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® 1040

Type of product: Mixture

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

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to paragraph (d) of Regulation 29 CFR 1910.1200

Eye Irrit. 2A;H319

2.2 Label elements.

Labeling according to paragraph (f) of Regulation 29 CFR 1910:1200

Hazard symbol(s):	None.
Signal word:	Warning.
Hazard statement(s):	H319 - Causes serious eye irritation
Precautionary Statement:	P280 - Wear eye protection/ face protection. P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337 + P313 - If eye irritation persists: Get medical advice/attention.

2.3 Other hazards

Aqueous solutions or powders that become wet render surfaces extremely slippery. For explanation of abbreviations see Section 16.

SECTION 3. Composition/information on ingredients

3.1 Substances

Not Applicable. This product is not a substance.

3.2 Mixtures

Hazardous Components

Sodium carbonate

Concentration/range	20-40%
CAS No.	497-19-8
Classification according to paragraph (d) of 29 CFR 1910.1200:	Eye Irritant 2A; H319

Citric acid

Concentration/range	< 20%
CAS No.	77-92-9
Classification according to paragraph (d) of 29 CFR 1910.1200:	Eye Irritant 2A; H319

Adipic acid

Concentration/range	< 20%
CAS No.	124-04-9
Classification according to paragraph *(d) of 29 CFR 1910.1200:*	Eye Irritant 2A; H319

SECTION 4. First aid measures

4.1 Description of first aid measures

Inhalation:

No hazards which require special first aid measures.

Skin Contact:

Wash off with soap and plenty of water. Get medical attention if irritation develops and persists.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. In case of persistent eye irritation, consult a physician.

Ingestion:

Rinse mouth with water. Do NOT induce vomiting. No hazards which require special first aid measures.

4.2 Most important symptoms and effects, both acute and delayed

Irritating to eyes.

4.3 Indication of any immediate medical attention and special treatment needed

None expected.

Other Information:

When wet renders surfaces extremely slippery.

SECTION 5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media:

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide (CO 2)

Unsuitable extinguisher media:

None

5.2 Special hazards arising from the substance or mixture

Hazardous decomposition products:

Thermal decomposition may produce: Carbon oxides (Cox), Nitrogen oxides (NOx), Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

5.3 Advice for fire fighters

Protective measures:

In the event of fire, wear self-contained breathing apparatus.

Other information:

When wet render surfaces extremely slippery.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment, and emergency procedures

Personal precautions:

Aqueous solutions or powders that become wet render surfaces extremely slippery.

Protective equipment:

Wear adequate personal protective equipment (see Section 8 Exposure Controls/Personal Protection).

Emergency procedures:

Keep people away from spill/leak.

6.2 Environmental precautions

As with all chemical products, do not flush into surface water.

6.3 Methods and material for containment and cleaning up

Small spills:

Do not flush with water. Clean up promptly by sweeping. Keep in suitable, closed container for disposal. After cleaning, flush away traces with water.

Large spills:

Do not flush with water. Clean up promptly by sweeping. Keep in suitable, closed container for disposal. After cleaning, flush away traces with water.

Residues:

Flush away with large quantities of water.

6.4 Reference to other sections

Section 7: Handling and storage; Section 8: Exposure controls/personal protection; Section 9: Physical and chemical properties; Section 13: Disposal considerations

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with eyes. Aqeous solutions or powders that become wet render surfaces extremely slippery. Use personal protective equipment.

7.2 Conditions for safe storage, including any incompatibilities

Keep in a dry, cool and well-ventilated place. Keep container closed when not in use. Incompatible with oxidizing agents. Incompatible with strong acids and bases.

7.3 Specific end use(s)

None.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits:

Adipic acid

ACGIH: 5 mg/m3 (8 hours)

8.2 Exposure controls

Appropriate engineering controls:

Natural ventilation is adequate in absence of dusts. Use local exhaust if dusting occurs.

Individual protection measures, such as personal protective equipment:

Eye/Face protection:	Safety glasses with side-shields, goggles, or face shield.
Skin protection:	Work clothes protecting arms, legs and body.
Hand protection:	PVC or other plastic material gloves.
Respirator protection:	No personal respiratory protective equipment normally required. Breathing apparatus only if aerosol or dust is formed.
Additional advice:	Handle in accordance with good industrial hygiene and safety practice.
Environmental exposure controls:	Do not allow uncontrolled discharge of product into the environment. Do not flush into surface water. No special precautions required.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance:	Solid, white

Odor:	None.
Odor Threshold:	Not applicable.
pH:	5 – 8 @5g/L
Melting point/freezing point:	>150°C
Initial boiling point and boiling range:	Not applicable.
Flash point:	Not applicable.
Evaporation rate:	Not applicable.
Flammability (solid, gas):	No data available.
Upper/lower flammability or explosive limits	Not applicable.
Vapour pressure:	Not applicable.
Vapour density:	Not applicable.
Relative density:	0.9-1.5
Solubility(ies):	Soluble in water.
Partition coefficient:	< 0
Auto ignition temperature:	Does not self-ignite (based on the chemical structure).
Decomposition temperature:	> 150°C
Viscosity:	See Technical Bulletin.
Explosive properties:	Not expected to be explosive based on the chemical.
Oxidizing properties:	Not expected to be oxidizing based on the chemical.

