

## Safety Data Sheet Tetragard<sup>TM</sup>

SDS Number: 2795 Revision: October 4, 2021

### Section 1: IDENTIFICATION

1.1 Product Name: Tetragard<sup>TM</sup>

#### 1.2 Other Identification:

Chemical Family: Inorganic salt solution  
Formula: Na<sub>2</sub>S<sub>x</sub>

1.3 Recommended Use of Chemical: Cyanide assisted corrosion control for petroleum industry.

#### 1.4 Manufacturer:

Tessenderlo Kerley, Inc.  
2910 N. 44<sup>th</sup> Street, Suite 100  
Phoenix, Arizona 85018  
Information: (602) 889-8300

#### 1.5 Emergency Contact:

Tessenderlo Kerley, Inc. (800) 877-1737  
CHEMTREC (800) 424-9300 (Domestic)  
(703) 527-3887 (International)

### Section 2: HAZARD(S) IDENTIFICATION

2.1 Hazard Classification:	Health	Acute Toxicity Oral	Category 4
		Acute Toxicity Dermal	Category 4
		Acute Toxicity Inhalation	Category 4
		Skin Corrosion/Irritation	Category 1C
		Eye Damage/Irritation	Category 1
	Physical	None	

2.2 Signal Word: DANGER

#### 2.3 Hazard Statement(s):

Harmful if swallowed.  
Harmful in contact with skin.  
Harmful if inhaled.  
Causes severe skin burns and eye damage.  
Causes serious eye damage.



2.4 Symbol(s):

**2.5 Precautionary Statement(s):**

**If swallowed:** Rinse mouth. Do NOT induce vomiting. Immediately call a poison center/doctor/regional medical center.

**If on skin (or hair):** Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a poison center/doctor/regional medical center. Wash contaminated clothing before reuse.

**If inhaled:** Remove person to fresh air and keep comfortable for breathing. Immediately call a poison center/doctor/regional medical center.

**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/doctor/regional medical center.

Do not breathe gas/mist/vapors/spray.

Wash hands and face thoroughly after handling.

Wear neoprene rubber gloves/boots/suit/goggles and full-face mask.

Use only outdoors or in a well-ventilated area. Store locked up.

Do not eat, drink or smoke when using this product.

Dispose of contents/container to a chemical waste facility in accordance with local, state and federal regulations.

Do not allow release to aquatic waterways.

**2.6 Unclassified Hazard(s):**

Aquatic toxicity

**2.7 Unknown Toxicity Ingredient:**

None

**Section 3: COMPOSITION/INFORMATION on INGREDIENTS****3.1 Chemical Ingredients:** (See Section 8 for exposure guidelines)

Sodium polysulfide solution is a complex mixture of sodium polysulfide and sodium thiosulfate. These two salts account for 33 to 38% of the solution with the remaining percentage being water.

Chemical	Synonym Common Name	CAS No.	EINECS No.
Sodium polysulphide	Sodium polysulfide	1344-08-7	215-686-9
Sodium thiosulphate	Sodium thiosulfate	7772-98-7	231-867-5
Water	Water	7732-18-5	231-791-2

**Section 4: FIRST AID MEASURES****4.1 Symptoms/Effects:**

Acute: Eye contact may cause eye irritation and possible corneal damage. Skin contact may cause skin irritation. Ingestion may irritate the gastrointestinal tract.

Chronic: No known chronic effects.

- 4.2 Eyes:** Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart during irrigation to ensure thorough flushing of the entire area of the eye and lids. Get immediate medical attention.
- 4.3 Skin:** Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Continue rinsing. Get immediate medical attention.
- 4.4 Ingestion:** DO NOT INDUCE VOMITING. If victim is conscious, give 2 to 4 glasses of water. If vomiting does occur, continue to give fluids. Get immediate medical attention.
- 4.5 Inhalation:** Remove victim from contaminated atmosphere. If breathing is labored, administer Oxygen. If breathing has ceased, clear airway and start CPR. Get immediate medical attention.

## Section 5: FIRE FIGHTING MEASURES

**5.1 Flammable Properties:** (See Section 9 for additional flammable properties)

**NFPA:**            **Health - 3**      **Flammability - 0**      **Reactivity - 1**

**5.2 Extinguishing Media:**

**5.2.1 Suitable Extinguishing Media:** Not flammable, use media suitable for combustibles involved in fire.

**5.2.2 Unsuitable Extinguishing Media:** Not applicable

**5.3 Protection of Firefighters:**

**5.3.1 Specific Hazards Arising from the Chemical:**

**Physical Hazards:** Heating of this product will increase the evolution of Hydrogen sulfide vapors. This gas may form explosive mixtures with air.

**Chemical Hazards:** Contact with acidic materials or dilution with water will also increase the evolution of Hydrogen sulfide vapors.

**5.3.2 Protective Equipment and Precautions for Firefighters:**

Firefighters should wear self-contained breathing apparatus (SCBA) and full fire-fighting turnout gear. Keep containers/storage vessels in fire area cooled with water spray.

