Safety Data Sheet
CaTs®

SDS Number: 2908 **Revision:** March 10, 2015

Section 1: IDENTIFICATION

1.1 Product Name: **CaTs®**

1.2 Other Identification:

Chemical Family: Inorganic salt solution
Formula: CaS_2O_3

1.3 Recommended Use of Chemical: Agricultural liquid fertilizer

1.4 Manufacturer: Tessenderlo Kerley Inc.
2255 N. 44th Street, Suite 300
Phoenix, Arizona 85008-3279
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 None
Physical None

2.2 Signal Word: Not applicable

2.3 Hazard Statement(s): Not applicable

2.4 Symbol(s): Not applicable

2.5 Precautionary Statement(s): Not applicable

2.6 Unclassified Hazard(s): None

2.7 Unknown Toxicity Ingredient: None

Section 3: COMPOSITION/INFORMATION on INGREDIENTS

3.1 Chemical Ingredients (See Section 8 for exposure guidelines)

Chemical	Synonym Common Name	CAS No.	EINECS No.	% by Wt.
Thiosulfuric acid ($H_2S_2O_3$), calcium salt	Calcium thiosulfate	10124-41-1	233-333-7	20 - 30
Water	Water	7732-18-5	231-791-2	70 - 80

Section 4: FIRST AID MEASURES

4.1 Symptoms/Effects:

Acute: Eye contact may cause eye irritation. Repeated or prolonged skin contact my 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. Obtain medical attention if irritation occurs.

4.3 Skin: Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Continue rinsing. Obtain medical attention if irritation occurs.

4.4 Ingestion: If victim is conscious, give 2 to 4 glasses of water and induce vomiting by touching finger to back of throat. Obtain 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. Obtain medical attention.

Section 5: FIRE FIGHTING MEASURES

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

Heating this product to dryness will cause the release of oxides of sulfur.

NFPA: Health - 0 Flammability - 0 Reactivity - 0

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: None known

5.3 Protection of Firefighters:

5.3.1 Specific Hazards Arising from the Chemical:

Physical Hazards: Heating (flames) of closed or sealed containers may cause violent rupture of container due to thermal expansion of compressed gases.

Chemical Hazards: Heating causes release of oxides of sulfur. Sulfur dioxide is highly irritating to the eyes, respiratory tract and moist skin.

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 hazard area and deny entry to unnecessary, untrained and unprotected personnel.

6.2 Environmental Precautions: Large quantities should be kept out of "waters of the United States" because of potential aquatic toxicity. This product is a non-hazardous liquid fertilizer solution designed to supply calcium and sulfur to crops.

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 Methods for Cleanup:

Small Release: Shovel up the absorbed material and place in drums for disposal as a chemical waste or recycle as a fertilizer as the original product was intended.

Large Release: Recover as much of spilled product as possible using portable pump and hoses. Use material as originally intended or dispose of as a chemical waste. Treat remaining product as small release (above).

6.5 Other Information: Not applicable

Section 7: HANDLING and STORAGE

7.1 Handling: Avoid contact with eyes. Use only in a well-ventilated area. Wash thoroughly after handling. Avoid prolonged or repeated contact with the skin.

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/C	TLV	STEL
Not applicable				

8.2 Engineering Controls: Keep eye wash/safety showers in areas where product is commonly used.

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 and apron should be worn to prevent repeated or prolonged contact with the liquid. Wash contaminated clothing prior to reuse.
8.3.3 Respiratory Protection:	None generally required. If conditions exist where mist may be generated, a NIOSH/MSHA approved mist respirator should be worn.
8.3.4 Hygiene Considerations:	There are no known hazards associated with this product when used as recommended, however 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:	Colorless liquid
9.2 Odor:	Concrete to no odor
9.3 Odor Threshold:	Not determined
9.4 pH:	6.5 – 8.0
9.5 Melting/Freezing Point:	Salt-out temperature 32°F (*Typical*)
9.6 Boiling Point:	212°F (100°C) with decomposition
9.7 Flash Point:	Not applicable
9.8 Evaporation Rate:	Not determined
9.9 Flammability:	Not applicable
9.10 Upper/Lower Flammability Limits:	Not applicable
9.11 Vapor Pressure:	37mm Hg @ 100°F
9.12 Vapor Density:	Same as water
9.13 Relative Density:	1.25 – 1.26 (10.4 – 10.5 lbs/gal) (*Typical*)
9.14 Solubility:	Complete
9.15 Partition Coefficient:	Data not available.
9.16 Auto-ignition Temperature:	Not applicable
9.17 Decomposition Temperature:	Data not available.
9.18 Viscosity:	2.11 cSt @ 25°C

Section 10: STABILITY and REACTIVITY

10.1 Reactivity: Avoid interaction with heat, flames, oxidizers or acids.

10.2 Chemical Reactivity: This is a stable product under normal (ambient) temperature and pressure conditions.

10.3 Possibility of Hazardous Reactions: Strong oxidizers such as nitrates, nitrites or chlorates can cause explosive mixtures if heated to dryness.

