**SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

SDS REVISION #: 1

PRODUCT IDENTIFIER: LiquiFloc 512AE

OTHER IDENTIFIERS: N/A

CHEMICAL FORMULA: N/A

RELEVANT USES: Water treatment chemical

DISTRIBUTED BY: Chemstream, Inc.
511 Railroad Ave
Homer City, PA 15748

PHONE NUMBERS: Business – (724) 915-8388 (business hours)
CHEMTREC - (800) 424-9300 (transportation emergencies)

SECTION 2 - HAZARDS IDENTIFICATION**GHS CLASSIFICATION**

Eye irritant (Category 2); Causes serious eye irritation

SIGNAL WORD

Warning

HAZARD STATEMENTS

H319: Causes serious eye irritation

PRECAUTIONARY STATEMENTS**Prevention**

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection

Response

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.

P362: Take off contaminated clothing.

Disposal

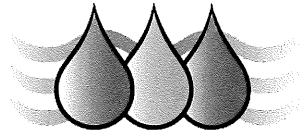
P501: Dispose of contents/container as special waste in compliance with local and national regulations

HAZARDS NOT OTHERWISE CLASSIFIED

Advice: Solutions extremely slippery when spilled

Inhalation: Avoid breathing vapors or mist





Potential environmental effects; This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCES/MIXTURES

Anionic polyacrylamide in water-in-oil emulsion

Chemical Name	CAS No.	Concentration (%)
Distillates (petroleum), hydrotreated light	64742-47-8	20 - 24
Alcohols, C12-16, ethoxylated	68551-12-2	0 - 2.5
Alcohols, C10-16, ethoxylated	68002-97-1	0 - 2.5
Alcohols, C12-14, ethoxylated	68439-50-9	0 - 2.5

Components listed above that have a zero minimum and a common maximum range are interchangeably used components based on availability. Only one of these components is contained in the product up to the maximum amount noted.

SECTION 4 - FIRST AID MEASURES

GENERAL ADVICE

Show this safety data sheet to the doctor in attendance

IN CASE OF EYE CONTACT

Immediately flush with large amounts of water for at least 15 minutes, lifting upper and lower lids occasionally. Remove contact lenses, if present and easy to do. Get immediate medical attention.

IN CASE OF SKIN CONTACT

Immediately flush exposed area with water for at least 15 minutes. Remove contaminated clothing and launder before re-use. If a person feels unwell or symptoms of skin irritation appear, consult a physician.

IF SWALLOWED

Rinse mouth with water. Call a poison control center or doctor immediately. DO NOT induce vomiting unless directed to do so by a physician or poison control center.

IF INHALED

Move to fresh air. If breathing is difficult, medical advice is required.

Most important symptoms and effects, both acute and delayed

**SECTION 5 - FIRE FIGHTING MEASURES****EXTINGUISHING MEDIA**

Water spray, dry chemical, carbon dioxide, alcohol-resistant foam

UNSUITABLE EXTINGUISHING MEDIA

Do not use a solid water stream as it may scatter and spread fire. Solid water stream may be ineffective

PROTECTION OF FIREFIGHTERS

Wear self-contained breathing apparatus. Use NIOSH/MSHA approved respiratory protection

FURTHER INFORMATION

In the event of fire, cool tanks with water spray

SECTION 6 - ACCIDENTAL RELEASE MEASURES**PRECAUTIONS, PROTECTIVE EQUIPMENT & EMERGENCY PROCEDURES**

For personal protection see SDS section 8. Avoid contact with skin, eyes, and clothing. Where the exposure level is not known, wear approved, positive pressure, self-contained respirator. Where the exposure level is known, wear approved respirator suitable for the level of exposure.

ENVIRONMENTAL PRECAUTIONS

Prevent leaks from entering drains and ditches that lead to natural waterways

METHODS AND MATERIALS FOR CONTAINMENT AND CLEAN UP

Sweep up to prevent slipping hazard. Soak up with inert absorbent material. Shovel into suitable container for disposal. After cleaning, flush away traces with water. Use detergent if needed.

ADDITIONAL ADVICE

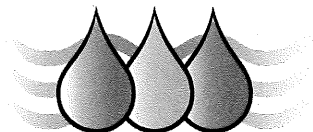
Local authorities should be advised if significant spillages cannot be contained

SECTION 7 - HANDLING AND STORAGE**HANDLING**

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

STORAGE

Do not freeze. Store at room temperature in the original container. Flashpoint determination was performed using a Pensky Martens type closed cup method. The method indicates a flash point greater than 93.3C (200F). Although there was not flashpoint detected below 93.3C (200F) some flammable vapours were evolved during the test as evidenced by the



enlargement of the flame. Therefore caution should be exercised during storage and handling. To avoid product degradation and equipment corrosion, do not store in iron, copper or aluminum containers or equipment. Avoid strong oxidizing agents.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS No.	Value	Form of exposure	Control parameters	Update	Basis
Distillates (petroleum), hydrotreated light	64742-47-8		Vapour	197 ppm 1,200 mg/m3		
		TWA		200 mg/m3	2006-11-29	CA BC OEL

ENGINEERING CONTROLS

Avoid contact with skin and eyes. Do not breathe vapors or aerosols. Do not eat, drink or smoke when using this product. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation. Keep away from tobacco products. Keep away from food and drink. Wash hands before breaks and immediately after handling product.

