Sodium Hydrosulfide Flake

SECTION 1. IDENTIFICATION

Product Identifier	Sodium Hydrosulfide Flake
Other Means of Identification	Hydrogen sodium sulfide, Sodium bisulfide
Product Code(s)	SO3495
Product Family	Inorganic Solid
Recommended Use	Laboratory and industrial use.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	CANUTEC CANADA, 613-996-6666, 24 Hours
SDS No.	1398

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Acute toxicity (Oral) - Category 3; Acute toxicity (Dermal) - Category 3; Acute toxicity (Inhalation) - Category 4; Skin corrosion - Category 1B; Serious eye damage - Category 1

Label Elements

Signal Word:
Danger

Hazard Statement(s):
Toxic if swallowed or in contact with skin.
Harmful if inhaled.
Causes severe skin burns and eye damage.

Precautionary Statement(s):
Prevention:
Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Do not breathe dust/fume/gas/mist/vapours/spray.
Response:
IF SWALLOWED: Immediately call a POISON CENTRE or doctor.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
IF ON SKIN: Wash with plenty of water.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage:

Store locked up.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers	Other Names
Sodium hydrosulfide, anhydrous	16721-80-5	71.5 - 74.5	Hydrogen sodium sulfide, Sodium bisulfide	
Sodium sulfide, anhydrous	1313-82-2	2.5	Disodium monosulfide	
Sodium thiosulfate	7772-98-7	1	Disodium thiosulphate	

Notes

(plus 25% water of crystallization).

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. If breathing is difficult, trained personnel should administer emergency oxygen if advised to do so by Poison Centre or doctor. Avoid mouth-to-mouth contact by using a barrier device. Immediately call a Poison Centre or doctor.

Skin Contact

Immediately rinse with lukewarm, gently flowing water for 15-20 minutes. Immediately call a Poison Centre or doctor.

Eye Contact

Immediately rinse the contaminated eye(s) with lukewarm, gently flowing water for 15-20 minutes, while holding the eyelid(s) open. Immediately call a Poison Centre or doctor. Specific treatment is required.

Ingestion

Rinse mouth with water. Do not induce vomiting. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Immediately call a Poison Centre or doctor.

First-aid Comments

Provide general supportive measures (comfort, warmth, rest). Do not leave the victim unattended. All first aid procedures should be periodically reviewed by a doctor familiar with the material and its condition of use in the workplace.

Most Important Symptoms and Effects, Acute and Delayed

If in eyes: contact causes severe burns with redness, swelling, pain and blurred vision. Permanent damage including blindness can result. If on skin: contact can cause pain, redness, burns, and blistering. Permanent scarring can result.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice, consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Unsuitable Extinguishing Media

None known.

Specific Hazards Arising from the Product

Heating increases the release of toxic vapour. Closed containers may rupture violently when heated releasing contents.
In a fire, the following hazardous materials may be generated: very toxic, flammable hydrogen sulfide; corrosive sulfur oxides.

Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. Move containers from fire area if it can be done without risk. Otherwise, use water in flooding quantities as a spray or fog to keep fire-exposed containers cool and absorb heat. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles. Dike and recover contaminated water for appropriate disposal.
Chemical protective clothing (e.g. chemical splash suit) and positive pressure SCBA may be necessary.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources. Use grounded, explosion-proof equipment. Remove or isolate incompatible materials as well as other hazardous materials. Notify government occupational health and safety and environmental authorities.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Avoid generating dust. Contain spill with earth, sand, or absorbent material which does not react with spilled material. Small spills of solutions: contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Flush spill area.
Small spills of solids: collect using shovel/scoop or approved HEPA vacuum and place in a suitable container for disposal. Flush spill area.
Large spills or leaks: contact emergency services and manufacturer/supplier for advice.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Immediately report leaks, spills or failures of the safety equipment (e.g. ventilation system). Do not breathe in this product. Avoid generating dusts. Only use where there is adequate ventilation. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent accidental contact with incompatible chemicals. Never add water to a corrosive. Always add corrosives slowly to COLD water. Keep containers tightly closed when not in use or empty.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated, out of direct sunlight and away from heat and ignition sources, separate from incompatible materials (see Section 10: Stability and Reactivity). Keep amount in storage to a minimum. Comply with all applicable health and safety regulations, fire and building codes.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