10.4 Conditions to Avoid: Heating above 120°F (49°C)

10.5 Incompatible Materials: Strong oxidizers (See Section 10.3). Acids will cause the release of sulfur dioxide, a severe respiratory hazard. CaTs® is not compatible with; carbon steel, copper or zinc or any of their alloys including brass, bronze or galvanized materials. These materials should not be utilized in handling systems or storage containers for this product.

10.6 Hazardous Decomposition Products: Calcium oxide and oxides of sulfur. Sulfur dioxide is a severe respiratory irritant.

Section 11: TOXICOLOGICAL INFORMATION

11.1 Oral: Oral Rat (female) LD_{50}: > 2,000 mg/Kg (OECD 425)

11.1.1: Interperitoneal Rat LD_{LO}: 573 mg/Kg

11.1.2: Intravenous Rat LD_{LO}: 344 mg/Kg

11.1.3: Intraperitoneal Mouse LD_{50}: 115 mg/Kg

11.2 Dermal: Data not available.

11.3 Inhalation: Data not available.

11.4 Eyes: Data not available.

11.5 Chronic/Carcinogenicity: No evidence available.

11.6 Teratology: Data not available.

11.7 Reproduction: Data not available.

11.8 Mutagenicity: Data not available.

Section 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity: Data not available.

12.2 Persistence & Degradability: Data not available.

12.3 Bioaccumulative Potential: Data not available.

12.4 Mobility in Soil: Data not available.

12.5 Other Adverse Effects: Data not available.

Section 13: DISPOSAL CONSIDERATIONS

Consult federal, state and local regulations for disposal requirements.

Section 14: TRANSPORT INFORMATION

14.1 Basic Shipping Description:

14.1.1 Proper Shipping Name: Calcium thiosulfate solution (*Not regulated by DOT*)
14.1.2 Hazard Classes: Not applicable
14.1.3 Identification Number: Not applicable
14.1.4 Packing Group: Not applicable
14.1.5 Hazardous Substance: No
14.1.6 Marine Pollutant: No

14.2 Additional Information:

14.2.1 Other DOT Requirements:

14.2.1.1 Reportable Quantity: Not applicable
14.2.1.2 Placard(s): Not applicable
14.2.1.3 Label(s): Not applicable

14.2.2 USCG Classification: Class 43, Misc. water solutions

14.2.3 International Transportation:

14.2.3.1 IMO: Non-hazardous under IMO regulations.
14.2.3.2 IATA: Non-hazardous under IATA regulations.
14.2.3.3 TDG (Canada): Non-hazardous under TDG regulations.
14.2.3.4 ADR (Europe): Non-hazardous under ADR regulations.
14.2.3.5 ADG (Australia): Non-hazardous under ADG regulations.

14.2.4 Emergency Response Guide: Not applicable

14.2.5 ERAP (Canada): Not applicable

14.2.6 Special Precautions: None

Section 15: REGULATORY INFORMATION

15.1 U.S. FEDERAL REGULATIONS

15.1.1 OSHA: This product meets the criteria of the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200).

15.1.2 TSCA: Product is contained in USEPA Toxic Substance Control Act Inventory.

15.1.3 CERCLA: Reportable Quantity – Not applicable

15.1.4 SARA Title III:

15.1.4.1 Extremely Hazardous Substance (EHS): Not listed

15.1.4.2 Section 312 (Tier II) Ratings:

Immediate (acute)	Yes
Fire	No
Sudden Release	No
Reactivity	No
Delayed (chronic)	No

15.1.4.3 Section 313 (FORM R): Not applicable

15.1.5 RCRA: Not applicable

15.1.6 CAA: Hazardous Air Pollutant (HAP) Not applicable

15.2 International Regulations:

15.2.1 Canada:

15.2.1.1 WHIMS: Not hazardous

15.2.2.2 DSL/NDSL: Listed in DSL

15.3 State Regulations:

15.3.1 CA Proposition 65: Not applicable

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 Tessenderlo Kerley, Inc. 7/15/2013

Revised multiple sections to correct typos and formatting. 3/10/2015.

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