EYE / FACE PROTECTION

Tightly fitting safety goggles.

SKIN PROTECTION

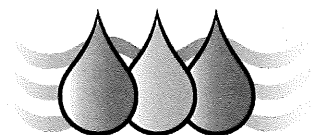
Wear impervious gloves. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion and the contact time. Wear chemical resistant protective clothing. Chemical resistant boots. Glove material nitrile rubber.

RESPIRATORY PROTECTION

Where exposures are below the established exposure limit, no respiratory protection is required. Where exposure exceeds the established exposure limit, use respiratory protection recommended for the material and level of exposure. Where respiratory protection is required based on use and conditions, NIOSH approved respirators should be used.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: viscous liquid, white
Odor: Sulphur dioxide
pH: 4-6
Initial Boiling Point: Boiling point/boiling range ca. 212° F
Flash Point: >212° F (Pensky-Martens)
Evaporation Rate: No data available Similar to water



Upper Explosion Limit:	Unavailable
Lower Explosion Limit:	Unavailable
Vapor Pressure:	Unavailable
Vapor Density:	Unavailable
Relative Density:	ca. 1.0 g/cm ³
Solubility in Water:	dispersible
Volatile %:	>60
VOC %:	nil
Autoignition Temperature:	Unavailable
Decomposition Temperature:	Unavailable
Viscosity, Kinematic	> 20.5 mm ² /s

SECTION 10 - STABILITY AND REACTIVITY

REACTIVITY**STABILITY (conditions to avoid)**

Stable under normal conditions of 70° F (21° C) and 14.7 psig (760 mm Hg).

POSSIBILITY OF HAZARDOUS REACTIONS

Hazardous polymerization does not occur

CONDITIONS TO AVOID

Stable under recommended storage conditions

INCOMPATIBLE MATERIALS

Strong oxidizing agents

HAZARDOUS DECOMPOSITION PRODUCTS

Oxides of nitrogen, ammonia, carbon dioxide, carbon monoxide

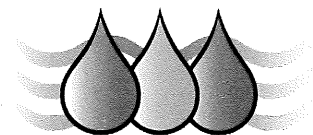
DECOMPOSITION

No data available

SECTION 11 - TOXICOLOGICAL INFORMATION

INFORMATION ON TOXICOLOGICAL EFFECTS

Acute oral toxicity	Remarks: estimated LD50 Rat >5,000 mg/kg
Acute oral toxicity	Distillates (petroleum), hydrotreated light: LD50 Rat >5,000 mg/kg
Acute inhalation toxicity	Remarks: estimated LC50 Rat, 4 hour, > 20 mg/L
Acute inhalation toxicity	Distillates (petroleum), hydrotreated light: LC50 Rat, 4 hour, 5.2 mg/L
Acute dermal toxicity	Remarks: estimated LD50 Rabbit, > 2,000 mg/kg
Acute dermal toxicity	Distillates (petroleum), hydrotreated light: LD50 Rabbit, >2,000 mg/kg



Skin corrosion/irritation	OECD Test Guideline 439/Read-across (Analogy). Conclusion: No skin irritation
Serious eye damage/eye	Conclusion: causes serious eye irritation
Skin sensitisation	Conclusion: not sensitizing
Skin sensitization	Distillates (petroleum), hydrotreated light: Conclusion – this substance is not classified as a sensitizer
Genotoxicity in vitro	Distillates (petroleum), hydrotreated light: Conclusion not mutagenic
Carcinogenicity	Distillates (petroleum), hydrotreated light: Not classified by IARC or NTP.
Toxicity for reproduction	Conclusion: Based on available data, the classification criteria are not met. Distillates (petroleum), hydrotreated light: Conclusion did not show teratogenic effects in animal experiments.
Aspiration toxicity	No aspiration toxicity classification

SECTION 12 - ECOLOGICAL INFORMATION

AQUATIC TOXICITY

Ecotoxicological information provided is based on a structurally or compositionally similar product. This material is not classified as dangerous for the environment.

