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® TG6000

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

Identified uses: Waste water treatment

Uses advised against: consumer use

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

Classification according to Regulation (EC) No. 1272/2008 [CLP]

This mixture is classified as not hazardous according to regulation (EC) 1272/2008 [GHS]

Classification according to EU Directives 67/548/EEC or 1999/45/EC

This mixture is not a hazardous substance or mixture according to EC-directives 67/548/EEC or 1999/45/EC

2.2. Label Elements

None.

2.3. Other hazards

Spills will produce extremely slippery surfaces in case of contact with water. Full text of each classification is presented in Section 16, including each hazard statement and R phrases.

2.4. Other Information

Not applicable.

SECTION 3. Composition/information on ingredients

3.1. Chemical description

Cationic acrylamide copolymer in aqueous dispersion.

3.2. Hazardous components

Name	Concentration	CAS#	EINCES#	DSD Classification	CLP Classification
Acetic acid	< 1%	64-19-7	200-580-7	C R34	Flam.Liq. 3, H226 Skin Corr. 1A, H314
Sodium nitrate	0.5 – 10%	7631-99-4	231-554-3	Xn R22	cute Tox. 4, H302

SECTION 4. First aid measures

4.1. Description of first aid measures

Eye Contact	Rinse thoroughly with plenty of water, also under the eyelids. If symptoms persist, call a physician.
Skin Contact	Wash with immediately with soap and plenty of water. Remove and wash contaminated clothing before re-use. If persistent irritation occurs, seek medical advice.
Inhalation	Move victim to fresh air.
Ingestion	Do not induce vomiting without medical advice. If conscious, wash out mouth and give one glass of water to drink. Seek medical attention.
Self-Protection of the First Aider	Use personal protection equipment.

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

Ingestion, gastrointestinal discomfort. Repeated ingestion of the product is considered highly unlikely route of exposure if working in adequate sanitary and hygiene conditions. Eyes, causes itching and redness.

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician – Treat symptomatically. The main product ingredients are water, cationic polymer (soluble in water) and salt. Any ingredient in significant proportion according to the criteria laid down in Regulation 1272/2008 is mentioned in paragraph 3.2 of this SDS.

SECTION 5. Fire-fighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water, water spray, dry powder, carbon dioxide (CO2), foam.

Unsuitable Extinguishing Media

None.

5.2. Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of Hcl, NH3, nitrogen oxides (NOx), carbon oxides (COx) and sulfur oxidesm (SOx).

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protection equipment. Avoid contact with skin, eyes or clothing. Use personal protective equipment. Spills will become extremely slippery.

6.2. Environmental precautions

Avoid the ground to be contaminated, natural water courses and wastewater drainage. If contamination occurs inform the corresponding authorities immediately.

6.3. Methods and material for containment and cleaning up

For small spills use inert absorbent materials and remove with a shovel and then flush the affected area with pressured water. For large spills, contain them with absorbent material and pump out the product to adequate containers; then flush the affected area with pressured water.

6.4. Reference to other sections

See Sections 8 & 13 for additional information.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment. Handle in accordance with good industrial hygiene and safety practice. Take off contaminated clothing and wash before reuse. Do not get in eyes, on skin or on clothing. Ensure you have a safety shower and eye wash fountain available.

7.2. Conditions for safe storage, including any incompatibilities

Minimum temperature	-5C
Maximum temperature	40C
Recommended temperature range	10 – 30C
Critical temperature range	-5 – 0C
Shelf life	9 months

Avoid extreme temperatures (below “Minimum temperature” and above “Maximum temperature”). Keep in a covered place, with the drum well closed and within the “Recommended temperature range”. On long storage periods at low temperatures (see “Critical temperature range”) the product may undergo an emulsion degradation process. If this occurs we recommend mixing the product and moving it to a warmer storage zone. Direct sunlight may provoke slight product coloration and/or colored spots on its surface, which does not mean any degradation. Tramfloc, Inc. guarantees the product quality for that time specified as “Shelf Life”. Longer storage periods do not mean the product is useless; it may just be necessary reprocessing the product (agitation, filtration, etc.), and may be higher doses to keep the performance as habitual. Only in case of a severe and irreversibly degradation we recommend disposing the product as a waste.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Does not contain substances above concentration limits fixing an occupational exposure limits.

