

SODIUM SULFIDE

SDS

CAUTIONARY RESPONSE INFORMATION

Common Synonyms	Solid flakes Yellow to red Rotten eggs odor
	Sinks and mixes with water.
	Keep people away. Avoid contact with solid and dust. Wear rubber overclothing (including gloves) and dust respirator. Call fire department. Notify local health and pollution control agencies. Protect water intakes.
Fire	Combustible. POISONOUS GAS MAY BE PRODUCED IN FIRE. Flammable, poisonous gas is formed on contact with acids. WEAR GOGGLES AND SELF-CONTAINED BREATHING APPARATUS. Extinguish with water.
Exposure	CALL FOR MEDICAL AID. DUST Irritating to eyes, nose and throat. Move to fresh air. IF IN EYES, hold eyelids open and flush with plenty of water. SOLID Harmful if swallowed. IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk.
Water Pollution	HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.

1. CORRECTIVE RESPONSE ACTIONS Dilute and disperse Stop discharge Collection Systems: Dredge Do not burn	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed. 2.2 Formula: Na ₂ S 2.3 IMO/UN Designation: 4.2/1385 2.4 DOT ID No.: 1385 (anhydrous) 2.5 CAS Registry No.: 1313-82-2 2.6 NAERG Guide No.: 135 2.7 Standard Industrial Trade Classification: 52341
3. HEALTH HAZARDS	
3.1 Personal Protective Equipment: Goggles or face shield.	
3.2 Symptoms Following Exposure: Caustic action on skin and eyes. If ingested may liberate hydrogen sulfide in stomach.	
3.3 Treatment of Exposure: INGESTION: give water; induce vomiting; call a doctor. SKIN OR EYE CONTACT: wash with water for at least 15 min.	
3.4 TLV-TWA: Not listed.	
3.5 TLV-STEL: Not listed.	
3.6 TLV-Ceiling: Not listed.	
3.7 Toxicity by Ingestion: Grade 3; LD ₅₀ = 50-500 mg/kg (human)	
3.8 Toxicity by Inhalation: Currently not available.	
3.9 Chronic Toxicity: None	
3.10 Vapor (Gas) Irritant Characteristics: Non-volatile.	
3.11 Liquid or Solid Characteristics: Irritates skin and mucous membranes.	
3.12 Odor Threshold: Currently not available	
3.13 IDLH Value: Not listed.	
3.14 OSHA PEL-TWA: Not listed.	
3.15 OSHA PEL-STEL: Not listed.	
3.16 OSHA PEL-Ceiling: Not listed.	
3.17 EPA AEGL: Not listed	

4. FIRE HAZARDS

- 4.1 **Flash Point:**
Moderately flammable solid
- 4.2 **Flammable Limits in Air:** Not pertinent
- 4.3 **Fire Extinguishing Agents:** Water
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
- 4.5 **Special Hazards of Combustion Products:** Irritating sulfur dioxide is produced in fire.
- 4.6 **Behavior in Fire:** Not pertinent
- 4.7 **Auto Ignition Temperature:** Not pertinent
- 4.8 **Electrical Hazards:** Not pertinent
- 4.9 **Burning Rate:** Not pertinent
- 4.10 **Adiabatic Flame Temperature:** Currently not available
- 4.11 **Stoichiometric Air to Fuel Ratio:** 5.9 (calc.)
- 4.12 **Flame Temperature:** Currently not available
- 4.13 **Combustion Molar Ratio (Reactant to Product):** 2.0 (calc.)
- 4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction
- 5.2 **Reactivity with Common Materials:** No reaction
- 5.3 **Stability During Transport:** Stable
- 5.4 **Neutralizing Agents for Acids and Caustics:** Not pertinent
- 5.5 **Polymerization:** Not pertinent
- 5.6 **Inhibitor of Polymerization:** Not pertinent

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**
61 ppm/48 hr/bluegill, sunfish/TL_m/fresh water
- 6.2 **Waterfowl Toxicity:** Currently not available
- 6.3 **Biological Oxygen Demand (BOD):**
Currently not available
- 6.4 **Food Chain Concentration Potential:**
None
- 6.5 **GESAMP Hazard Profile:**
Bioaccumulation: 0
Damage to living resources: 2
Human Oral hazard: 1
Human Contact hazard: 0
Reduction of amenities: 0

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Crystals, 60-62%, plus water; fused chips
- 7.2 **Storage Temperature:** Ambient
- 7.3 **Inert Atmosphere:** No requirement
- 7.4 **Venting:** Open
- 7.5 **IMO Pollution Category:** B
- 7.6 **Ship Type:** 3
- 7.7 **Barge Hull Type:** Currently not available

8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Spontaneously Combustible
- 8.2 **49 CFR Class:** 4.2
- 8.3 **49 CFR Package Group:** II
- 8.4 **Marine Pollutant:** No
- 8.5 **NFPA Hazard Classification:**
- | Category | Classification |
|----------------------|----------------|
| Health Hazard (Blue) | 2 |
| Flammability (Red) | 1 |
| Instability (Yellow) | 0 |
- 8.6 **EPA Reportable Quantity:** Not listed.
- 8.7 **EPA Pollution Category:** Not listed.
- 8.8 **RCRA Waste Number:** Not listed
- 8.9 **EPA FWPCA List:** Not listed

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Solid
- 9.2 **Molecular Weight:** 78.4
- 9.3 **Boiling Point at 1 atm:** Very high
- 9.4 **Freezing Point:** Not pertinent
- 9.5 **Critical Temperature:** Not pertinent
- 9.6 **Critical Pressure:** Not pertinent
- 9.7 **Specific Gravity:** 1.856 at 20°C (solid)
- 9.8 **Liquid Surface Tension:** Not pertinent
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 9.10 **Vapor (Gas) Specific Gravity:** Not pertinent
- 9.11 **Ratio of Specific Heats of Vapor (Gas):** Not pertinent
- 9.12 **Latent Heat of Vaporization:** Not pertinent
- 9.13 **Heat of Combustion:** Not pertinent
- 9.14 **Heat of Decomposition:** Not pertinent
- 9.15 **Heat of Solution:** Not pertinent
- 9.16 **Heat of Polymerization:** Not pertinent
- 9.17 **Heat of Fusion:** 15.4 cal/g
- 9.18 **Limiting Value:** Currently not available
- 9.19 **Reid Vapor Pressure:** Currently not available

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T		N O T P E R T I N E N T

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
34	9.996		N O T		N O T		N O T
36	10.400		P E R T I N E N T		P E R T I N E N T		P E R T I N E N T
38	10.800						
40	11.200						
42	11.600						
44	12.000						
46	12.400						
48	12.800						
50	13.200						
52	13.600						
54	14.000						
56	14.400						
58	14.800						
60	15.200						
62	15.600						
64	16.000						
66	16.400						
68	16.800						
70	17.200						
72	17.600						
74	18.000						
76	18.400						
78	18.800						
80	19.200						
82	19.600						
84	20.000						