Acute toxicity

48-hr. EC₅₀ (*daphnia magna* or water flea)/OECD Test Guideline 202
– > 100 mg/L

96-hr. LC₅₀ (*Branchydanio rerio* or zebra fish)/Immobilization/OECD Test
Guideline 203 – > 100 mg/L

96-hr. LC₅₀ (*Oncorhynchus mykiss* or rainbow trout)/Immobilization/OECD Test
Guideline 203 – > 100 mg/L

72-hr. IC₅₀ (*Selenastrum capricornutum* or green algae)/Growth inhibition/OECD
Test Guideline 201: - > 100 mg/L

TOXICITY TO OTHER ORGANISMS

No data available

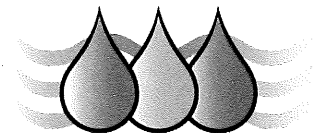
PERSISTENCE AND BIODEGRADABILITY

Biological degradability: CO₂ Test/OECD Test Guideline 301B: Not readily biodegradable.

BIOACCUMULATIVE POTENTIAL

Bioaccumulation is unlikely because of the high molecular weight of the polymer; diffusion through biological membranes is very small.

Partition coefficient: n-octanol/water: Not applicable

**MOBILITY IN SOIL**Water solubility: dispersible
Surface tension: not determined**OTHER ADVERSE EFFECTS**

No data available

SECTION 13 - DISPOSAL CONSIDERATIONS**PRODUCT**

Recycling, recovery and reuse of materials is recommended if permitted by regulations. If recycling is not practicable, dispose of in compliance with local regulations. Incineration is recommended

EPA Hazardous Waste – No

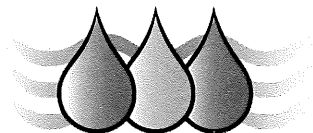
CONTAMINATED PACKAGING

Dispose of in compliance with local and national regulations.

SECTION 14 - TRANSPORT INFORMATION

UN Number: N/A

Land Transport Not classified as dangerous in the meaning of transport regulations
Store between 5-30C, Protect from frost, keep out of direct sunlight**Sea Transport** Not classified as dangerous in the meaning of transport regulations
Store between 5-30C, Protect from frost, keep out of direct sunlight**Air Transport** Not classified as dangerous in the meaning of transport regulations
Store between 5-30C, Protect from frost, keep out of direct sunlight**SECTION 15 - REGULATORY INFORMATION****SARA TITLE III SECTION 311 CATEGORIES**Immediate (Acute) Health Effects: Yes
Delated (Chronic) Health Effects: No
Fire Hazard: No
Sudden Release of Pressure Hazard: No
Reactivity Hazard: No**SARA 302 Extremely Hazardous Substances**No chemicals in this material are subject to the reporting requirements of SARA Title III,
Section 302.
None Present ()

**SARA 313 – Specific Toxic Chemical Listings**

This product does not contain any components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

None Present ()

CALIFORNIA PROPOSITION 65

Acrylamide (79-06-1) = < 0.05%

Remarks: this product contains a chemical or chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

OTHER REGULATIONS

None

NOTIFICATION STATUS

-All components of this product are included in the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.

-All components of this product are included in the United States TSCA Chemical Inventory or are not required to be listed on the United States TSCA Chemical Inventory

-All components of this product are included in the Canada Domestic Substance List (DSL) or are not required to be listed on the Canada Domestic Substance List (DSL).

-All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on the Australian Inventory of Chemical Substances (AICS).

-All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

All components of this product are included on the Taiwan Toxic Chemical Substances Control Act Inventory.

-All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese (ENCS) inventory

-All components of this product are included on the Korean (ECL) inventory or are not required to be listed on the Korean (ECL) inventory

-All components of this product are included on the Phillipine (PICCS) inventory or are not required to be listed on the Phillipine (PICCS) inventory

-All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese (ENCS) inventory

-All components of this product are NOT included on the New Zealand Inventory of Chemical Substances

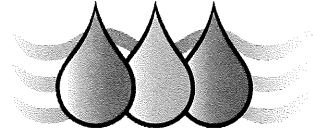
SECTION 16 - OTHER INFORMATION**HMIS RATING**

Health: 2

Flammability: 1

Reactivity: 0

CHEMSTREAM



WATER TREATMENT AND DUST
SUPPRESSION SOLUTIONS

LiquiFloc 512AE
Safety Data Sheet

Preparation date: March 19, 2018
Revised: N/A
Page 9 of 9

NFPA RATING

Health: 2
Fire: 1
Reactivity: 0

Training advice

Read the safety data sheet before using the product

PREPARATION DATE: March 19, 2018

REVISION DATE: N/A

REASON FOR REVISION: N/A

The product information contained herein is believed to be accurate as of the date of the Safety Data Sheet, and is provided without warranty, expressed or implied, as to the results of use of this information or the product to which it relates. Recipient assumes all responsibility for the use of this information and the use (alone or in combination with any other product), storage or disposal of the product, including any resultant personal injury or property damage.