## Section 6: ACCIDENTAL RELEASE MEASURES

**6.1 Personal Precautions:** Use personal protective equipment specified in Section 8. Isolate the release area and deny entry to unnecessary, unprotected and untrained

personnel.

**6.2 Environmental Precautions:** Keep out of “waters of the United States” because of potential aquatic Toxicity (see Section 12).

**6.3 Methods of Containment:**

**Small Release:** Confine and absorb small releases with sand, earth or other inert absorbents.

**Large Release:** Shut off release if safe to do so. Dike spill area with earth, sand or other inert absorbents to prevent runoff into surface waterways (potential aquatic toxicity), storm drains and sewers.

**6.4 Method for Cleanup:**

**Small Release:** If Hydrogen sulfide vapors are present, spray spill area with weak (3-5%) solution of Hydrogen peroxide solution to mitigate the release of Hydrogen sulfide. Shovel up (non-sparking tools) spilled material and place in suitable container for disposal as a chemical waste.

**Large Release:** Recover as much of the spilled product as possible with air-operated diaphragm pump and hoses. Use recovered product as originally intended or dispose of as a chemical waste. Use non-sparking tools to shovel up remaining material and dispose of as a chemical waste. Treat remaining material as a small release.

**Section 7: HANDLING and STORAGE**

**7.1 Handling:** Avoid contact with skin and eyes. Use only in a well-ventilated area. Wash thoroughly after handling. Avoid breathing of vapors.

**7.2 Storage:** Store in well-ventilated areas. Do not store combustibles in the area of storage vessels. Keep away from any sources of heat or flame. Store totes and smaller containers out of direct sunlight at moderate temperatures (See Section 10.5 for materials of construction).

**Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1 Exposure Guidelines:**

Chemical	OSHA PELs		ACGIH TLVs	
	TWA	STEL	TWA	STEL
Hydrogen sulfide	None	20 ppm (Ceiling)	1 ppm	5 ppm
Sodium polysulfide	None	None	None	None
Sodium thiosulphate	None	None	None	None
Water	None	None	None	None

**8.2 Engineering Controls:** Use adequate exhaust ventilation to prevent inhalation of

product vapors. Keep eye wash/safety shower in areas where product is commonly handled.

### 8.3 Personal Protective Equipment (PPE):

- 8.3.1 Eye/Face Protection:** Chemical goggles and a full face shield.
- 8.3.2 Skin Protection:** Neoprene rubber gloves, boots and chemical suit should be worn to prevent contact with the liquid. Wash contaminated clothing prior to reuse.
- 8.3.3 Respiratory Protection:** Respiratory protection is based on potential for exposure to Hydrogen sulfide vapors. Self-contained breathing apparatus (SCBA) or supplied air respirator with full-face mask is recommended for product transfers.
- 8.3.4 Hygiene Considerations:** Common good industrial hygiene practices should be followed, such as washing thoroughly after handling and before eating or drinking.

## Section 9: PHYSICAL and CHEMICAL PROPERTIES

- 9.1 Appearance:** Ruby-red liquid.
- 9.2 Odor:** Possible rotten egg odor (hydrogen sulfide)
- 9.3 Odor Threshold** 4.7 ppb (hydrogen sulfide)
- 9.4 pH:** 10.5 to 12.5
- 9.5 Melting Point/Freezing Point:** 34°F (1.1°C) *Typical*
- 9.6 Boiling Point:** 113°C (235°F)
- 9.7 Flash Point:** Not determined
- 9.8 Evaporation Rate:** Not determined
- 9.9 Flammability:** Not applicable
- 9.10 Upper/Lower Flammability Limits:** Not applicable
- 9.11 Vapor Pressure:** None
- 9.12 Vapor Density:** Not determined
- 9.13 Relative Density:** 1.37 (11.4 lbs/gal)
- 9.14 Solubility:** Dissolves with possible precipitation of elemental sulfur.
- 9.15 Partition Coefficient:** Not applicable
- 9.16 Auto-ignition Temperature:** Not applicable
- 9.17 Decomposition Temperature:** Not determined
- 9.18 Viscosity:** Not determined

## Section 10: STABILITY and REACTIVITY

- 10.1 Reactivity:** See Sections 10.4.
- 10.2 Chemical Stability:** This product is stable under normal (ambient) temperature and pressure.
- 10.3 Possibility of Hazardous Reactions:** See Section 10.4.

<b>10.4 Conditions to Avoid:</b>	High heat or fire conditions or contact with acidic materials.
<b>10.5 Incompatible Materials:</b>	Strong oxidizers such as nitrates, nitrites or chlorates can cause explosive mixtures if heated to dryness. Acids, acidic materials or dilution with water will cause increased evolution of Hydrogen sulfide vapors, a highly toxic gas. <b>This product is not compatible with Zinc, Aluminum, Copper or their alloys (brass, bronze or galvanized metals).</b> These materials should not be used in product handling or storage systems.
<b>10.6 Hazardous Decomposition Products:</b>	Heating of this product will cause the evolution of Hydrogen sulfide vapors. Continued heating will also cause Oxides of Sulfur to be released.

