

SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY

Product name: **CLARIFLOC WE-1414**

Company: Polydyne Inc.
Riceboro, GA 31323
PO Box 279
United States

Telephone: 1-800-848-7659
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Emergency telephone number: 1-800-424-9300

Product Use: Processing aid for industrial applications.

2. HAZARDS IDENTIFICATION

Appearance and Odor:

Form: Granular solid

Color: White

Odor: None

Potential Health Effects:
None. See Section 11 for more information.

Potential Physical/Chemical Effects:
Aqueous solutions or powders that become wet render surfaces extremely slippery.

OSHA Regulatory Status:
This material is not considered hazardous in accordance with OSHA 29 CFR 1910.1200.

Potential Environmental Effects:
None. See Section 12 for more information.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Identification:
Cationic water-soluble polymer.

Regulated Components:

Chemical Name	CAS Number:	Concentration/ -range:
Adipic acid	124-04-9	<= 2.5%
Sulfamic acid	5329-14-6	<= 2.5%

4. FIRST AID MEASURES

Inhalation: Move to fresh air.

Skin contact: Wash with water and soap as a precaution. Get medical attention if irritation develops and persists.

Eye contact: Rinse thoroughly with plenty of water, also under the eyelids. Get medical attention.

Ingestion: Rinse mouth with water. Do not induce vomiting.

5. FIRE FIGHTING MEASURES

Suitable extinguishing media: Water. Water spray. Foam. Dry powder. Carbon dioxide (CO₂).

Unsuitable extinguishing media: None.

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

Special protective equipment for firefighters: No special protective equipment required.

Specific methods: Keep personnel removed and upwind of fire.

Specific hazards: In the event of fire the following can be released: Nitrogen Oxides. Carbon Oxides. Hydrogen chloride. Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

Flash point (°C): Not applicable.

Autoignition temperature (°C): Not applicable.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: No special precautions required. The product when wet renders surfaces extremely slippery

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

Methods for cleaning up: Do not flush with water. Clean up promptly by sweeping or vacuum. Keep in suitable and closed containers for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Handling: Avoid contact with skin and eyes. Avoid dust formation. Do not breathe dust. Wash hands before breaks and at the end of workday.

Storage: Keep in a dry, cool and well-ventilated place. The recommended storage temperature is 5-30 °C.

Technical measures/Precautions: No special precautions required.

Incompatible products: Oxidising agents.

Technical measures/Storage conditions: No special storage conditions required.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limits:
None.

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

Personal protective equipment:

Respiratory protection: Dust safety masks are recommended where concentration of total dust is more than 10 mg/m³.

Hand protection: PVC or other plastic material gloves.

Eye protection: Safety glasses with side-shields. Do not wear contact lenses where this product is used.

Skin and body protection: Chemical resistant apron or protective suit if splashing or repeated contact with solution is likely.

Hygiene measures: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form:	Granular solid
Color:	White
Odor:	None
pH:	2.5 - 4.5 @ 5 g/L
Melting point/range (°C):	> 100°C
Flash point (°C):	Not applicable.
Boiling point (°C):	Not applicable
Autoignition temperature (°C):	Not applicable.
Vapor pressure (mm Hg):	Not applicable
Approx. bulk density:	0.6 - 0.9
Viscosity (mPa.s):	See Technical Bulletin
Water solubility:	Completely soluble
LogPow:	< 0

10. STABILITY AND REACTIVITY

Stability: Stable. Hazardous polymerisation does not occur.

Materials to avoid: Oxidizing agents may cause exothermic reactions.

Hazardous decomposition products: Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NO_x), carbon oxides (CO_x). Hydrogen cyanide (hydrocyanic acid).

11. TOXICOLOGICAL INFORMATION

Product Information

Acute toxicity:

Oral: LD50/oral/rat > 5000 mg/kg

Dermal: LD50/dermal/rat > 5000 mg/kg

Inhalation: The product is not expected to be toxic by inhalation.

Irritation:

Skin: Not irritating.

Eyes: Testing conducted according to the Draize technique showed the material produces no corneal or iridial effects and only slight transitory conjunctival effects similar to those which all granular materials have on conjunctivae.

Sensitization: The results of testing on guinea pigs showed this material to be non-sensitizing.

Mutagenicity: Not mutagenic.

Carcinogenicity: Not carcinogenic.

Reproductive effects: Not toxic for reproduction.

Chronic toxicity: No chronic effects.

Component Information

Adipic acid

Acute toxicity:

Oral: LD50/oral/rat > 2000 mg/kg

Dermal: LD50/dermal/rabbit > 2000 mg/kg

Inhalation: LC0/inhalation/4 h/rat > 7.7 mg/L

Irritation:

Skin: Slightly irritating

Eyes: Not irritating. (OECD 405)

Sensitization: Not sensitizing.

Mutagenicity: Negative in the In vitro Mammalian Cell Gene Mutation Test (OECD 476).

Carcinogenicity: Not carcinogenic.

Reproductive effects: Not toxic for reproduction.

Chronic toxicity: No chronic effects.