8.2. Exposure controls

Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

Individual protection measures, such as personal protective equipment

Collective protection	Natural ventilation is adequate in open areas. Provide technical ventilation in confined spaces.
Eye/Face protection	Safety glasses with side-shields. If splashes are likely to occur, wear: Goggles.
Skin protection	Use latex or natural rubber gloves. Use a chemical resistant apron or full protective equipment depending on the handling level and contacts risks with the product and its dissolutions.
Respiratory protection	In exposure limits are likely to be exceeded or if irritation or other symptoms are

	experienced, NIOSH/MSHA or EN 136 approved respiratory protection should be worn.
General Hygiene	Wash your hands and any body area that has been exposed to the product before drinking, eating, using the services and end of the work period. Be aware of your exposure to the products used in the workplace and act responsibly to not contaminate other areas.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical State	Liquid	
Appearance	White, milky	
Odor	Salty	
Odor threshold	Perceptible only if you are very close to the product.	
Property	Values	Remarks/Method
pH	3.0 – 4.5	No information available
Melting point/freezing point	< 10C	No information available
Boiling point	>100C	No information available
Flash point	No information available.	No information available
Evaporation rate	No information available	No information available
Flammability (solid, gas)	No information available	No information available
Flammability Limit in Air		
- Upper flammability limit	No information available	
- Lower flammability limit	No information available	
Vapor pressure	No information available.	No information available
Vapor density	No information available	No information available
Specific gravity	No information available.	No information available
Water solubility	Dispersible.	No information available
Solubility in other solvents	No information available	No information available
Partition coefficient: n-octanol/water	No information available	No information available
Autoignition temperature	No information available	No information available
Decomposition temperature	>150C	No information available
Viscosity <2000 cp	No information available	
Explosive properties	No information available	
Oxidizing properties	No information available	

9.2. Other information

Water soluble. Solutions for concentrations above 3% become very viscous. Product solubility limit depend on dissolution conditions (concentration, pH, temperature, preparation system – agitation).

SECTION 10. Stability and reactivity

10.1. Reactivity

Stable under normal conditions. There may be a risk of water contamination of the product during handling and use. Water or water-based products will dissolve partially and imperfectly in the product and may cause it to be very difficult to use in

the application (gel formation, clogged pipes and pumps).

10.2. Chemical stability

Product is stable. Some slight separation may occur. It doesn't mean the product is damaged; you can easily recover it to its original state by agitation. By evaporation cycles effect – some condensation can form gel particles on the surface of the product and these, in light contact, can acquire a yellowish tone.

10.3. Possibility of hazardous reactions

No risk of explosion or polymerization or inflammation on contact with air, even at high temperatures (<100C) and in the presence of ignition sources.

10.4. Conditions to avoid

None for safety reasons.

10.5. Incompatible materials

Strong bases may provoke ammonia vapors.

10.6. Hazardous decomposition products

None under normal conditions. As a general rule, please avoid contact with strong chemical reagents such as acids, bases, reductors and oxidizers.

SECTION 11. Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information given is based on data on the components and the toxicology of similar products.

Eyes	Contact with eyes may cause irritation. Avoid contact with eyes.
Skin	May cause skin irritation and/or dermatitis. Avoid contact with skin.
Inhalation	Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Health injuries are not known or expected under normal use.

Numerical measures of toxicity - Product Information

Oral	Rats, LD50 > 7500 mg/kg
Dermal	Rabbit, LD50: not available

Component Information

Component	Oral LD50	Dermal LD50	Inhalation LC50
Acetic acid	=3310 mg/kg	=1060 mg/kg mg/kg (Rabbit)	11.4 mg/l (rh)
Sodium nitrate	1267 mg/kg/bw		

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization	No information available.
Mutagenic effects	No information available.
Reproductive Effects	No information available.
STOT - single exposure	No information available.
STOT - repeated exposure	No information available.

