.

Following skin contact

First rinse with plenty of water for at least 15 minutes, then remove contaminated clothes and rinse again. Refer for medical attention .

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Do NOT induce vomiting. Give one or two glasses of water to drink. Refer for medical attention .

4.2. Most important symptoms/effects, acute and delayed

Caustic action on skin and eyes. If ingested may liberate hydrogen sulfide in stomach. (USCG, 1999)

4.3. Indication of immediate medical attention and special treatment needed, if necessary

For advanced treatment: Consider orotracheal or nasotracheal intubation for airway control in the patient who is unconscious or in respiratory arrest. Positive-pressure ventilation techniques with a bag-valve-mask device may be beneficial. Monitor cardiac rhythm and treat arrhythmias if necessary . Start an IV with D5W TKO /SRP: To keep open, "minimal flow rate"/. Use lactated Ringer's if signs of hypovolemia are present. Watch for signs of fluid overload. Consider drug therapy for pulmonary edema . For hypotension with signs of hypovolemia, administer fluid cautiously. Watch for signs of pulmonary edema. Consider vasopressors to treat hypotension without signs of hypovolemia . Treat seizures with diazepam (Valium) . In severe cases use amyl nitrite and sodium nitrite ... as described for cyanide poisoning; omit the sodium thiosulfate injection. Early administration will be the most effective. DIRECT PHYSICIAN ORDER ONLY . Use proparacaine hydrochloride to assist eye irrigation . For basic treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for pulmonary edema and treat if necessary . Monitor for shock and treat if necessary . Anticipate seizures and treat if necessary . For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport . Treat with rapid rewarming techniques ... if frostbite occurs. Hydrogen sulfide and related compounds

5. SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media

Approach fire from upwind to avoid hazardous vapors & toxic decomp products. Use flooding quantities of water. Do not use carbon dioxide.

5.2. Specific hazards arising from the chemical

Special Hazards of Combustion Products: Irritating sulfur dioxide is produced in fire. (USCG, 1999)

5.3. Special protective actions for fire-fighters

Use water in large amounts, water spray, foam, dry powder.

6. SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove all ignition sources. Cover the spilled material with dry earth or sand. Sweep spilled substance into covered containers. Carefully collect remainder. Then store and dispose of according to local regulations. Do NOT let this chemical enter the environment. Personal protection: chemical protection suit including self-contained breathing apparatus.

6.2. Environmental precautions

Remove all ignition sources. Cover the spilled material with dry earth or sand. Sweep spilled substance into covered containers. Carefully collect remainder. Then store and dispose of according to local regulations. Do NOT let this chemical enter the environment. Personal protection: chemical protection suit including self-contained breathing apparatus.

6.3. Methods and materials for containment and cleaning up

Approach release from upwind. Keep water away from release. Prompt cleanup & removal are necessary. Shovel dry material into suitable dry container. Control runoff & isolate discharged material for proper disposal.

7. SECTION 7: Handling and storage

7.1. Precautions for safe handling

NO open flames, NO sparks and NO smoking. NO contact with acids or oxidizing agents.

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

7.2. Conditions for safe storage, including any incompatibilities

Separated from acids and oxidants. Keep in a well-ventilated room. Dry. Store in a cool, dry, well-ventilated location. Separate from water, acids, & carbon dioxide. Outside or detached storage is preferred. Immediately remove & properly dispose of any spilled material.

8. SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2. Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3. Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Wear face shield or eye protection in combination with breathing protection.

Skin protection

Protective gloves. Protective clothing.

Respiratory protection

Use closed system or ventilation.

Thermal hazards

no data available

9. SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Solid. Flakes.
Colour	Yellow.
Odour	Rotten eggs
Melting point/freezing point	≥ 69 - ≤ 93 °C. Atm. press.:Ca. 997 hPa.
Boiling point or initial boiling point and boiling range	Remarks:The test item has no boiling point, since the test substance oxidised after melting and water evaporation to sulfur.
Flammability	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit/flammability limit	no data available
Flash point	no data available
Auto-ignition temperature	Remarks:No self-ignition of the test item was observed up to 430 °C.
Decomposition temperature	920-950°C
pH	12.9. Remarks:Temperature was room temperature.
Kinematic viscosity	no data available
Solubility	188 g / L (20 °C)
Partition coefficient n-octanol/water	-3.5
Vapour pressure	no data available
Density and/or relative density	1.64. Temperature:21.1 °C.
Relative vapour density	no data available

10. SECTION 10: Stability and reactivity

10.1. Reactivity

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.