9.2 Other information

None

SECTION 10. Stability and reactivity

10.1 Reactivity

None known.

10. 2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Oxidizing agents may cause exothermic reactions.

10.4 Conditions to avoid

None known.

10.5 Incompatible materials

Incompatible with oxidizing agents. Incompatible with strong acids and bases.

10.6 Hazardous decomposition products

Thermal decomposition may produce: Carbon oxides (Cox), Nitrogen oxides (NOx), Hydrogen cyanide (hydrocyanic acid).

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Information on the product as supplied

Acute oral toxicity:	LD50/oral/rat > 2000 mg/kg.
Acute dermal toxicity:	LD50/dermal/rat > 2000 mg/kg.
Acute inhalation toxicity:	The product is not expected to be toxic by inhalation.
Skin corrosion/irritation:	Not irritating.
Serious eye damage/eye irritation:	Irritating to eyes.
Respiratory/skin sensitization:	Not sensitizing.
Mutagenicity:	Not mutagenic.
Carcinogenicity:	Not carcinogenic.
Reproductive toxicity:	Not toxic for reproduction.
STOT-single exposure:	No known effects.
STOT – repeated exposure:	No known effects.
Aspiration hazard:	No hazards resulting from the material as supplied.

Relevant information on the hazardous components:

Sodium carbonate

Acute oral toxicity:	LD50/oral/rat = 2800 mg/kg.
Acute dermal toxicity:	LD50/dermal/rat > 2000 mg/kg.
Acute inhalation toxicity:	LC50/inhalation/2h/rat = 2300 mg/m3.
Skin corrosion/irritation:	Not irritating. (OECD 404)
Serious eye damage/eye irritation:	Irritating to eyes.
Respiratory/skin sensitization:	Not sensitizing.
Mutagenicity:	Not mutagenic. (OECD 414)
Carcinogenicity:	Unlikely carcinogenic.
Reproductive toxicity:	Prenatal Development Toxicity Study (OECD 414) NOAEL/Maternal toxicity/rat >= 245 mg/kg/day NOAEL/Developmental toxicity/rat >= 245 mg/kg/day
STOT-single exposure:	No known effects.
STOT – repeated exposure:	No known effects.
Aspiration hazard:	No hazards resulting from the material as supplied.

Citric acid

Acute oral toxicity:	LD50/oral/rat = 5400 mg/kg.
Acute dermal toxicity:	LD50/dermal/rat > 2000 mg/kg.
Acute inhalation toxicity:	The product is not expected to be toxic by inhalation.

Skin corrosion/irritation:	Not irritating. (OECD 404) May cause skin irritation with susceptible persons.
Serious eye damage/eye irritation:	Irritating to eyes.
Respiratory/skin sensitization:	Not sensitizing.
Mutagenicity:	Not mutagenic. (OECD 414)
Carcinogenicity:	Did not show carcinogenic or mutagenic effects in animal experiments.
Reproductive toxicity:	Negative in the Ames Test (OECD 471). Negative in the Rodent Dominant Lethal Test (OECD 478). Not mutagenic. (OECD 475)
STOT-single exposure:	No known effects.
STOT – repeated exposure:	No known effects.
Aspiration hazard:	No hazards resulting from the material as supplied.

Adipic acid

Acute oral toxicity:	LD50/oral/rat > 2000 mg/kg.
Acute dermal toxicity:	LD50/dermal/rat > 2000 mg/kg.
Acute inhalation toxicity:	LC0/inhalation/4 h/rat > 7.7 mg/L.
Skin corrosion/irritation:	Slightly irritating.
Serious eye damage/eye irritation:	Not irritating. (OECD 405)
Respiratory/skin sensitization:	Not sensitizing.
Mutagenicity:	Negative in the In vitro Mammalian Cell Gene Mutation Test (OECD 476).
Carcinogenicity:	Not carcinogenic.
Reproductive toxicity:	Not toxic for reproduction.
STOT-single exposure:	No known effects.
STOT – repeated exposure:	No known effects.
Aspiration hazard:	No known effects.

SECTION 12. Ecological information

12.1 Toxicity

Information on the product as supplied:

Acute toxicity to fish:	LC50/Danio rerio/96 hours > 100 mg/L (Estimated) LC50/Oncorhynchus mykiss/96 hours > 100 mg/L. (Estimated)
Acute toxicity to invertebrates:	EC50/Daphnia magna/ 48 hours > 100 mg/L (Estimated).
Acute toxicity to algae:	IC50/Scenedesmus subspicatus/72 hours > 100 mg/L(Estimated).
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	No data available.

