# 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® 558

Type of product: Powder

Substance: Dialuminum Chloride Pentahydroxide

Synonyms: Aluminum Chlorhydrate

*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:*

Not Regulated, No Hazard

*2.2 Label Elements:*

Not Regulated, No Hazard

*2.3 Other Hazards:*

Not Regulated, No Hazard

## SECTION 3. COMPOSITION / INFORMATION ON INGREDIENTS

*3.1 Substances*

| | |
|---|---|
| Main Constituent: | Dialuminum Chloride Pentahydroxide |
| CAS No: | 12042-91-0 |
| EC number: | 234-933-1 |

| | |
|---|---|
| Purity | 100 % |
| Synonyms: | Aluminum Chlorohydrate |
| Other Constituent: | N/A |
| Impurities: | None |
| Additives: | None |

*3.2 Hazard Ingredients*

None

*3.3 Additional Information*

None

**SECTION 4. FIRST AID MEASURES**

*4.1 General Information:*

Immediate medical attention is not necessary.

*4.2 In Case Of Inhalation:*

Supply fresh air. Rinse mouth and nose with water. Contact a physician.

*4.3 In Case Of Skin Contact:*

Rinse with water. If symptoms persist, call a physician.

*4.4 In Case Of Eye Contact:*

Rinse with plenty of lukewarm water, also under the eyelids. If symptoms persist, call a physician.

*4.5 In Case Of Ingestion:*

Do NOT induce vomiting. Rinse mouth with water. Drink 1 or 2 glasses of water or milk. If symptoms persist, call a physician. Never give anything by mouth to an unconscious person.

*4.6 Self Protection of Direct*

Contact with the product should be prevented or minimized. Wear gloves in the First Aider: suitable material such as PVC, Neoprene or Natural rubber.

*4.7 Information to Physician:*

Symptoms:

| | |
|---|---|
| If Inhaled: | May cause mucous membrane irritation with cough and rhinitis. |
| If On Skin: | May cause mild irritation dryness and dermatitis. |
| If In Eyes: | May cause redness, conjunctivitis and short term mild irritation. |

| | |
|---|---|
| If Swallowed: | May cause burning pain in mouth and throat. |
| Hazards: | See Section 4.6 |
| Treatment: | See Sections 4.2 – 4.5 |

## SECTION 5. FIRE FIGHTING MEASURES

*5.1 Suitable extinguishing media:*

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

*5.2 Extinguishing Media Which Must Not Be Used for Safety Reasons:*

None.

*5.3 Special Exposure Hazards Arising from the Substance Itself, Combustion Products, Resulting Gases:*

Hydrogen chloride may be released when heating above the decomposition temperature.

*5.4 Special Protective Equipment for Fire Fighters:*

In the event of fire, wear self-contained breathing apparatus. Fire fighters must wear fire resistant personnel protective equipment

*5.5 Additional Information*

None

## SECTION 6. ACCIDENTAL RELEASE MEASURES

*6.1 Personal Precautions:*

Refer to protective measures listed in section “Section 7. Handling and Storage”. Wear protective suit and boots. If aerosols or mist are formed, use half mask with combination filter B/P2.

*6.2 Environmental Precautions:*

Cover the drains to prevent the product from entering the environment. If theproduct contaminates rivers and lakes or drains inform respective authorities.

*6.3 Methods for Cleaning Up:*

Contain spills in dyke or use absorptive barriers. Remove larger spills using a vacuum truck. Must be disposed of in accordance with local and national regulations.

*6.4 Additional Information:*

Product is water-soluble and compatible with water treatment plants. Product reacts with soaps forming a hydroxide gel.

## SECTION 7. HANDLING AND STORAGE

*7.1 Handling:*

The work place and work methods shall be organized in such a way that direct contact with the product is prevented or minimized.

Protective Measures:

Wear gloves in a suitable material such as PVC, Neoprene or Natural rubber. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also consider the specific local conditions under which the product is used, such as the danger of cuts, abrasion and the contact time.

Tightly fitted safety goggles must be worn.

Prevention of Aerosol Material should be transferred in ways that do not create dust.

Dust Generation:

*7.2 Storage:*

Product should be stored in dry conditions above freezing and below high temperatures (not >60°C). Protect from moisture.

Technical Measures:

Avoid incompatible materials including non acid-proof metals such as aluminum, copper and iron, bases, unalloyed steel and galvanized surfaces.

Packaging Materials:

Plastic (PE, PP, PVC), fiberglass-reinforced polyester, epoxy-coated concrete and titanium. High density PE is recommended.

*7.3 Specific End Use:*

This material is used as a water treatment coagulant. When used in these applications, the product should be handled as described above to minimize worker exposure to lungs, eyes and skin.

## SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

*8.1 Exposure Limit Values:*

Occupational exposure limit is 2mg/m3 as Aluminum for soluble Aluminum compounds (OSHA TLV-TLW, ACGIH TLV-TLW, EH40, EU OEL, AGW).

*8.2 Exposure Controls*

*8.2.1 Occupational Exposure Controls*

Technical Measures to Material transfer should be done under conditions of local exhaust ventilation to avoid breathing dust.

Personal Protective Equipment

Respiratory Protection:

Dust mask. In absence of local exhaust ventilation, approved respirators are recommended.

