

# SAFETY DATA SHEET

## 1. Identification

**Product identifier:** SODIUM SULFIDE

### Other means of identification

**Product No.:** 3910, 31111

### Recommended use and restriction on use

**Recommended use:** Not determined.

**Restrictions on use:** Not determined.

### Details of the supplier of the safety data sheet

|                 |                                                                                          |
|-----------------|------------------------------------------------------------------------------------------|
|                 | Avantor Performance Materials, LLC.<br>3477 Corporate Parkway<br>Center Valley, PA 18034 |
| Telephone:      |                                                                                          |
|                 | Customer Service: 855-282-6867                                                           |
| Fax:            | 610-573-2610                                                                             |
| Contact Person: | Environmental Health & Safety                                                            |
| E-mail:         | info@avantormaterials.com                                                                |

### Emergency telephone number:

CHEMTREC: 1-800-424-9300 within US and Canada

## 2. Hazard(s) identification

### Hazard Classification

#### Health Hazards

|                                   |             |
|-----------------------------------|-------------|
| Acute toxicity (Oral)             | Category 4  |
| Skin Corrosion/Irritation         | Category 1B |
| Serious Eye Damage/Eye Irritation | Category 1  |

#### Unknown toxicity - Health

|                                          |       |
|------------------------------------------|-------|
| Acute toxicity, oral                     | 100 % |
| Acute toxicity, dermal                   | 100 % |
| Acute toxicity, inhalation, vapor        | 100 % |
| Acute toxicity, inhalation, dust or mist | 100 % |

### Environmental Hazards

|                                          |            |
|------------------------------------------|------------|
| Acute hazards to the aquatic environment | Category 1 |
|------------------------------------------|------------|

#### Unknown toxicity - Environment

|                                          |     |
|------------------------------------------|-----|
| Acute hazards to the aquatic environment | 0 % |
|------------------------------------------|-----|

Chronic hazards to the aquatic environment 100 %

## Label Elements

### Hazard Symbol:



**Signal Word:** Danger

**Hazard Statement:** Harmful if swallowed.  
Causes severe skin burns and eye damage.  
Very toxic to aquatic life.

### Precautionary Statements

**Prevention:** Do not breathe dust/fume/gas/mist/vapors/spray. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid release to the environment.

**Response:** Immediately call a POISON CENTER/doctor. IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. 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 INHALED: Remove person to fresh air and keep comfortable for breathing. Collect spillage.

**Storage:** Store locked up.

**Disposal:** 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.

**Other hazards which do not result in GHS classification:** None.

## 3. Composition/information on ingredients

### Substances

| Chemical name                  | Common name and synonyms | CAS number | Content in percent (%)* |
|--------------------------------|--------------------------|------------|-------------------------|
| SODIUM SULFIDE (HYDRATED FORM) |                          | 1313-84-4  | 98 - 100%               |

\* All concentrations are percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

## 4. First-aid measures

|                             |                                                                                                                                                                                                                                                  |
|-----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General information:</b> | Get medical advice/attention if you feel unwell. Show this safety data sheet to the doctor in attendance.                                                                                                                                        |
| <b>Ingestion:</b>           | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately call a POISON CENTER/doctor.                                                                                                                                                      |
| <b>Inhalation:</b>          | Move to fresh air. Get medical attention if symptoms persist. If breathing stops, provide artificial respiration. If breathing is difficult, give oxygen.                                                                                        |
| <b>Skin Contact:</b>        | Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes. |
| <b>Eye contact:</b>         | Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention if symptoms persist.                                                                                                 |

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

|                  |                                                           |
|------------------|-----------------------------------------------------------|
| <b>Symptoms:</b> | Corrosive to skin and eyes. Causes digestive tract burns. |
| <b>Hazards:</b>  | None known.                                               |

#### Indication of immediate medical attention and special treatment needed

|                   |                                                 |
|-------------------|-------------------------------------------------|
| <b>Treatment:</b> | Symptoms may be delayed. Treat symptomatically. |
|-------------------|-------------------------------------------------|

### 5. Fire-fighting measures

|                              |                                                        |
|------------------------------|--------------------------------------------------------|
| <b>General Fire Hazards:</b> | In case of fire and/or explosion do not breathe fumes. |
|------------------------------|--------------------------------------------------------|

