

# SAFETY DATA SHEET



Revision date: 05-Apr-2023

Revision Number 8

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### Product identifier

**Product Name** SODIUM HYDROSULPHIDE

**Product Code(s)** 000031020401

### Other means of identification

**UN number** 2949

**CAS No.** 16721-80-5

**Synonyms** Sodium hydrosulfide; Sodium hydrogen sulphide; Sodium bisulphide; Sodium mercaptan; Sodium sulphhydrate; Sodium hydrosulfide flakes; Sodium hydrosulfide dihydrate.

### Recommended use of the chemical and restrictions on use

**Recommended use** Paper pulping, dyestuffs processing, rayon and cellophane desulfurising, unhairing hides, bleaching agent.

**Uses advised against** No information available

### Supplier

Ixom Operations Pty Ltd  
ABN: 51 600 546 512  
Level 8, 1 Nicholson Street  
Melbourne 3000  
Australia

Telephone Number: +61 3 9906 3000

### Emergency telephone number

Emergency telephone number **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

## 2. HAZARDS IDENTIFICATION

### GHS Classification

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

<b>Corrosive to metals</b>	Category 1
<b>Acute toxicity - Oral</b>	Category 3
<b>Acute toxicity - Dermal</b>	Category 4
<b>Skin corrosion/irritation</b>	Category 1 Sub-category B

<b>Serious eye damage/eye irritation</b>	Category 1
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**SIGNAL WORD**

Danger

**Label elements**Corrosion  
Skull and crossbones**Hazard statements**

H290 - May be corrosive to metals  
 H301 - Toxic if swallowed  
 H312 - Harmful in contact with skin  
 H314 - Causes severe skin burns and eye damage

**Precautionary Statements - Prevention**

Keep only in original container  
 Do not breathe fume, gas, mist, vapours, spray  
 Wash face, hands and any exposed skin thoroughly after handling  
 Wash eyes thoroughly after handling.  
 Do not eat, drink or smoke when using this product  
 Wear protective gloves / protective clothing / eye protection / face protection  
 Avoid release to the environment

**Precautionary Statements - Response**

Specific treatment (see First aid on this SDS)  
 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 or doctor/physician  
 IF ON SKIN: Wash with plenty of soap and water  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 Wash contaminated clothing before reuse  
 Call a POISON CENTER or doctor/physician if you feel unwell  
 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
 Call a POISON CENTER or doctor/physician if you feel unwell  
 IF SWALLOWED: Rinse mouth. DO NOT induce vomiting  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor  
 Absorb spillage to prevent material damage

**Precautionary Statements - Storage**

Store locked up  
 Store in corrosive resistant container with a resistant inner liner

**Precautionary Statements - Disposal**

Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

**Other hazards which do not result in classification**

AUH031 - Contact with acids liberates toxic gas

**General Hazards**

**Poisons Schedule (SUSMP)**                      None allocated

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical name	CAS No.	Weight-%
Water of crystallisation	7732-18-5	>25

Sodium hydrosulfide	16721-80-5	to 100
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## 4. FIRST AID MEASURES

### Description of first aid measures

<b>General advice</b>	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.
<b>Inhalation</b>	Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately. 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.
<b>Eye contact</b>	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
<b>Skin contact</b>	Wash skin with soap and water. IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Do NOT induce vomiting. Drink 1 or 2 glasses of water. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning.
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### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	Treat symptomatically. Can cause corneal burns. Probable mucosal damage may contraindicate the use of gastric lavage.
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## 5. FIRE FIGHTING MEASURES

### Suitable Extinguishing Media

<b>Suitable Extinguishing Media</b>	Foam. Dry chemical or CO <sub>2</sub> .
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<b>Unsuitable extinguishing media</b>	No information available.
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### Specific hazards arising from the chemical

<b>Specific hazards arising from the chemical</b>	Corrosive hazard. Wear protective gloves/clothing and eye/face protection. Combustible solid. Sealed containers may rupture when heated.
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<b>Hazardous combustion products</b>	Hydrogen sulfide. Oxides of sulfur.
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### Special protective actions for fire-fighters

