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 names: TRAMFLOC® 724 and 725

Type of product: solution

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Processing aid for industrial applications.

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

Product identifier

Product name

Other means of identification

Product code

725

Synonyms

None

Recommended use of the chemical and restrictions on use

Recommended use [RU]

No information available

Uses advised against

No information available

SECTION 2. Hazards Identification

2.1. Classification of the substance or mixture

OSHA Regulatory Status

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

2.2. Label elements

EMERGENCY OVERVIEW

The product contains no substances which at their given concentration, are considered to be hazardous to health.

Other information

• Not applicable

SECTION 3. Composition/information on ingredients

3.1 Substances

Component	CAS-No	weight-%	TRADE SECRET
Poly dimethyl diallyl-ammonium chloride	26062-79-3	<50	*

*The exact percentage (concentration) of composition has been withheld as a trade secret

SECTION 4. First aid measures

4.1. Description of first aid measures

Eye contact:

Immediately flush with plenty of water for at least 15 minutes, holding eyelids apart to ensure flushing of the entire surface. Washing within one minute is essential to achieve maximum effectiveness. Seek medical attention if irritation should develop.

Skin contact:

Immediately flush skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. If skin irritation occurs: Get medical advice/attention.

Ingestion:

Do NOT induce vomiting. If vomiting should occur spontaneously, keep airway clear. Never give anything by mouth to an unconscious person. Get medical attention.

Inhalation:

Remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

4.2. Most important symptoms and effects, both acute and delayed

Acute effects

May result in mild irritation of a short-term nature for the skin and eyes.

Chronic effects

Prolonged or repeated skin exposure may cause dermatitis.

Indication of any immediate medical attention and special treatment needed

Note to physicians:

Treat symptomatically.

SECTION 5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media

This material is not expected to burn unless heated to dryness. Use extinguishing agent suitable for type of surrounding fire: Water, Foam, Carbon Dioxide (CO_2), Dry Chemical.

Extinguishing media which must not be used for safety reasons

No information available

5.2. Special hazards arising from the substance or mixture

Thermal decomposition (as may be experienced in a fire) may produce hydrogen chloride gas and/or may liberate oxides of nitrogen and carbon. Spills produce slippery surfaces and could present a physical hazard for firemen.

5.3. Advice for fire-fighters

Firefighting measures

Cool exposed containers with water spray after extinguishing fire.

Special protective equipment for firefighters

Full protective clothing and approved self-contained breathing apparatus required for firefighting personnel.

Explosion data

Sensitivity to Mechanical Impact

None.

Sensitivity to Static Discharge

None.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions:

Wear suitable protective clothing and gloves. Environmental precautions

6.2. Environmental precautions

Avoid runoff to waterways and sewers.

Methods and material for containment and cleaning up

6.3. Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. Dike to collect large liquid spills.

Clean up spill immediately using inert absorbent materials such as clays, sand, earth, or other commercially available dry sweeping compound. Spills of solution are extremely slippery so all residue must be removed promptly. If slippery conditions persist, apply additional dry sweeping compound. Following containment, large spills should be pumped into salvage tanks.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Keep container closed when not in use

Avoid contact with eyes, skin and clothing

Personal protective equipment comprising: suitable protective gloves, safety goggles and protective clothing.

Wash thoroughly with soap and water after handling.

Take off contaminated clothing and wash before reuse

Use only in well-ventilated areas

Use with adequate ventilation and employ respiratory protection where mist or spray may be generated.

Ensure that eyewash stations and safety showers are close to the workstation location.

7.2. Conditions for safe storage, including any incompatibilities.

Technical measures and storage conditions

Keep container tightly closed when not in use.

Store in a cool, well ventilated area

Store at 5 - 30° C (40 - 90° F) in original closed containers.

Avoid storage temperatures below freezing, since product may stratify.

Changes in temperature create air pressure changes inside drums.

Use proper precaution in unscrewing plug and/or opening container.

Incompatible products:

Strong oxidizers. Contact with copper, copper alloys, aluminum, mild steel or iron may cause corrosion/degradation.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Exposure Guidelines

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies

Appropriate engineering controls

Engineering controls

Local exhaust ventilation as necessary to maintain exposures to within applicable limits. Please refer to the ACGIH document, "Industrial Ventilation, A Manual of Recommended Practices", most recent edition, for details. If there are no applicable or established exposure limit requirements or guidelines, general ventilation should be sufficient.

Individual protection measures, such as personal protective equipment

Eye/face Protection	Wear chemical splash goggles and face shield (when eye and face contact is possible due to splashing or spraying of material).
Hand Protection	Rubber gloves.
Skin and body protection	While there is a possibility of skin contact, rubber gloves and boots impervious to liquid material should be worn.