#### Suitable (and unsuitable) extinguishing media

|                                        |                                                                     |
|----------------------------------------|---------------------------------------------------------------------|
| <b>Suitable extinguishing media:</b>   | Use fire-extinguishing media appropriate for surrounding materials. |
| <b>Unsuitable extinguishing media:</b> | None known.                                                         |

|                                                    |                                                       |
|----------------------------------------------------|-------------------------------------------------------|
| <b>Specific hazards arising from the chemical:</b> | During fire, gases hazardous to health may be formed. |
|----------------------------------------------------|-------------------------------------------------------|

#### Special protective equipment and precautions for firefighters

|                                                        |                                                                                                                                                                                                    |
|--------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Special fire fighting procedures:</b>               | Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool. Cool containers exposed to flames with water until well after the fire is out. |
| <b>Special protective equipment for fire-fighters:</b> | Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.                                   |

### 6. Accidental release measures

|                                                                             |                                                                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal precautions, protective equipment and emergency procedures:</b> | Keep unauthorized personnel away. Keep upwind. Use personal protective equipment. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. See Section 8 of the SDS for Personal Protective Equipment. |
| <b>Methods and material for containment and cleaning up:</b>                | Neutralize with lime or soda ash. Sweep up and place in a clearly labeled container for chemical waste. Clean surface thoroughly to remove residual contamination. Dike far ahead of larger spill for later recovery and disposal.                                                              |
| <b>Notification Procedures:</b>                                             | Dike for later disposal. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Inform authorities if large amounts are involved.                                                                                                |
| <b>Environmental Precautions:</b>                                           | Do not contaminate water sources or sewer. Prevent further leakage or spillage if safe to do so. Avoid release to the environment.                                                                                                                                                              |

## 7. Handling and storage

|                                                                      |                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Precautions for safe handling:</b>                                | Do not taste or swallow. Do not get in eyes, on skin, on clothing. Do not breathe dust/fume/gas/mist/vapors/spray. Use personal protective equipment as required. Wear protective gloves/protective clothing/eye protection/face protection. See Section 8 of the SDS for Personal Protective Equipment. Wash hands thoroughly after handling. |
| <b>Conditions for safe storage, including any incompatibilities:</b> | Keep container tightly closed in a cool, well-ventilated place. Keep away from food, drink and animal feeding stuffs. Avoid heat, sparks, open flames and other ignition sources. Store away from incompatible materials. Avoid conditions which create dust. Store in a corrosion-resistant container with a resistant inner liner.           |

## 8. Exposure controls/personal protection

### Control Parameters

#### Occupational Exposure Limits

None of the components have assigned exposure limits.

#### Appropriate Engineering Controls

No data available.

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

|                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>General information:</b> | Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. An eye wash and safety shower must be available in the immediate work area. |
| <b>Eye/face protection:</b> | Wear safety glasses with side shields (or goggles). Use tight fitting goggles if dust is generated.                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Skin Protection</b>      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Hand Protection:</b>     | Chemical resistant gloves                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Other:</b>               | Wear suitable protective clothing.                                                                                                                                                                                                                                                                                                                                                                                                                                        |

|                                |                                                                                                                                                                                                                                                                                                                         |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Respiratory Protection:</b> | If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Air-purifying respirator with a high efficiency particulate filter. |
| <b>Hygiene measures:</b>       | Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.                                                        |

## 9. Physical and chemical properties

### Appearance

|                                                              |                    |
|--------------------------------------------------------------|--------------------|
| <b>Physical state:</b>                                       | Solid              |
| <b>Form:</b>                                                 | Crystals           |
| <b>Color:</b>                                                | White              |
| <b>Odor:</b>                                                 | Rotten egg odor    |
| <b>Odor threshold:</b>                                       | No data available. |
| <b>pH:</b>                                                   | Caustic            |
| <b>Melting point/freezing point:</b>                         | Approximate 50 °C  |
| <b>Initial boiling point and boiling range:</b>              | No data available. |
| <b>Flash Point:</b>                                          | No data available. |
| <b>Evaporation rate:</b>                                     | No data available. |
| <b>Flammability (solid, gas):</b>                            | No data available. |
| <b>Upper/lower limit on flammability or explosive limits</b> |                    |
| <b>Flammability limit - upper (%):</b>                       | No data available. |
| <b>Flammability limit - lower (%):</b>                       | No data available. |
| <b>Explosive limit - upper (%):</b>                          | No data available. |
| <b>Explosive limit - lower (%):</b>                          | No data available. |
| <b>Vapor pressure:</b>                                       | No data available. |
| <b>Vapor density:</b>                                        | No data available. |
| <b>Density:</b>                                              | 1,43 g/ml (20 °C)  |
| <b>Relative density:</b>                                     | 1,43 (20 °C)       |
| <b>Solubility(ies)</b>                                       |                    |
| <b>Solubility in water:</b>                                  | 2.000 g/l          |
| <b>Solubility (other):</b>                                   | No data available. |
| <b>Partition coefficient (n-octanol/water):</b>              | No data available. |
| <b>Auto-ignition temperature:</b>                            | No data available. |
| <b>Decomposition temperature:</b>                            | No data available. |
| <b>Viscosity:</b>                                            | No data available. |

