SAFETY DATA SHEET

According to Federal Regulation 29 CFR 1910.1200

SECTION 1. Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: TRAMFLOC® 910

Type of product: Mixture

1.2. Other identification

	Chemical Family:	Inorganic salt solution
	Formula:	CaSx
	Reach Pre-Registration #:	05-2118202566-47-0000

Uses advised against: none

1.3. Details of the supplier of the safety data sheet

Company: Tramfloc, Inc.
6046 FM 2920 Rd. #615
Spring, TX 77379-2542
Telephone: 888-929-8973
Telefax: 480-383-6895
E-mail address: water@tramfloc.com

1.4 Emergency telephone number:

24-hour emergency number: 800-424-9300 CHEMTREC (CCN 20412), Outside US 703-527-3887

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

Hazard Classification:	Health	Acute Oral Toxicity Category 4
		Acute Dermal Toxicity Category 4
		Acute Inhalation Toxicity Category 4
		Skin Corrosion/Irritation Category 2
		Eye Damage/Irritation Category 2B
	Physical	None
	Signal Word:	Warning

2.2. Label elements

Hazard Statement(s):	Harmful is swallowed
	Harmful in contact with skin
	Harmful if inhaled

Causes skin irritation

Causes eye irritation

Symbol(s):

Precautionary Statement(s):

Wash thoroughly with soap and water after handling.

If swallowed: Get medical attention/contact Poison Control Center immediately.

Wear protective gloves/protective clothing when handling product.

If contact with the skin: Wash immediately with water for 15 minutes.

Avoid breathing product vapors/mist.

If inhaled: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes, remove contact lenses, if present and easy to do. Continue rinsing.

Use/store in cool, well ventilated areas.

Keep away from any sources of heat or flames.

Store totes or small containers out of direct sunlight.

Do not allow release to aquatic waterways.

2.3. Other hazards

Unclassified Hazard(s): Aquatic toxicity.

2.4 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.
Calcium polysulfide, CaSx	Lime sulfur, calcium sulfide	1344-81-6	215-709-2	24 - 29
Water	Water	7732-18-5	231-791-2	Remaining %

SECTION 4. First aid measures

4.1. Description of first aid measures

Acute: Eye contact may cause eye irritation. Repeated or prolonged skin contact may cause skin irritation. Ingestion may irritate the gastrointestinal tract.

Chronic:	No known chronic effects.
Eyes:	Immediately flush with large quantities of water for 15 minutes. Hold eyelids apart during irrigation to insure thorough flushing of the entire area of the eye and lids. Obtain medical attention if irritation occurs.
Skin:	Immediately flush with large quantities of water. Remove contaminated clothing under a safety shower. Obtain medical attention if irritation occurs.
Ingestion:	If victim is conscious, give 2 to 4 glasses of water and induce vomiting by touching finger to back of throat. Obtain immediate medical attention.
Inhalation:	Remove victim from contaminated atmosphere. If breathing is labored, administer oxygen. If breathing has ceased, clear airway and start CPR. Obtain immediate medical attention.

SECTION 5. Fire-fighting measures

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

NFPA: Health – 2 Flammability – 0 Reactivity - 0

Heating this product will evolve hydrogen sulfide vapors.

5.1. Extinguishing media

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

Unsuitable Extinguishing Media: Not applicable.

5.2. Special hazards arising from the substance or mixture

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 hydrogen sulfide vapors. Vapors are irritating to eyes, skin and respiratory tract.

5.3. Advice for fire-fighters

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, protective equipment and emergency procedures

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 and material for containment and cleaning up

Small Release: Confine and absorb small releases on 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).

Method for Cleanup:

Small Release: For small areas shovel up absorbed material and place in drums for disposal as a chemical waste.

Large Release: Recover as much of the spilled product using portable pump and hoses.

Treat remaining material as a small release (above).

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Avoid contact with eyes. Use only in a well ventilated area. Wash thoroughly after handling. Avoid prolonged or repeated breathing of vapors. Avoid prolonged or repeated contact with the skin.