Respiratory protection	Under most conditions, use adequate general ventilation and protective equipment since volatility and toxicity are very low. If significant vapors, mists or aerosols are present, use NIOSH approved respirator (ANSI Z882.1980) or equivalent, that is equipped with a dust/mist cartridge.
Other personal protection data	Avoid contamination of food, beverage or smoking materials. Eyewash fountains and safety showers must be easily accessible.
Hygiene measures	Handle in accordance with good industrial hygiene and safety practice.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	viscous liquid
Color	straw
Appearance	clear
Odor	amine
Odor threshold	No information available
Other information	
Density	9.34 - 9.67 lb/gal
Bulk Density	No information available
Explosive properties	No information available.
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	No information available
Volatile organic compounds (VOCs) content:	No information available
Percent Volatile, wt.%	50 %
pH	5.5-6.5
Melting/freezing	-2.55-0°C / 27.4 – 32°F
Boiling point / boiling range	> 100°C / > 212°F @ 760 mm Hg
Flash point	> 100°C / 212°F, closed cup
Evaporation rate	equal to water
Flammability (solid, gas)	not applicable
Upper flammability limit	not applicable
Lower flammability limit	not applicable
Vapor pressure	20-30 mm Hg @ 38°C
Vapor density	> 60 mm Hg
Specific gravity	1.12 – 1.16
Solubility (water)	completely; 100%

Solubility in other solvents	no information available
Partition coefficient: n-octanol/water	K_{ow} <10
Autoignition temperature	not applicable
Decomposition temperature	not applicable
Decomposition temperature	no information available
Kinematic viscosity	no information available
Dynamic viscosity	~10,000 cps

SECTION 10. Stability and reactivity

10.1. Reactivity

No data available.

10.2. Chemical stability

Stable under normal conditions of handling, use and transportation.

10.3. Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

None known

10.5. Incompatible materials

Strong oxidizers. Contact with copper, copper alloys, aluminum, mild steel or iron may cause corrosion/degradation.

10.6. Hazardous decomposition products

Thermal decomposition (as may be experienced in a fire) may produce hydrogen chloride gas and/or oxides of nitrogen and carbon.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Eye contact	None expected, but prolonged or repeated eye contact may result in mild irritation and redness of a short-term nature.
Skin contact	None expected, but prolonged or repeated skin contact may result in irritation of a short-term nature.
Ingestion	Effects of ingesting small amounts are negligible; ingesting large amounts may injure person slightly.
Inhalation	Not considered hazardous under normal conditions of use.
Acute toxicity	Oral LD_{50} > 5 g/kg (rat; estimated)
Dermal toxicity	LD_{50} > 5 g/kg (rat; estimated)
Inhalation LC_{50}	No information available
Symptoms	No information available.

	Delayed and immediate effects as well as chronic effects from short and long-term exposure
Skin corrosion/irritation	Testing conducted on rabbits using the Draize technique revealed the material to be mildly irritating to the skin.

Serious eye damage/eye irritation

Testing conducted using the Draize technique revealed that the material produces no corneal or iridial effects and only minor conjuctival effects.

Sensitization	No information available
Germ cell mutagenicity	Negative in the Ames test

Negative in the mouse micronucleus test

Carcinogenicity	This product does not contain any components in concentrations greater than or equal to 0.1% that are listed as known or suspected carcinogens by NTP, IARC, ACGIH, or OSHA.
Reproductive toxicity	No information available
STOT - Single exposure	No information available.
STOT - Repeated exposure	No information available
Aspiration hazard	No information available.
BOD_5	88,000 mg/l COD = 500,000 mg/l

Conclusions are drawn from sources other than direct testing.

SECTION 12. Ecological information

12.1. Toxicity

The effects of this product on aquatic organisms are rapidly and significantly reduced with the presence of dissolved organic carbon in the aquatic environment.

Acute toxicity to fish:	LC_{50} (96 hour): 6.51 mg/l in 180 mg/l $CaCO_3$– Fathead Minnow (Pimephales promelas)
Crustacea:	EC_{50} (48 hour): 0.23 mg/l in 100 mg/l $CaCO_3$ - Water flea (*Daphnia magna*)
Algae/aquatic plants	No information available
Persistence and degradability	No information available
Bioaccumulative potential	This product does not bio-accumulate.
Mobility	No information available
PBT and vPvB assessment	No information available
Other adverse effects	Other information

No other ecological studies have been carried out on this product.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Disposal of wastes:

Recycle, if possible. If not, dispose of the waste material in accordance with all applicable federal, state and local laws and regulations regarding health and pollution.

Contaminated packaging:

Since empty containers retain product residue, follow label warnings even after container is emptied.

SECTION 14. Transport information

DOT

Not regulated

ICAO/IATA

Not regulated

IMDG

Not regulated

SECTION 15. Regulatory information

International Inventories

TSCA (United States)

All ingredients are on the inventory or exempt from listing

Australia (AICS)

All ingredients are on the inventory or exempt from listing

Canada (DSL)

All ingredients are on the inventory or exempt from listing

Canada (NDSL)

None of the ingredients are on the inventory.

China (IECSC)

All ingredients are on the inventory or exempt from listing

EINECS (European Inventory of Existing Chemical Substances)

Some ingredients are not on the inventory.

ELINCS (European List of Notified Chemical Substances)

None of the ingredients are on the inventory.

ENCS (Japan)

All ingredients are on the inventory or exempt from listing

South Korea (KECL)

All ingredients are on the inventory or exempt from listing

Philippines (PICCS)

All ingredients are on the inventory or exempt from listing

Legend

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

AICS - Australian Inventory of Chemical Substances

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

IECSC - China Inventory of Existing Chemical Substances

EINECS/ELINCS - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

U.S. Federal Regulations

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

SARA 311/312 Hazard Categories

Acute health hazard

No

Chronic health hazard

No

Fire hazard

No

Sudden release of pressure hazard

No

Reactive hazard

No

SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

U.S. State Regulations

California Proposition 65

This product may contain traces of a substance(s) known to the State of California to cause cancer and/or reproductive toxicity.

U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

SECTION 16. Other information

NFPA Rating

Health - 1

Flammability - 0

Instability - 0

Special Hazard -

HMIS Rating

Health - 1

Flammability - 0

Physical hazard - 0

Personal protection - B