### Other information

|                          |                                                      |
|--------------------------|------------------------------------------------------|
| <b>Molecular weight:</b> | 240,18 g/mol (H <sub>2</sub> O.1/9Na <sub>2</sub> S) |
|--------------------------|------------------------------------------------------|

## 10. Stability and reactivity

|                            |                                                             |
|----------------------------|-------------------------------------------------------------|
| <b>Reactivity:</b>         | No dangerous reaction known under conditions of normal use. |
| <b>Chemical Stability:</b> | Material is stable under normal conditions.                 |

|                                            |                                                                      |
|--------------------------------------------|----------------------------------------------------------------------|
| <b>Possibility of hazardous reactions:</b> | Hazardous polymerization does not occur.                             |
| <b>Conditions to avoid:</b>                | Heat, sparks, flames. Contact with incompatible materials. Moisture. |
| <b>Incompatible Materials:</b>             | Strong oxidizing agents. Acids. Aluminum. Zinc. Oxidizing agents.    |
| <b>Hazardous Decomposition Products:</b>   | Hydrogen sulfide.                                                    |

## 11. Toxicological information

### Information on likely routes of exposure

|                      |                                                                                   |
|----------------------|-----------------------------------------------------------------------------------|
| <b>Inhalation:</b>   | Dust may irritate respiratory system.                                             |
| <b>Skin Contact:</b> | Causes severe skin burns.                                                         |
| <b>Eye contact:</b>  | Causes serious eye damage.                                                        |
| <b>Ingestion:</b>    | Harmful if swallowed. May cause burns of the gastrointestinal tract if swallowed. |

### Information on toxicological effects

#### Acute toxicity (list all possible routes of exposure)

|                            |                    |
|----------------------------|--------------------|
| <b>Oral Product:</b>       | No data available. |
| <b>Dermal Product:</b>     | No data available. |
| <b>Inhalation Product:</b> | No data available. |

|                                        |                    |
|----------------------------------------|--------------------|
| <b>Repeated dose toxicity Product:</b> | No data available. |
|----------------------------------------|--------------------|

|                                           |                           |
|-------------------------------------------|---------------------------|
| <b>Skin Corrosion/Irritation Product:</b> | Causes severe skin burns. |
|-------------------------------------------|---------------------------|

|                                                   |                            |
|---------------------------------------------------|----------------------------|
| <b>Serious Eye Damage/Eye Irritation Product:</b> | Causes serious eye damage. |
|---------------------------------------------------|----------------------------|

|                                                   |                        |
|---------------------------------------------------|------------------------|
| <b>Respiratory or Skin Sensitization Product:</b> | Not a skin sensitizer. |
|---------------------------------------------------|------------------------|

|                                 |                                                            |
|---------------------------------|------------------------------------------------------------|
| <b>Carcinogenicity Product:</b> | This substance has no evidence of carcinogenic properties. |
|---------------------------------|------------------------------------------------------------|

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans:**  
No carcinogenic components identified

**US. National Toxicology Program (NTP) Report on Carcinogens:**  
No carcinogenic components identified

**ACGIH Carcinogen List:**  
SDS\_CA - SDSMIX000187

No carcinogenic components identified

#### Germ Cell Mutagenicity

##### In vitro

**Product:** No mutagenic components identified

##### In vivo

**Product:** No mutagenic components identified

#### Reproductive toxicity

**Product:** No components toxic to reproduction

#### Specific Target Organ Toxicity - Single Exposure

**Product:** None known.

#### Specific Target Organ Toxicity - Repeated Exposure

**Product:** None known.

#### Aspiration Hazard

**Product:** Not classified

**Other effects:** None known.

## 12. Ecological information

#### Ecotoxicity:

##### Acute hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Aquatic Invertebrates

**Product:** No data available.

##### Chronic hazards to the aquatic environment:

##### Fish

**Product:** No data available.

##### Aquatic Invertebrates

**Product:** No data available.

##### Toxicity to Aquatic Plants

**Product:** No data available.

#### Persistence and Degradability

##### Biodegradation

**Product:** There are no data on the degradability of this product.

##### BOD/COD Ratio

**Product:** No data available.

#### Bioaccumulative potential

##### Bioconcentration Factor (BCF)

**Product:** No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**

**Product:** No data available.

**Mobility in soil:** No data available.

**Other adverse effects:** Very toxic to aquatic life.

**13. Disposal considerations**

**Disposal instructions:** Discharge, treatment, or disposal may be subject to national, state, or local laws.

**Contaminated Packaging:** Since emptied containers retain product residue, follow label warnings even after container is emptied.

