



# Safety Data Sheet

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## Section 01 Identification

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| <b>Product Identifier</b>                  | Sodium Sulphide Flake  |
| <b>Other Means of Identification</b>       | Disodium monosulfide hydrate   |
| <b>Product Use and Restrictions on Use</b> | Depilatory agent in leather manufacture, dyes, processing aids, reducing agent   |
| <b>Initial Supplier Identifier</b>         | ClearTech Industries Inc<br>1500 Quebec Avenue<br>Saskatoon, SK. Canada<br>S7K 1V7<br><br>Phone: 800.387.7503<br>Fax: 888.281.8109<br><a href="http://www.cleartech.ca">www.cleartech.ca</a> |
| <b>Prepared By</b>                         | ClearTech Industries Inc. technical writer   |
| <b>24-Hour Emergency Phone</b>             | 306.664.2522   |

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## Section 02 Hazard Identification

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### Physical Hazards

This product does not qualify for any physical hazard class under WHMIS 2015

### Health Hazards

|  |            |
|--|------------|
| <b>Acute toxicity - oral</b>               | Category 3 |
| <b>Acute toxicity - dermal</b>             | Category 3 |
| <b>Skin corrosion / irritation</b>         | Category 1 |
| <b>Serious eye damage / eye irritation</b> | Category 1 |

### Environmental Hazards

|  |            |
|--|------------|
| <b>Hazardous to the aquatic environment - acute hazard</b> | Category 1 |
|--|------------|

### Signal Word

**Danger**

### Hazard Statements

- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H400 Very toxic to aquatic life.

### Pictograms



## Precautionary Statements

### Prevention

- P260 Do not breathe dust.  
P264 Wash affected body parts thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P273 Avoid release to the environment.  
P280 Wear protective gloves, protective clothing, eye protection, face protection

### Response

- P301 P310 P330 IF SWALLOWED: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.  
P303 P361 P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. Wash contaminated clothing before reuse. Call a POISON CENTER or doctor if you feel unwell.  
P304 P340 P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor.  
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.

### Storage

- P405 Store locked up.

### Disposal

- P501 Dispose of contents / container in accordance with all federal, provincial and / or local regulations including the Canadian Environmental Protection Act.

## Hazards Not Otherwise Classified

Not available

## Supplemental Information

The classification "Acute toxicity - dermal, Category 3" is based on an unreliable study and may not apply.

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## Section 03 Composition / Information on Ingredients

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### Hazardous Ingredients:

| Chemical name     | Common name(s)  | CAS number | Concentration (w/w%) |
|-------------------|-----------------|------------|----------------------|
| Disodium sulphide | Sodium sulphide | 1313-82-2  | 60-61%               |

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## Section 04 First-Aid Measures

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### Description of necessary first-aid measures

|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | Remove source of exposure or move person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor. If breathing has stopped, trained personnel should begin rescue breathing or if the heart has stopped, immediately start cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED). Avoid mouth to mouth contact by using a barrier device.  |
| <b>Ingestion</b>    | Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER or doctor. If vomiting occurs naturally, lie on your side, in the recovery position. Immediately call a POISON CENTER or doctor. Rinse mouth. If breathing has stopped, trained personnel should begin rescue breathing or, if the heart has stopped, immediately start cardiopulmonary resuscitation (CPR) or automated external defibrillation (AED). Avoid mouth-to-mouth contact by using a barrier device. |
| <b>Skin contact</b> | Avoid direct contact. Wear chemical protective clothing, if necessary. Take off immediately contaminated clothing, shoes and leather goods. Rinse skin with lukewarm, gently flowing water / shower for 60 minutes. Immediately call a POISON CENTER or doctor. Wash contaminated clothing before re-use, or discard.   |
| <b>Eye contact</b>  | Avoid direct contact. Wear chemical protective gloves, if necessary. Remove source of exposure or move person to fresh air. Rinse eyes cautiously with lukewarm, gently flowing water for several minutes, while holding the eyelids open. Remove contact lenses, if present and easy to do. Continue rinsing for 60 minutes. Take care not to rinse contaminated water into the unaffected eye or onto the face. Immediately call a POISON CENTER or doctor.                         |

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

|                            |   |
|----------------------------|---|
| <b>Inhalation</b>          | Causes severe burns to the mouth and throat.                      |
| <b>Ingestion</b>           | Causes burns to the mouth and throat. Toxic if swallowed.         |
| <b>Skin contact</b>        | Causes severe skin burns. Toxic in contact with skin.             |
| <b>Eye contact</b>         | Causes serious eye damage.  |
| <b>Further information</b> | For further information see Section 11 Toxicological Information. |