Hand Protection:

Wear gloves in a suitable material such as PVC, Neoprene or Natural rubber.

Eye Protection:

Tightly fitting safety goggles must be worn.

Skin Protection:

Skin should be covered by clothing at a minimum. Avoid excessive skin contact.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

*9.1 Appearance*

| | |
|---|---|
| Physical State: | Solution |
| Color: | White to light yellow powder |
| Odor: | Slight, characteristic |

*9.2 Safety Relevant Basic Data*

| | |
|---|---|
| pH (20 °C): | Approximately 4 in a 15% aqueous solution. |
| Melting point/range (°C): | Not applicable. |
| Boiling point/range (°C): | N/A |
| Flash point (°C): | None, product is not flammable. |
| Ignition temperature (°C): | None, product is not flammable. |
| Vapor Pressure (kPa): | N/A |
| Density (g/cm3): | N/A |
| Water Solubility (20 °C in g/l): | Fully soluble |
| Viscosity, dynamic (mPa s): | N/A |

## SECTION 10. STABILITY AND REACTIVITY

*10.1 Conditions to Avoid:*

Excessive heating after water evaporation for long periods of time can result in the evolution of HCl.

*10.2 Materials to Avoid:*

Will react with caustics to form aluminum hydroxides. Can corrode ordinary grades of steel.

*10.3 Hazardous Decomposition Products:*

HCl can be evolved during high temperature heating for extended periods of time.

## SECTION 11. TOXICOLOGICAL INFORMATION

Product is not classified under either the Dangerous Substance Directive or GHS/CLP Regulation.

*11.2 Acute toxicity*

Oral:

Not classified. Rat ingestion study, OECD 401, LD50 (rat) indicates > 2000 mg/kg.

Dermal:

Not classified. Rat dermal toxicity test, OECD 402, LD50 (rat) >2000 mg/kg body weight.

Inhalative:

Irritant or Corrosive Effects

Primary Irritation to Skin:

Not classified. Negative results rabbit skin, OECD 404.

Irritation to Eyes:

Not classified. Negative results rabbit eye, OECD 405.

Sensitization

Not classified. Negative result for Aluminum Hydroxy Chloride, CAS 1327-41-9, read across.

Specific Target Organ Toxicity (STOT)

Not classified. No STOT identified in animal studies. Human effects can be related to systemic toxicity.

Repeated Dose Toxicity

Not classified. Read across from chronic (1 year) toxicity study (oral, rat) with Al Citrate, OECD 426 and OECD 452.

Read across from short term repeat dose toxicity study (rat) with Aluminum Hydroxy Chloride, CAS 1327-41-9.

Carcinogenicity

Not classified. No studies; none expected.

Mutagenicity/Genotoxicity

Not classified. Negative results for in-vitro mutagenicity testing.

Toxicity for Reproduction

Not classified. Read across from Aluminum Hydroxy Chloride reproductive / developmental toxicity screening test. NOAEL 1000 mg/kg/day (equivalent to 90 mg/kg bw/day Al3+) and Aluminum Citrate one year developmental and chronic neurotoxicity study (oral, rat).

## SECTION 12. ECOLOGICAL INFORMATION

*12.1 Ecotoxicity*

Not classified. Zebra fish LC50 (96h) 100 – 500 mg/l (OECD 203), Daphnia Magna EC50 (48h) 397mg/l, EC50 (bacteria) > 1000 mg/l Fermentation tube test.

*12.2 Mobility*

Not classified based on rapid hydrolysis and precipitation.

*12.3 Persistence and Degradability*

Inorganic product, not degradable. Cannot be eliminated from water by biological purification processes.

*12.4 Results of PBT Assessment*

Substance is not toxic.

## SECTION 13. DISPOSAL CONSIDERATIONS

*13.1 Appropriate Disposal / Product:*

Must be disposed of in accordance with local and national regulations.

*13.2 Waste Codes / Waste Designations According to EWC/AVV/U.S. EPA:*

Not applicable; material is not a hazardous waste.

*13.3 Appropriate Packaging:*

Follow recommendations according to method of disposal and specific disposal facility.

*13.4 Additional Information:*

None.

## SECTION 14. TRANSPORT INFORMATION

*14.1 Land transport (ADR/RID and GGVS/GGVE)*

Not restricted.

This is not a hazardous material for transportation as defined by USA Dept. of Transportation.

*14.2 Maritime transport (IMDG-Code/GGVSea)*

Not restricted. Not a marine pollutant.

*14.3 Air transport (ICAO-TI and IATA/DGR)*

Not restricted.

## SECTION 15. REGULATORY INFORMATION

*15.1 EU Regulations*

Not classified.

Restrictions on Use: None known

*15.2 National Regulations*

Germany

Wassergefahrdungsklasse (water hazard class): not a hazard.

United States

Coagulant for pool treatment No known regulations

U.S.A. HMIS: Health Hazard: 2 Fire Hazard: 0 Physical Hazard: 0 Personal Protection: B

U.S.A. NFPA: Health: 2 Fire: 0 Reactivity: 0

Other Countries

This product is regulated in Japan and Korea.

**SECTION 16. OTHER INFORMATION**

New SDS edition: 21-DEC, 2016

Previous edition: N/A

Changes from previous issue date are due to: New

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.