**14. Transport information**
**TDG**

|                               |                           |
|-------------------------------|---------------------------|
| UN Number:                    | UN 1849                   |
| UN Proper Shipping Name:      | SODIUM SULPHIDE, HYDRATED |
| Transport Hazard Class(es)    |                           |
| Class:                        | 8                         |
| Label(s):                     | 8                         |
| Packing Group:                | II                        |
| Marine Pollutant:             | No                        |
| Special precautions for user: | Not determined.           |

**IMDG**

|                               |                           |
|-------------------------------|---------------------------|
| UN Number:                    | UN 1849                   |
| UN Proper Shipping Name:      | SODIUM SULPHIDE, HYDRATED |
| Transport Hazard Class(es)    |                           |
| Class:                        | 8                         |
| Label(s):                     | 8                         |
| EmS No.:                      | F-A, S-B                  |
| Packing Group:                | II                        |
| Marine Pollutant:             | No                        |
| Special precautions for user: | Not determined.           |

**IATA**

|                               |                           |
|-------------------------------|---------------------------|
| UN Number:                    | UN 1849                   |
| UN Proper Shipping Name:      | Sodium sulphide, hydrated |
| Transport Hazard Class(es):   |                           |
| Class:                        | 8                         |
| Label(s):                     | 8                         |
| Packing Group:                | II                        |
| Marine Pollutant:             | No                        |
| Special precautions for user: | Not determined.           |
| Cargo aircraft only:          | Allowed.                  |

**Transport in bulk according to Annex II of MARPOL and the IBC Code:** Not applicable

**15. Regulatory information**

## Canada Federal Regulations

### List of Toxic Substances (CEPA, Schedule 1)

Not Regulated

### Export Control List (CEPA 1999, Schedule 3)

Not Regulated

### National Pollutant Release Inventory (NPRI)

#### Canada. National Pollutant Release Inventory (NPRI) Substances, Part 5, VOCs with Additional Reporting Requirements

NPRI PT5 Not Regulated

#### Canada. National Pollutant Release Inventory (NPRI) (Schedule 1, Parts 1-4)

NPRI Not Regulated

## Greenhouse Gases

Not Regulated

## Controlled Drugs and Substances Act

CA CDSI Not Regulated

CA CDSII Not Regulated

CA CDSIII Not Regulated

CA CDSIV Not Regulated

CA CDSV Not Regulated

CA CDSVII Not Regulated

CA CDSVIII Not Regulated

## Precursor Control Regulations

Not Regulated

## International regulations

### Montreal protocol

Not applicable

### Stockholm convention

Not applicable

### Rotterdam convention

Not applicable

### Kyoto protocol

Not applicable

**Inventory Status:**

|                                          |                                        |
|------------------------------------------|----------------------------------------|
| Australia AICS:                          | On or in compliance with the inventory |
| Canada DSL Inventory List:               | On or in compliance with the inventory |
| EINECS, ELINCS or NLP:                   | On or in compliance with the inventory |
| Japan (ENCS) List:                       | Not in compliance with the inventory.  |
| China Inv. Existing Chemical Substances: | On or in compliance with the inventory |
| Korea Existing Chemicals Inv. (KECI):    | Not in compliance with the inventory.  |
| Canada NDSL Inventory:                   | Not in compliance with the inventory.  |
| Philippines PICCS:                       | On or in compliance with the inventory |
| US TSCA Inventory:                       | On or in compliance with the inventory |
| New Zealand Inventory of Chemicals:      | On or in compliance with the inventory |
| Japan ISHL Listing:                      | Not in compliance with the inventory.  |
| Japan Pharmacopoeia Listing:             | Not in compliance with the inventory.  |

**16. Other information, including date of preparation or last revision**

**Revision Date:** 18.05.2018

**Version #:** 1.1

**Further Information:** No data available.

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