Chronic Toxicity	Avoid repeated exposure.
Aspiration Hazard	No information available.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.

SECTION 12. Ecological information

12.1. Toxicity

Acute toxicity (LC50, fish) CL50 (96h, Danio rerio): 1 – 10 mg/li. Data for a representative polymer. Acute toxicity (LC50, crustacea): EC50 (48h, Daphnia magna): 10 – 100 mg/li. Data for a representative polymer. Acute toxicity (LC50, algae): Algal inhibition tests are not appropriate. The flocculating characteristics of the product interfere directly in the test medium preventing homogenous distribution which invalidates the test.

Terrestrial ecotoxicity

No additional information

Microbiological activity in sewage treatments plants

At the habitual doses of this product, no harm is expected for the microorganisms present in secondary treatments in waste water treatment plants. If water is contaminated with less than 1% of product we do not expect an irreversibly effect on the primary and/or secondary water treatment. With further dilution this effect will be clearly reduced. Then the treatment will need to be adjusted to the new water characteristics. In case of spill follow the recommendation given in Section 13.

12.2. Persistence and degradability

Abiotic degradation: Hydrolysis > 70% (28 days, pH 6-8, OECD 111). It is equivalent to a rapid biodegradability in accordance with Directive 67/548/CE, Annex VI. Data for a representative polymer. COD: 201.000 ppm O2.

Other data

In aqueous solution this product may be eliminated by flocculation and precipitation. It is easily removed from the aqueous media in presence of suspended matter. This product does not contain halogen organic compounds.

12.3. Bioaccumulative potential

This is a high molecular weight, for this reason it will not permeate the membrane cell. There be be no bio-accumulation.

12.4. Mobility in soil

It may be easily removed by an abiotic process of adsorption.

12.5. Results of PBT and vPvB assessment

This product does not bioaccumulate.

12.6. Other adverse effects

No information available.

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Disposal Methods	Contain and dispose of waste according to local regulations.
Contaminated packaging	Empty containers should be taken for local recycling, recovery or waste disposal. Do not burn or use a cutting torch on the empty drum.

Waste codes/waste designations according to EWC/AVV: Not applicable.

Other information	Waste codes should be assigned by the user based on the application for which the product was used.

SECTION 14. Transport information

DOT	Not regulated

ICAO/IATA	Not regulated
IMDG/IMO	Not regulated

SECTION 15. Regulatory information

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

International Inventories

US TSCA	Complies
Australia (AICS)	Complies
Canada (DSL)	Complies
China (IECSC)	Complies
Europe (EINECS/ELINCS/NLP)	Complies
Japan (METI)	Complies
South Korea (KECL)	Complies
Philippines (PICCS)	Contact manufacturer
New Zealand	Complies

Legend

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

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

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

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

PICCS - Philippines Inventory of Chemicals and Chemical Substances

AICS - Australian Inventory of Chemical Substances

15.2 Chemical safety assessment

The product should be considered a mixture. Given its classification is not necessary to perform a chemical safety assessment thereof.

15.3 Additional information

Hazard class for water (Germany): WGK 2

Proper and professional use of this substance for drinking water treatment, rehabilitation of surface waters or waste water treatment is not restricted by this classification.

Authorization and/or restrictions on use:

This product does not contain substances subject to authorization (Regulation (EC) No. 1907/2006 (REACH), Annex XIV).

This product does not contain substances subject to restriction (Regulation (EC) No. 1907/2006 (REACH), Annex XVII).

Persistent Organic Pollutants

Not applicable.

Ozone-depleting substances (ODS) regulation (EC) 1005/2009

Not applicable

SECTION 16. Other information

NFPA

Health 1

Flammability 1

Instability 0

HMIS III

Health 1

Flammability 1

Physical Hazard 0

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Reason for revision SDS sections updated, 3, 15.

For industrial use only.

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.