## **Section 05 Fire Fighting Measures**

|   |  |
|---|--|
| <b>Suitable extinguishing media</b>                   | Powder and foam extinguishing agents are recommended. Water is not recommended, except in flooding quantities, as it may release toxic and flammable hydrogen sulfide. |
| <b>Unsuitable extinguishing media</b>                 | Carbon dioxide and water   |
| <b>Specific hazards arising from the chemical</b>     | In the event of a fire oxides of sulphur and toxic, flammable hydrogen sulfide may be released.  |
| <b>Special protective equipment for fire-fighters</b> | Wear NIOSH-approved self-contained breathing apparatus and chemical-protective clothing.   |

## **Section 06 Accidental Release Measures**

|   |  |
|---|--|
| <b>Personal Precautions / Protective Equipment / Emergency Procedures</b> | Wear appropriate personal protective equipment (See Section 08 Exposure Controls and Personal Protection). Stay upwind, ventilate area. Do not breathe dust.   |
| <b>Environmental Precautions</b>  | Do NOT let this chemical enter the environment. Prevent material from entering waterways, sewers or confined spaces. Notify local health and wildlife officials. Notify operators of nearby water intakes.   |
| <b>Methods and Materials for Containment and Cleaning Up</b>              | Do not pre-damp spilled material, it may generate toxic and flammable hydrogen sulphide. Avoid the release of dust into the air. Use a vacuum to collect spilled material, transfer into clean, dry, labelled containers and cover. Flush area with water. |

## Section 07 Handling and Storage

|                                      |  |
|--------------------------------------|--|
| <b>Precautions for Safe Handling</b> | Use proper equipment for lifting and transporting all containers. Use sensible industrial hygiene and housekeeping practices. Wash thoroughly after handling. Avoid all situations that could lead to harmful exposure. Prevent the release of dust into the workplace air. Inspect containers for damage or leaks before handling. If the original label is damaged or missing replace with a workplace label. Have suitable emergency equipment for fires, spills and leaks readily available.<br>Never add water to a corrosive. Always add corrosives to water. When mixing with water, stir small amounts in slowly. Use cold water to prevent excessive heat generation. Never return contaminated material to its original container. |
| <b>Conditions for Safe Storage</b>   | Store in a cool, dry, well-ventilated area, away from heat sources and incompatible materials. Always store in original labeled container. Keep containers tightly closed when not in use and when empty. Empty containers may contain hazardous residues. Protect label and keep it visible.  |
| <b>Incompatibilities</b>             | Acids, such as sulphuric, nitric, hydrochloric, phosphoric, fluosilicic (HFSA), sulphonic, acetic, citric, oxalic, and formic.<br>Oxidizing agents, such as oxygen, hydrogen peroxide, sulphuric and nitric acids, hypochlorites and permanganates.<br>Water and carbon dioxide  |

## Section 08 Exposure Controls and Personal Protection

### Exposure limits

| Component                                | Regulation | Type of listing | Value  |
|--|------------|-----------------|--------|
| Hydrogen sulfide (decomposition product) | ACGIH      | STEL/Ceiling    | 10 ppm |

### Engineering controls

|                                 |   |
|---------------------------------|---|
| <b>Ventilation Requirements</b> | Mechanical ventilation (dilution or local exhaust), process or personnel enclosure and control of process conditions should be provided in accordance with all fire codes and regulatory requirements. Supply sufficient replacement air to make up for air removed by exhaust systems. |
| <b>Other</b>                    | An emergency shower and eyewash station should be available, tested, and be in close proximity to the product being handled in accordance with provincial regulations.  |

### Protective equipment

The following are recommendations only. It is the responsibility of the employer / user to conduct a hazard assessment of the process in which this product being used and determine the proper engineering controls and PPE for their process. Additional regulatory and safety information should be sought from local authorities and, if needed, a professional industrial hygienist.

|                                 |   |
|---------------------------------|---|
| <b>Eye and face protection</b>  | Where there is potential eye or face exposure, tightly fitting safety goggles and a face shield or a full face respirator or similar protective equipment which protects the wearer's face and eyes are recommended. Contact lenses are not recommended; they may contribute to severe eye injury.  |
| <b>Hand and body protection</b> | Disposable latex or nitrile gloves are recommended to prevent incidental contact. Butyl rubber, neoprene, or PVC skin protection is recommended for extended contact. Leather gloves are not recommended for chemical protection. Refer to manufacturer's specifications for breakthrough times and permeability information; note that breakthrough times and permeability vary with temperature, application and age of material. Continued use of contaminated safety gear or clothing is not recommended; wash before reuse or discard. |
| <b>Respiratory protection</b>   | In case of insufficient ventilation wear suitable respiratory equipment.  |