	ACGIH TLV®		OSHA PEL		AIHA WEEL	
Chemical Name	**TWA**	**STEL**	**TWA**	**Ceiling**	**8-hr TWA**	**TWA**
Sodium hydrosulfide, anhydrous	Not established		Not established			
Sodium sulfide, anhydrous	Not established		Not established			
Sodium thiosulfate	Not established		Not established			

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use a corrosion-resistant exhaust ventilation system separate from other ventilation systems. Exhaust directly to the outside, taking any necessary precautions for environmental protection.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Respiratory Protection

For non-routine or emergency situations: wear a NIOSH approved powered air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	White - yellow flakes. Absorbs moisture from the air.
Odour	Rotten eggs
Odour Threshold	Not available
pH	11.2 (1% solution)
Melting Point/Freezing Point	52 ºC (126 ºF) (melting); 52 ºC (126 ºF) (freezing)
Initial Boiling Point/Range	164 ºC (327 ºF)
Flash Point	Not available
Evaporation Rate	Not available
Flammability (solid, gas)	Not available
Upper/Lower Flammability or Explosive Limit	Not available (upper); Not applicable (lower)
Vapour Pressure	Not available
Vapour Density (air = 1)	Not available
Relative Density (water = 1)	~ 1.79
Solubility	Not available in water; Not available (in other liquids)
Partition Coefficient, n-Octanol/Water (Log Kow)	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); Not available (dynamic)

Other Information

Physical State	Solid
Molecular Weight	56.06

SECTION 10. STABILITY AND REACTIVITY

Reactivity

None known.

Chemical Stability

Normally stable. Unstable under certain conditions - see Conditions to Avoid.

Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

Conditions to Avoid

Exposure to air. Generation of dust. Open flames, sparks, static discharge, heat and other ignition sources.

Incompatible Materials

Strong oxidizing agents (e.g. perchloric acid), strong acids (e.g. hydrochloric acid), halogens (e.g. chlorine), strong bases (e.g. sodium hydroxide).

Hazardous Decomposition Products

Very toxic, flammable hydrogen sulfide; corrosive sulfur oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Sodium hydrosulfide, anhydrous	Not available	50-100 mg/kg (rat)	> 200 mg/kg (rabbit)
Sodium sulfide, anhydrous	Not available	208 mg/kg (rat)	< 340 mg/kg (rabbit)
Sodium thiosulfate	Not available	> 5000 mg/kg (rat)	Not available

LD50 (oral): 58.5 mg/kg (rat) High toxicity.

LD50 (dermal): 177.8 mg/kg (rabbit) High toxicity.

Skin Corrosion/Irritation

Animal tests show skin corrosion.

Serious Eye Damage/Irritation

Causes serious eye damage based on skin corrosion information.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

At high concentrations may cause severe nose and throat irritation.

Ingestion

Toxic, can cause death May cause severe irritation or burns to the mouth, throat and stomach.

Aspiration Hazard

No information was located.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

No information was located.

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Sodium hydrosulfide,	Not Listed	Not designated	Not Listed	Not Listed

anhydrous				
Sodium sulfide, anhydrous	Not evaluated	Not Listed	Not Listed	Not Listed
Sodium thiosulfate	Not Listed	Not Listed	Not Listed	Not Listed

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Bury in a licensed landfill according to federal, provincial/state, and local regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN2949	SODIUM HYDROSULFIDE with not less than 25 percent water of crystallization	8 - Corrosive	II
US DOT	UN2949	SODIUM HYDROSULFIDE with not less than 25 percent water of crystallization	8 - Corrosive	II

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

All ingredients are listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

All ingredients are listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

SDS Prepared By Alphachem Limited

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References	CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).
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