#### Section 11: TOXICOLOGICAL INFORMATION

<b>11.1 Oral:</b>	Oral Rat, LD <sub>50</sub> : 1,020 mg/kg (sodium polysulfide)
<b>11.2 Dermal:</b>	Dermal Rat, LD <sub>50</sub> : 2,600 mg/kg 24 hr. exposure – severe (sodium polysulfide)
<b>11.3 Inhalation:</b>	No data available.
<b>11.4 Eyes:</b>	No data available.
<b>11.5 Chronic/Carcinogenicity:</b>	Not listed in NTP, IARC or by OSHA
<b>11.6 Teratology:</b>	No data available.
<b>11.7 Reproduction:</b>	No data available.
<b>11.8 Mutagenicity:</b>	No data available.

#### Section 12: ECOLOGICAL INFORMATION

<b>12.1 Ecotoxicity:</b>	No data available. However product high pH (alkalinity) may be detrimental to aquatic species.
<b>12.2 Persistence &amp; Degradability:</b>	No data available.
<b>12.3 Bioaccumulative Potential:</b>	This product is not bioaccumulative.
<b>12.4 Mobility in Soil:</b>	No data available.
<b>12.5 Other Adverse Effects:</b>	None

#### Section 13: DISPOSAL CONSIDERATIONS

Consult federal, state and local regulations for disposal requirements.

<b>Section 14: TRANSPORT INFORMATION</b>
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**14.1 Basic Shipping Description:**

<b>14.1.1 Proper Shipping Name:</b>	Corrosive liquid, basic, inorganic, n.o.s. (sodium polysulfide)
<b>14.1.2 Hazard Classes:</b>	8 (corrosive)
<b>14.1.3 Identification Number:</b>	UN3266
<b>14.1.4 Packing Group:</b>	II
<b>14.1.5 Hazardous Substance:</b>	No
<b>14.1.6 Marine Pollutant:</b>	No

**14.2 Additional Information:****14.2.1 Other DOT Requirements:**

<b>14.2.1.1 Reportable Quantity:</b>	No
<b>14.2.1.2 Placard(s):</b>	Corrosive
<b>14.2.1.3 Label(s):</b>	Corrosive

**14.2.2 USCG Classification:** Not determined

**14.2.3 International Transportation:**

<b>14.2.3.1 IMO:</b>	Corrosive liquid, basic, inorganic, n.o.s. (sodium polysulphide)
<b>14.2.3.2 IATA:</b>	Corrosive liquid, basic, inorganic, n.o.s. (sodium polysulphide)
<b>14.2.3.3 TDG (Canada):</b>	Corrosive liquid, basic, inorganic, n.o.s. (sodium polysulphide)
<b>14.2.3.4 ADR (Europe):</b>	Corrosive liquid, basic, inorganic, n.o.s. (sodium polysulphide)
<b>14.2.3.5 ADG (Australia):</b>	Corrosive liquid, basic, inorganic, n.o.s. (sodium polysulphide)

**14.2.4 Emergency Response Guide:** 154

**14.2.5 ERAP - Canada:** Not applicable

**14.2.6 Special Precautions:** Not applicable

<b>Section 15: REGULATORY INFORMATION</b>
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**15.1 U.S. Federal Regulations:**

<b>15.1.1 OSHA:</b>	This product is considered hazardous under the criteria of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200).
<b>15.1.2 TSCA:</b>	Product is contained in USEPA Toxic Substance Control Act Inventory.
<b>15.1.3 CERCLA:</b>	Reportable Quantity    No
<b>15.1.4 SARA Title III:</b>	

<b>15.1.4.1 Extremely Hazardous Substance (EHS):</b>	No
<b>15.1.4.2 Section 312 (Tier II) Ratings:</b>	Immediate (acute) Yes Fire No Sudden Release No Reactivity Yes Delayed (chronic) No
<b>15.1.4.3 Section 313 (FORM R):</b>	Not applicable
<b>15.1.5 RCRA:</b>	Possible D002, D003
<b>15.1.6 CAA (Hazardous Air Pollutant/HAP):</b>	No

**15.2 International Regulations:****15.2.1 Canada:**

<b>15.2.1.1 WHMIS:</b>	E, D1A
<b>15.2.1.2 DSL/NDSL:</b>	Listed in DSL, No. 5757

**15.3 State Regulations:**

<b>15.3.1 CA Proposition 65:</b>	Not applicable
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**Section 16: OTHER INFORMATION**

**REVISIONS:** This SDS was reformatted to comply with the new Hazard Communication Standard dated March 26, 2012, by the Regulatory Affairs Department of Tessengerlo Kerley, Inc. 2/9/2015  
Revised sections 2, 3, 6, 8-10, 14 and 15. 6/10/2016  
Revised Sections 1 and 2. 1/3/2020  
Revised logo. 10/4/2021

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