**Emergency or planned entry into unknown concentrations or IDLH conditions:**

(APF = 10,000) Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode

(APF = 10,000) Any supplied-air respirator that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained positive-pressure breathing apparatus

Thermal hazards Not available

**Section 09 Physical and Chemical Properties****Appearance**

Physical state Flake  
Colour Yellow to brown  
Odour Sulphurous, like rotten eggs  
Odour threshold Not available

**Property**

pH Alkaline / basic when dissolved in water  
Melting point / freezing point 69-93 °C (60%) 920-1180 °C (Anhydrous)  
Initial boiling point and boiling range Decomposes  
Flash point Not applicable  
Evaporation rate Not available  
Flammability No autoignition below 430 °C  
Upper flammable limit Not applicable  
Lower flammable limit Not applicable  
Vapour pressure Not applicable  
Vapour density Not applicable  
Relative density 1.86 g/cm<sup>3</sup>  
Solubility ~180 g/L in water @ 20 °C  
Partition coefficient: n-octanol/water Not available  
Auto-ignition temperature >430 °C  
Decomposition temperature 920-950 °C  
Viscosity Not applicable  
Specific gravity Not applicable  
Particle characteristics Particle size: Not available  
Particle shape: Not available  
Formula Na<sub>2</sub>S XH<sub>2</sub>O  
Molecular weight 78.046 g/mol (anhydrous)

**Section 10 Stability and Reactivity**

Reactivity Reacts violently with acids.  
Stability This product is stable if stored according to the recommendations in Section 07.

|   |   |
|---|---|
| <b>Possibility of hazardous reactions</b> | Hazardous polymerization is not known to occur.   |
| <b>Conditions to avoid</b>                | Avoid contact with incompatible materials.  |
| <b>Incompatible materials</b>             | Acids, such as sulphuric, nitric, hydrochloric, phosphoric, fluosilicic (HFSA), sulphonic, acetic, citric, oxalic, and formic.<br>Oxidizing agents, such as oxygen, hydrogen peroxide, sulphuric and nitric acids, hypochlorites and permanganates.<br>Water and carbon dioxide |
| <b>Hazardous decomposition products</b>   | Thermal decomposition may produce oxides of sulphur and toxic, flammable hydrogen sulfide . Reactions with acids produces flammable and toxic hydrogen sulfide.   |

## Section 11 Toxicological Information

### Acute Toxicity (LD50 / LC50 values)

| Component                 | Route  | Species | Value            | Exposure time |
|---------------------------|--------|---------|------------------|---------------|
| Sodium hydrogen sulphide  | Oral   | Rat     | 100-215 mg/kg bw |               |
| Sodium sulphide 60% flake | Dermal | Rabbit  | <340 mg/kg       | 24 hours      |

### Toxic Health Effect Summary

|                                 |   |
|---------------------------------|---|
| <b>Chemical characteristics</b> | Sodium sulphid is a reducing agent and a base.  |
| <b>Skin</b>                     | In a study on rabbits necrosis and alkaline chemical burns were observed following 340 mg/kg body weight exposure over 24 hours. These results are considered unreliable because they were performed on abraided skin.  |
| <b>Ingestion</b>                | Causes burns to the mouth and throat. Toxic if swallowed.   |
| <b>Inhalation</b>               | Causes severe burns to the mouth and throat. This product can be classified toxic by inhalation, if the LC50 values are considered in isolation. However, there is no available evidence that This product causes systematic toxicity; all of its affects are localized and are therefore considered corrosive. This substance is already classified as corrosive, therefore also classifying it as toxic by inhalation would be inappropriate. |
| <b>Eye contact</b>              | Causes serious eye damage.  |
| <b>Sensitization</b>            | This product and its components at their listed concentration have no known sensitizing effects.  |
| <b>Mutagenicity</b>             | This product and its components at their listed concentration have no known mutagenic effects.  |
| <b>Carcinogenicity</b>          | This product and its components at their listed concentration have no known carcinogenic effects.   |
| <b>Reproductive toxicity</b>    | This product and its components at their listed concentration have no known reproductive effects.   |
| <b>Specific organ toxicity</b>  | This product and its components at their listed concentration have no known effects on specific organs.   |
| <b>Aspiration hazard</b>        | Not available   |
| <b>Synergistic materials</b>    | Not available   |