<b>Special protective equipment for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.
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<b>Hazchem code</b>	2X
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## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Do not get in eyes, on skin, or on clothing. Do not breathe dust. Evacuate personnel to safe areas. Stop leak if you can do it without risk. Do not touch or walk through spilled material. Use personal protective equipment as required. Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

**For emergency responders** Use personal protection recommended in Section 8.

### Environmental precautions

**Environmental precautions** Local authorities should be advised if significant spillages cannot be contained.

### Methods and material for containment and cleaning up

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Use appropriate personal protective equipment (PPE). Carefully shovel or sweep up spilled material and place in suitable container. Avoid generating dust. Use non-sparking tools.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

**Advice on safe handling** Avoid contact with skin, eyes, and clothing. Do not breathe dust. Use personal protection equipment. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Take precautionary measures against static discharges. Ground and bond all lines and equipment associated with product system. All equipment should be non-sparking and explosion proof.

### Conditions for safe storage, including any incompatibilities

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from moisture. Store away from sources of heat or ignition. Keep container closed when not in use.

**Packaging materials** Do not store in aluminium containers. Do not store in copper or copper alloy containers. Do not store in zinc containers.

**Incompatible materials** Acids. Carbon. Diazonium salts. Water. Moisture. Aluminium. Copper. Zinc. Strong oxidizing agents.

**Poisons Schedule (SUSMP)** None allocated

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

**Exposure Limits** No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for particulates:

Dusts not otherwise classified: 8hr TWA = 10 mg/m<sup>3</sup>

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

### Appropriate engineering controls

#### Engineering controls

Ensure that eyewash stations and safety showers are close to the workstation location. Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

### Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES, DUST MASK.



#### Eye/face protection

Tight sealing safety goggles.

#### Skin and body protection

Boots. Overalls. Impervious clothing.

#### Hand protection

Elbow-length impervious gloves.

#### Respiratory protection

If determined by a risk assessment an inhalation risk exists, wear a dust mask/respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

#### Environmental exposure controls

No information available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

Physical state	Solid
Appearance	Flakes
Color	Yellow
Odor	Rotten-egg like
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	11 (10 g/L aqueous solution)	None known
pH (as aqueous solution)	No data available	None known
Melting point / freezing point	55°C	None known
Boiling point / boiling range	No data available	None known
Flash point	90°C	None known
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	1.79	None known
Water solubility	Soluble in water	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information**10. STABILITY AND REACTIVITY**Reactivity

**Reactivity** Contact with acids liberates toxic gas. Hygroscopic.

Chemical stability

**Stability** Stable under normal conditions.

Explosion data

**Sensitivity to mechanical impact** None.

**Sensitivity to static discharge** None.

Possibility of hazardous reactions

**Possibility of hazardous reactions** Can react with acids evolving flammable and toxic hydrogen sulphide gas.

Conditions to avoid

**Conditions to avoid** Heat, flames and sparks. Moisture. Avoid dust generation. Avoid temperatures above 50 °C.

Incompatible materials

**Incompatible materials** Acids. Carbon. Diazonium salts. Water. Moisture. Aluminium. Copper. Zinc. Strong oxidizing agents.

Hazardous decomposition products

**Hazardous decomposition products** Hydrogen sulfide. Oxides of sulfur.

**11. TOXICOLOGICAL INFORMATION**

**Acute toxicity****Information on likely routes of exposure**

<b>Product Information</b>	No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:
<b>Inhalation</b>	May cause irritation.
<b>Eye contact</b>	Corrosive to the eyes and may cause severe damage including blindness.
<b>Skin contact</b>	Contact causes severe skin irritation and possible burns. Harmful in contact with skin.
<b>Ingestion</b>	Can burn mouth, throat, and stomach. Toxic if swallowed.
<b>Symptoms</b>	Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness). Burning.

**Numerical measures of toxicity - Product Information**

Refer to component information below.

**Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Water of crystallisation	> 90 mL/kg ( Rat )	-	-
Sodium hydrosulfide	= 96-215 mg/kg ( Rat )	-	= 1500 mg/m <sup>3</sup> ( Rat ) 14 min

See section 16 for terms and abbreviations

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

<b>Skin corrosion/irritation</b>	Causes burns.
<b>Serious eye damage/eye irritation</b>	Causes serious eye damage.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP. (OSHA - Occupational Safety and Health Administration) (IARC - International Agency for Research on Cancer) (NTP - National Toxicology Program).
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.
<b>Chronic effects:</b>	May cause impaired memory, paralysis, impairment of the central nervous system.

**12. ECOLOGICAL INFORMATION****Ecotoxicity****Ecotoxicity** Keep out of waterways.**Persistence and degradability****Persistence and degradability** No information available.**Bioaccumulative potential****Bioaccumulation** No information available.**Component Information**

Chemical name	Partition coefficient
Sodium hydrosulfide	-3.5

**Mobility****Mobility in soil** No information available.**Other adverse effects****13. DISPOSAL CONSIDERATIONS****Waste treatment methods****Waste from residues/unused products** Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal.**14. TRANSPORT INFORMATION****ADG**

Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

**UN number** 2949  
**Proper shipping name** SODIUM HYDROSULPHIDE, HYDRATED  
**Hazard class** 8  
**Packing group** II  
**Hazchem code** 2X

**IATA**

Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

**UN number** 2949  
**UN proper shipping name** SODIUM HYDROSULPHIDE, HYDRATED  
**Transport hazard class(es)** 8  
**Packing group** II

**IMDG**

Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.



UN number	2949
UN proper shipping name	SODIUM HYDROSULPHIDE, HYDRATED
Transport hazard class(es)	8
Packing group	II
IMDG EMS Fire	F-A
IMDG EMS Spill	S-B

## 15. REGULATORY INFORMATION

### Safety, health and environmental regulations/legislation specific for the substance or mixture

#### National regulations

##### Australia

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

**Poisons Schedule (SUSMP)** None allocated

#### International Inventories

**AIIC** All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals.

**NZIoC** All the constituents of this material are listed on the New Zealand Inventory of Chemicals.

#### **Legend:**

**AIIC- Australian Inventory of Industrial Chemicals**

**NZIoC - New Zealand Inventory of Chemicals**

#### International Regulations

**The Montreal Protocol on Substances that Deplete the Ozone Layer** Not applicable

**The Stockholm Convention on Persistent Organic Pollutants** Not applicable

**The Rotterdam Convention** Not applicable

## 16. OTHER INFORMATION

**Reason(s) For Issue:** 5 Yearly Revised Primary SDS  
Change in Hazardous Chemical Classification  
Change in Physical Properties

**Issuing Date:** 05-Apr-2023

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

**Revision Note:**

The symbol (\*) in the margin of this SDS indicates that this line has been revised.

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

### Key literature references and sources for data used to compile the SDS

EPA (Environmental Protection Agency)  
 Acute Exposure Guideline Level(s) (AEGl(s))  
 U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
 U.S. Environmental Protection Agency High Production Volume Chemicals  
 Food Research Journal  
 Hazardous Substance Database  
 International Uniform Chemical Information Database (IUCLID)  
 Japan GHS Classification  
 Australian Industrial Chemicals Introduction Scheme (AICIS)  
 NIOSH (National Institute for Occupational Safety and Health)  
 National Library of Medicine's ChemID Plus (NLM CIP)  
 National Library of Medicine's PubMed database (NLM PUBMED)  
 National Toxicology Program (NTP)  
 New Zealand's Chemical Classification and Information Database (CCID)  
 Organization for Economic Co-operation and Development Environment, Health, and Safety Publications  
 Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
 Organization for Economic Co-operation and Development Screening Information Data Set  
 RTECS (Registry of Toxic Effects of Chemical Substances)  
 World Health Organization

### Disclaimer

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

**End of Safety Data Sheet**