Toxicity to microorganisms:	No data available.
Effects on terrestrial organisms:	No know effects.
Sediment toxicity:	No data available.

Relevant information on the hazardous components

Sodium carbonate

Acute toxicity to fish:	LC50/Danio rerio/96 hours = 300 mg/L
Acute toxicity to invertebrates:	EC50/Ceriodaphnia/ 48 hours = 200 mg/L
Acute toxicity to algae:	No data available.
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	No data available.
Toxicity to microorganisms:	No data available.
Effects on terrestrial organisms:	No know effects.
Sediment toxicity:	No data available.

Citric acid

Acute toxicity to fish:	LC50/Leuciscus idus/48 hours = 440 mg/L
Acute toxicity to invertebrates:	EC50/Daphnia magna/24 hours = 1535 mg/L
Acute toxicity to algae:	NOEC/Scenedesmus quadricuada/192 hours = 425 mg/L
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	No data available.
Toxicity to microorganisms:	NOEC/Pseudomonas putida/16 hours > 10000 mg/L
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

Adipic acid

Acute toxicity to fish:	LC50/Danio rerio/96 hours > = 1000 mg/L
Acute toxicity to invertebrates:	EC50/Daphnia magna/48 hours = 46 mg/L (OECD 202)
Acute toxicity to algae:	IC50/Selenastrum capricornutum/72 hours = 59 mg/L (OECD 201)
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	NOEC/Daphnia magna/21 days = 6.3 mg/L (OECD 211)
Toxicity to microorganisms:	EC50/activated sludge/3 hours = 4747 mg/L (OECD 209)
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

12.2 Persistence and degradability

Degradation:	Not readily biodegradable.
Hydrolysis:	Does not hydrolyse.
Photolysis:	No data available.

Sodium carbonate

Degradation:	Not relevant (inorganic)
Hydrolysis:	No data available.
Photolysis:	No data available.

Citric acid

Degradation:	Readily biodegradable. 97 % / 28 days (OECD 301 B)
Hydrolysis:	No data available.
Photolysis:	No data available.

Adipic acid

Degradation:	Readily biodegradable. > 70% / 28 days (OECD 301 D)
Hydrolysis:	Does not hydrolyse.
Photolysis:	Half-life (indirect photolysis) = 2.9 days

12.3 Bioaccumulative potential

Information on the product as supplied:

Not bioaccumulating.

Partition co-efficient (Log Pow)	< 0
Bioconcentration factor (BCF)	No data available.

Relevant information on the hazardous components

Sodium carbonate

Partition co-efficient (Log Pow)	No data available.
Bioconcentration factor (BCF)	No data available.

Citirc acid

Partition co-efficient (Log Pow)	-1.72 @ 20°C
Bioconcentration factor (BCF)	3.2 L/kg

Adipic acid

Partition co-efficient (Log Pow)	0.093 @ 25°C, pH 3.3
Bioconcentration factor (BCF)	No data available.

12.4 Mobility in soil

Information on the product as supplied:

No data available.

Sodium carbonate

Koc:	No data available.

Citric acid

Koc:	No data available.

Adipic acid

Koc: No data available.

12.5 Other adverse effects

None.

None known.

SECTION 13. Disposal considerations

13.1 Waste from residues / unused products

Dispose of in accordance with local regulations. Can be landfilled or incinerated, when in compliance with local regulations.

Contaminated packaging:

Rinse empty containers with water and use the rinse-water to prepare the working solution. Dispose in accordance with local and national regulations. Can be landfilled or incinerated, when in compliance with local regulations.

Recycling:

The product and its packaging are not suitable for recycling.

SECTION 14. Transport information

Land transport (DOT)

Not classified.

Sea transport (IMDG)

Not classified.

Air transport (IATA)

Not classified.

SECTION 15. Regulatory information

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

Information on the product as supplied:

TSCA Chemical Substances Inventory:

All components of this product are either listed on the inventory or are exempt from listing.

US SARA Reporting Requirements:

SARA (Section 311/312) hazard class:

Not concerned.

RCRA status:

Not RCRA hazardous.

California Proposition 65 Information:

WARNING! This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm, Acrylamide.

Relevant information on the hazardous components:

Adipic acid

Clean Water Act

CWA-Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity:	5,000 lbs.
CERCLA Hazardous Substances List (40 CFR 302.4) Reportable Quantity:	5,000 lbs.

SECTION 16. Other information

NFPA and HMIS Ratings:

NFPA:

Health 1

Flammability 0

Instability 0

HMIS

Health 1

Flammability 0

Physical Hazard 0

PPE Code B

Key or legend to abbreviations and acronyms used in the safety data sheet:

None.

This SDS was prepared in accordance with the following:

U.S. Code of Federal Regulations 29 CFR 1910.1200

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.