## Section 12 Ecological Information

### Ecotoxicity

| Component         | Type | Species         | Value      | Exposure Time |
|-------------------|------|-----------------|------------|---------------|
| Hydrogen sulphide | LC50 | Freshwater fish | 0.003 mg/L | 96 hours      |

# Safety Data Sheet

Sodium Sulphide Flake  
ClearTech Industries Inc

| Component                    | Type  | Species                  | Value      | Exposure Time |
|------------------------------|---|--------------------------|------------|---------------|
|                              | EC50  | Freshwater invertebrates | 0.02 mg/L  | 96 hours      |
|                              | EC50  | Marine water algae       | 0.104 mg/L | 48 hours      |
| <b>Biodegradability</b>      | The domestic substance list categorizes sodium sulphide as persistent.                              |                          |            |               |
| <b>Bioaccumulation</b>       | The domestic substance list categorizes sodium sulphide as non-bioaccumulative.                     |                          |            |               |
| <b>Mobility</b>              | This product is water soluble, is not predicted to adsorb to soil and may contaminate ground water. |                          |            |               |
| <b>Other adverse effects</b> | Not available   |                          |            |               |

## Section 13 Disposal Considerations

|  |  |
|--|--|
| <b>Waste From Residues / Unused Products</b> | Dispose in accordance with all federal, provincial, and local regulations including the Canadian Environmental Protection Act.   |
| <b>Contaminated Packaging</b>                | Do not remove label, follow label warnings even after the container is empty. Empty containers should be recycled or disposed of at an approved waste handling facility. |

## Section 14 Transport Information

|  |   |
|--|---|
| <b>UN number</b>                               | UN1849  |
| <b>UN proper shipping name and description</b> | SODIUM SULPHIDE, HYDRATED<br>with not less than 30% water   |
| <b>Transport hazard class(es)</b>              | 8   |
| <b>Packing group</b>                           | II  |
| <b>Excepted quantities</b>                     | 1 kg  |
| <b>Environmental hazards</b>                   | Not listed as a marine pollutant under Canadian TDG Regulations, schedule III.  |
| <b>Special precautions</b>                     | No special provisions   |
| <b>Transport in bulk</b>                       | ERAP index: not available   |
| <b>Additional information</b>                  | MARPOL 73/78 and IBC Code:<br>This product is not listed in Chapter 17 of the IBC Code.<br>Secure containers (full or empty) during shipment and ensure all caps, valves, or closures are secured in the closed position. |

**TDG PRODUCT CLASSIFICATION:** This product has been classified on the preparation date specified at section 16 of this SDS, for transportation in accordance with the requirements of part 2 of the Transportation of Dangerous Goods Regulations. If applicable, testing and published test data regarding the classification of this product are listed in the references at section 16 of this SDS.

## Section 15 Regulatory Information.

**NOTE: THE PRODUCT LISTED ON THIS SAFETY DATA SHEET HAS BEEN CLASSIFIED IN ACCORDANCE WITH THE HAZARD CRITERIA OF THE CANADIAN HAZARDOUS PRODUCTS REGULATIONS. THIS SAFETY DATA SHEET CONTAINS ALL INFORMATION REQUIRED BY THOSE REGULATIONS.**

All components of this product appear on the domestic substance list.

Reduced sulphur is listed in the National Pollutant Release Inventory (NPRI). Reporting threshold: 10 tonnes manufactured, processed or otherwise used.

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## Section 16 Other Information

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**Date of latest revision: January 24, 2022**

**Note:** The responsibility to provide a safe workplace remains with the buyer / user. The buyer / user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the buyer / user to comply with all applicable laws and regulations regarding handling, using, reselling and shipping this product.

**Attention: Receiver of the chemical goods / SDS coordinator**

As part of our commitment to the RDC Responsible Distribution® initiative, ClearTech Industries Inc. and its associated companies require, as a condition of sale, that you forward the attached Safety Data Sheet(s) to all affected employees, customers, and end-users. ClearTech will send any available supplementary handling, health, and safety information to you at your request.

If you have any questions or concerns please call our customer service center.

**References:**

- 1) CHEMINFO
- 2) TOXNET
- 3) eChemPortal
- 4) ECHA
- 5) Transportation of Dangerous Goods Canada
- 6) HSDB
- 7) PAN