7.2. Conditions for safe storage, including any incompatibilities.

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.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Chemical	OSHA		ACGIH	
	TWA	STEL	TLV	STEL
Hydrogen sulfide	20 ppm (Ceiling)	----	1 ppm	5 ppm

8.2. Exposure 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)

Eye/Face Protection:	Chemical goggles and a full face shield.
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.
Respiratory Protection:	Have self-contained breathing apparatus (SCBA), positive pressure, MSHA/NIOSH (approved or equivalent) available in case of spillage or equipment failure.
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. Information on basic physical and chemical properties

Appearance:	Ruby-red liquid
Odor:	Odor of rotten eggs
Odor Threshold:	4.7 ppb (hydrogen sulfide)
pH:	11.5 – 11.7, Typical
Melting Point/Freezing Point:	18 to 25°F (-7.7 to -3.9°C), Typical

Boiling Point:	Not determined
Flash Point:	Not applicable
Evaporation Rate:	Not determined
Flammability:	Not applicable
Upper/Lower Flammability Limits:	Not applicable
Vapor Pressure:	Not determined
Vapor Density:	Not determined
Relative Density:	1.27 (10.6 lbs/gal), Typical
Solubility:	Miscible
Partition Coefficient:	Data not available.
Auto-ignition Temperature:	Not applicable.
Decomposition Temperature:	Not determined.
Viscosity:	2.95 cSt @ 20°C, 2.5 cSt @ 30°C.

SECTION 10. Stability and reactivity

10.1. Reactivity

Strong oxidizers and acids.

10.2. Chemical stability

This is a stable product under conditions of ambient temperature and pressure.

10.3. Possibility of hazardous reactions

Interaction with strong oxidizers, acids or acidic materials.

10.4. Conditions to avoid

Interaction with strong oxidizers or acidic materials (evolution of hydrogen sulfide vapors).

10.5. Incompatible materials

Strong oxidizers can cause explosive mixtures if heated to dryness. Acids, acidic materials and dilution with water will cause the release of highly toxic hydrogen sulfide vapors.

10.6. Hazardous decomposition products

Hydrogen sulfide and oxides of sulfur.

SECTION 11. Toxicological information

Oral:	Oral Rat LD50: 820 mg/kg
Dermal:	Dermal Rabbit LD50: > 2,000 mg/kg
Inhalation:	INH-Rat LC50: 3.6 mg/L (4 hr. exposure)
Eye:	Data not available
Chronic/Carcinogenicity:	Not listed in NTP, IARC or by OSHA
Teratology:	Data not available
Reproduction:	Data not available
Mutagenicity:	Data not available

SECTION 12. Ecological information

12.1. Toxicity

Green Algae, EC50:	16.4 mg/l
Water Flea, EC50:	13.7 mg/l
Bluegill, LC50:	52.9 mg/l
Fathead Minnow, LC50:	42.9 mg/l
Rainbow Trout, LC50:	8.8mg/l

12.2. Persistence and degradability

No data available.

12.3. Bioaccumulative potential

This product is not bioaccumulative.

12.4. Mobility in soil

No data available

12.5. Other adverse effects

None

SECTION 13. Disposal considerations

Consult federal, state and local regulations for disposal regulations.

SECTION 14. Transport information

Basic Shipping Description:

Proper Shipping Name:	Calcium polysulfide solution *(Not regulated by DOT)*
Hazard Classes:	Not applicable
Identification Number:	Not applicable
Packing Group:	Not applicable
Hazardous Substance:	No
Marine Pollutant:	No

Additional Information:

Other DOT Requirements:

Reportable Quantity:	No
Placard(s):	Not applicable
Label(s):	Not applicable
USCG Classification:	Not determined.

International Transportation:

IMO: Environmentally hazardous substance, liquid, n.o.s. (calcium polysulfide)

IATA: Non-hazardous under IATA regulations.

TDG (Canada):	Not regulated – See US DOT Section 14.1.1.
ADR (Europe):	Environmentally hazardous substance, liquid, n.o.s. (calcium polysulfide)
ADG (Australia):	Environmentally hazardous substance, liquid, n.o.s. (calcium polysulfide)
Emergency Response Guide:	Not applicable
ERAP - Canada:	Not applicable
Special Precautions:	Not applicable

RR STCC 2899991

SECTION 15. Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

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

TSCA:	Product is contained in USEPA Toxic Substance Control Act Inventory.
CERCLA:	Reportable Quantity – Not applicable

SARA Title III:

Extremely Hazardous Substance (EHS): No

Section 312 (Tier II) Ratings: Immediate (acute) Yes

Fire	No
Sudden Release	No
Reactivity	No
Delayed (chronic)	No
Section 313 (FORM R):	Not applicable
RCRA:	Not Applicable

CAA (Hazardous Air Pollutant/HAP): Not Applicable

International Regulations:

Canada:

WHMIS:	Not determined
DSL/NDSL:	Listed in NDSL, Record No. 28636

State Regulations:

CA Proposition 65:	No

SECTION 16. Other information

The information contained herein is to the best of our knowledge and belief accurate. However, since the conditions of handling and use are beyond our control, Tramfloc, Inc. makes no guarantee for results obtained,

and assumes no responsibility for damages incurred by use of this product. It is the responsibility of the user to comply with all federal, state, and local laws and regulations.