Sulfamic acid

Acute toxicity:

Oral: LD50/oral/rat > 2000 mg/kg

Dermal: LD0/dermal/rat >= 2000 mg/kg (OECD 402)

Inhalation: The product is not expected to be toxic by inhalation.

Irritation:

Skin: Irritating

Eyes: Causes eye irritation (OPPTS 870.2400)

Sensitization: Not sensitizing.

Mutagenicity: Negative in the Ames Test (OECD 471). Negative in the In vitro Mammalian Cell Gene Mutation Test (OECD 476). Not mutagenic. (OECD 472, 487)

Carcinogenicity: Based on the absence of mutagenicity, it is unlikely that the substance is carcinogenic.

Reproductive effects: No data available

Chronic toxicity: No chronic effects.

12. ECOLOGICAL INFORMATION

Product Information

Aquatic toxicity:

Toxicity to fish: LC50/Danio rerio/96 hours = 5 - 10 mg/L (OECD 203)

Toxicity to daphnia: EC50/Daphnia magna/48 hours = 20 - 50 mg/L (OECD 202)

Toxicity to algae: Algal inhibition tests are not appropriate. The flocculation characteristics of the product interfere directly in the test medium preventing homogenous distribution which invalidates the test.

Environmental fate:

Persistence and degradability: Readily biodegradable.

Hydrolysis: At natural pHs (>6) the polymer degrades due to hydrolysis to more than 70% in 28 days. The hydrolysis products are not harmful to aquatic organisms.

Bioaccumulation: Does not bioaccumulate.

LogPow: < 0

LogKow: Not determined.

Component Information

Adipic acid

Aquatic toxicity:

Toxicity to fish: LC0/Danio rerio/96 hours \geq 1000 mg/L

Toxicity to daphnia: EC50/Daphnia magna/48 hours = 46 mg/L (OECD 202)

Toxicity to algae: IC50/Selenastrum capricornutum/72 hours = 59 mg/L (OECD 201)

Environmental fate:

Persistence and degradability: Readily biodegradable. $>$ 70% / 28 days (OECD 301 D)

Hydrolysis: Does not hydrolyse.

Bioaccumulation: The product is not expected to bioaccumulate.

LogPow: 0.093 @ 25°C, pH 3.3

LogKow: Not determined.

Sulfamic acid

Aquatic toxicity:

Toxicity to fish: LC50/Pimephales promelas/96 hours = 70.3 mg/L (OECD 203)

Toxicity to daphnia: EC50/Daphnia magna/48 hours = 71.6 mg/L (OECD 202)

Toxicity to algae: IC50/Scenedesmus subspicatus/72 hours = 48 mg/L (OECD 201)

Environmental fate:

Persistence and degradability: Not applicable.

Hydrolysis: Does not hydrolyse.

Bioaccumulation: No data available

LogPow: No data available

LogKow: Not determined.

13. DISPOSAL CONSIDERATIONS

Disposal: Dispose of in accordance with local, state and federal regulations.

Container: Rinse empty containers with water and use the rinse water to prepare the working solution. Can be landfilled or incinerated, when in compliance with local, state and federal regulations.

14. TRANSPORT INFORMATION

DOT:

Not classified as dangerous in the meaning of DOT regulations.

IMDG/IMO:

Not classified as dangerous in the meaning of IMO/IMDG regulations.

ICAO/IATA:

Not classified as dangerous in the meaning of ICAO/IATA regulations.

15. REGULATORY INFORMATION

Product Information

US SARA Reporting Requirements: None.

RCRA status : Not RCRA hazardous.

SARA (Section 311/312) hazard class: Not concerned.

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.

Adipic acid

CWA-Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity: 5000 lbs.

CERCLA Hazardous Substances List (40 CFR 302.4) Reportable Quantity: 5000 lbs.

International Inventories:

USA (TSCA): All components of this product are either listed on the inventory or are exempt from listing.

Canada (DSL): All components of this product are either listed on the inventory or are exempt from listing.

China (IECSC): All components of this product are either listed on the inventory or are exempt from listing.

European Union (REACH): All components of this product have been registered or pre-registered with the European Chemicals Agency or are exempt from registration.

Australia (AICS): All components of this product are either listed on the inventory or are exempt from listing.

Japan (ENCS): All components of this product are either listed on the inventory or are exempt from listing.

Korea (ECL): All components of this product are either listed on the inventory or are exempt from listing.

Philippines (PICCS): All components of this product are either listed on the inventory or are exempt from listing.

Taiwan (CSNN): All components of this product are either listed on the inventory or are exempt from listing.

New Zealand (NZIoC): All components of this product are either listed on the inventory or are exempt from listing.

16. OTHER INFORMATION

NFPA and HMIS Ratings :

NFPA:

Health:	1
Flammability:	1
Instability:	0



HMIS:

Health:	1
Flammability:	1
Physical Hazard:	0
PPE Code:	B

This MSDS was prepared in accordance with the following:
ISO 11014-1: Material Safety Data Sheet for Chemical Products
ANSI Z400.1-2004; Material Safety Data Sheets - Preparation

Revision Number: 14.01.a

PRCC003

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.