10.2. Chemical stability

UNSTABLE

10.3. Possibility of hazardous reactions

MOIST SODIUM SULFIDE IS SPONTANEOUSLY FLAMMABLE UPON DRYING IN AIR. SODIUM SULFIDE is a white to yellow crystalline material, flammable. Can explode on rapid heating or when shocked. Violent reaction with carbon, charcoal, diazonium salts, N,N-dichloromethylamine, strong oxidizers, water. On contact with acids it liberates highly toxic and flammable hydrogen sulfide gas. When heated to decomposition it emits toxic fumes of sodium oxide, and oxides of sulfur [Bretherick, 5th ed., 1995, p. 1729].

10.4. Conditions to avoid

no data available

10.5. Incompatible materials

Liberates toxic hydrogen sulfide on contact with acids.

10.6. Hazardous decomposition products

When heated to decomp ... emits toxic fumes of /sulfur oxides and disodium oxide/.

11. SECTION 11: Toxicological information

Acute toxicity

- Oral: LD50 - rat (male) - > 46.4 - < 68.1 mg/kg bw. Remarks: Mortality per dose: 46.4 mg/kg: 0.0 %; 68.1 mg/kg: 60 %.
- Inhalation: no data available
- Dermal: LD50 - rabbit (male/female) - < 340 mg/kg bw.

Skin corrosion/irritation

no data available

Serious eye damage/irritation

no data available

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

Carcinogenicity

no data available

Reproductive toxicity

no data available

STOT-single exposure

The substance is corrosive to the eyes, skin and respiratory tract. Corrosive on ingestion.

STOT-repeated exposure

no data available

Aspiration hazard

A harmful concentration of airborne particles can be reached quickly when dispersed.

12. SECTION 12: Ecological information

12.1. Toxicity

- Toxicity to fish: LC50 - Pimephales promelas - 7 960 mg/L - 96 h. Remarks:Na2 SO4.
- Toxicity to daphnia and other aquatic invertebrates: LC50 - Baetis vagans - 0.02 mg/L - 96 h. Remarks:Total sulfide concentrations were measured and H2 S concentrations were calculated based on measured total sulfide concentrations.
- Toxicity to algae: EC50 - Nitzschia linearis - 1 900 mg/L - 120 h.
- Toxicity to microorganisms: NOEC - activated sludge, domestic - ca. 8 g/L - 37 d. Remarks:Na2 SO4.

12.2. Persistence and degradability

no data available

12.3. Bioaccumulative potential

no data available

12.4. Mobility in soil

no data available

12.5. Other adverse effects

no data available

13. SECTION 13: Disposal considerations

13.1. Disposal methods

Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

14. SECTION 14: Transport information

14.1. UN Number

ADR/RID: UN3266 (For reference only, please check.)

IMDG: UN3266 (For reference only, please check.)

IATA: UN3266 (For reference only, please check.)

14.2. UN Proper Shipping Name

ADR/RID: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (For reference only, please check.)

IMDG: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (For reference only, please check.)

IATA: CORROSIVE LIQUID, BASIC, INORGANIC, N.O.S. (For reference only, please check.)

14.3. Transport hazard class(es)

ADR/RID: 8 (For reference only, please check.)

IMDG: 8 (For reference only, please check.)

IATA: 8 (For reference only, please check.)

14.4. Packing group, if applicable

ADR/RID: I (For reference only, please check.)

IMDG: I (For reference only, please check.)

IATA: I (For reference only, please check.)

14.5. Environmental hazards

ADR/RID: Yes

IMDG: Yes

IATA: Yes

14.6. Special precautions for user

no data available

14.7. Transport in bulk according to IMO instruments

no data available

15. SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
Disodium sulphide	Disodium sulphide	1313-82-2	215-211-5
European Inventory of Existing Commercial Chemical Substances (EINECS)			Listed.
EC Inventory			Listed.
United States Toxic Substances Control Act (TSCA) Inventory			Listed.
China Catalog of Hazardous chemicals 2015			Listed.
New Zealand Inventory of Chemicals (NZIoC)			Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

16. SECTION 16: Other information

Information on revision

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Abbreviations and acronyms

- CAS: Chemical Abstracts Service
- ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
- RID: Regulation concerning the International Carriage of Dangerous Goods by Rail
- IMDG: International Maritime Dangerous Goods
- IATA: International Air Transportation Association
- TWA: Time Weighted Average
- STEL: Short term exposure limit
- LC50: Lethal Concentration 50%
- LD50: Lethal Dose 50%
- EC50: Effective Concentration 50%

References

- IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website: http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en
- CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

Other Information

Other UN number: 1849, sodium sulfide, hydrated with 30% or more water, hazard class 8, packaging group II. Other melting points: 1180°C in vacuum.

Any questions regarding this SDS, Please send your inquiry to ydcl@yataichemical.com

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any damage resulting from handling or from contact with the above product.