



JEFFERSON PARISH

DEPARTMENT OF PURCHASING

CYNTHIA LEE SHENG
PARISH PRESIDENT

RENNY SIMNO
DIRECTOR

May 5, 2023

ADDENDUM # 2

Bid Number: 50-00142179

Bid Opening Date: May 11, 2023 at 2:00 pm cst

Description of Bid: Two (2) Year Contract for the Supply of Cationic Polymers for the Jefferson Parish Department of Sewerage

CLARIFICATION

This Addendum # 2 is being issued to answer the below questions asked.

Q1. Does Jefferson Parish have a local or Louisiana bidders' preference?

A1. Please reference under INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS Section A. – PREFERENCE

Q2. How is Jefferson Parish going to determine whether a product is of equal quality prior to the bid opening?

A2. That determination will be made after bid opening.

Please acknowledge Addendum # 2 on the bid form.

Sincerely,

A handwritten signature in black ink that reads "Doris Abraham".

Doris Abraham
Buyer II

Bidders must acknowledge all addenda on the bid form. Bidder acknowledges receipt of this addendum on the bid form by indicating the addendum number listed above. Failure to list each addenda number on the bid form will result in bid rejection.

This addendum is a part of the contract documents and modifies the original bidding documents and specifications. The contents of this addendum shall be included in the contract documents. Changes made by this addendum shall take precedence over the documents of earlier date.

JOSEPH S. YENNI BUILDING - 1221 ELMWOOD PARK BLVD - SUITE 404 - JEFFERSON, LA 70123 - PO BOX 10242 JEFFERSON, LA 70181-0242
OFFICE 504.364-2678

GENERAL GOVERNMENT BUILDING - 200 DERBIGNY ST - SUITE 4400 - GRETNA, LA 70053 - PO BOX 9 - GRETNA - LA 70054
OFFICE 504.364.2678

EMAIL: PURCHASING@JEFFPARISH.NET

WEBSITE: WWW.JEFFPARISH.NET



JEFFERSON PARISH

DEPARTMENT OF PURCHASING

CYNTHIA LEE SHENG
PARISH PRESIDENT

RENNY SIMNO
DIRECTOR

May 2, 2023

ADDENDUM # 1

Bid Number: 50-00142179

Bid Opening Date: May 11, 2023 at 2:00 pm cst

Description of Bid: Two (2) Year Contract for the Supply of Cationic Polymers for the Jefferson Parish Department of Sewerage

CLARIFICATION

This Addendum # 1 is being issued to confirm the below question asked.

Q1. Please confirm for certain whether a bid bond needs to be provided with the bid?

A1. There are no bid bond requirements listed in the specifications or bid form.

Q2. Are the required polymers listed in section 2.1 the only polymers that can be received?
as a responsive bidder?

A2. Under Instructions for Bidders and General Conditions on the Bid Form, please reference Section (B).

B. USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

Please acknowledge Addendum # 1 on the bid form.

Sincerely,

A handwritten signature in black ink that reads "Doris Abraham".

Doris Abraham
Buyer II

Bidders must acknowledge all addenda on the bid form. Bidder acknowledges receipt of this addendum on the bid form by indicating the addendum number listed above. Failure to list each addenda number on the bid form will result in bid rejection.

This addendum is a part of the contract documents and modifies the original bidding documents and specifications. The contents of this addendum shall be included in the contract documents. Changes made by this addendum shall take precedence over the documents of earlier date.

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OFFICE 504.364.2678

EMAIL: PURCHASING@JEFFPARISH.NET

WEBSITE: WWW.JEFFPARISH.NET



CENTRALBIDDING
FROM CENTRAL AUCTION HOUSE

**5000142179 Two (2) Year Contract for a Supply of Cationic Polymers for
the Jefferson Parish Department of Sewerage
Jefferson Parish Government**

Project documents obtained from www.CentralBidding.com

26-Apr-2023 12:01:22 PM



Bid Number 50-00142179

**Two (2) Year Contract for a Supply of Cationic Polymers for the
Jefferson Parish
Department of Sewerage**

BID DUE: May 11, 2023 AT 2:00 P.M.

ATTENTION VENDORS!!!

Please review all pages and respond accordingly, complying with all provisions in the technical specifications and Jefferson Parish Instructions for Bidders and General Terms and Conditions. All bids must be received on the Purchasing Department's eProcurement site, www.jeffparishbids.net, by the bid due date and time. Late bids will not be accepted.

**Jefferson Parish Purchasing Department
200 Derbigny Street
General Government Building, Suite 4400
Gretna, LA 70053
Buyer Name: Doris Abraham
Buyer Email: DABRAHAM@jeffparish.net
Buyer Phone: 504-364-2690**

Bid Specifications for Bid # 50-00142179

JEFFERSON PARISH DEPARTMENT OF SEWERAGE

SPECIFICATIONS FOR POLYMER

1.0 GENERAL:

- 1.1** Specifications for a two-year contract for a supply of cationic polymers (Clarifloc CE-293 Polymer & Clarifloc C-6254 polymer) for the Jefferson Parish Department of Sewerage. The quantity shown on this bid represents an approximate quantity to be purchased over the two-year period. Actual usage will be on an as needed basis.

2.0 PRODUCT SPECIFICATIONS:

- 2.1** The polymers furnished under these specifications will be used for the dewatering of sewerage sludge by using belt filter press. The required polymers are:
- A. Clarifloc C-6254 Polymer
 - B. Clarifloc CE-293 Polymer
- 2.2** The polymers supplied under these specifications must be a liquid cationic emulsified solution of a high molecular weight flocculant.
- 2.3** The polymers must have good mixing characteristics and produce a minimum of nuisance conditions, such as floating scum or foam.
- 2.4** The polymers shall be suitable for storage in plastic vessels and shall have a shelf life in the storage tank of no less than six months. The freeze-thaw recovery of the polymer shall be at least 90 percent. The polymers should be mixable with water in all dilutions, and should be able to be diluted to any ratio desired to meet the chemical feed capacity.
- 2.5** The polymers shall have the following general properties:
- Appearance - viscous liquid
 - Solubility - soluble in water in all proportions

Bid Specifications for Bid # 50-00142179

- 2.6 The polymers application shall decidedly improve the operation of the belt filter press, and attain the following performance:

Feed solids - 1.5 percent - 3.5 percent

Hydraulic loading - 100-300 gpm

Minimum cake solids – 16 percent

Minimum solids capture – 85 percent

Filtrate quality - less than 1,000 mg/1 tss

3.0 TESTING PROCEDURE:

Note: Jefferson Parish reserves the right to require or omit polymer testing based upon polymer performance. If testing is deemed necessary, the following procedures must be adhered to.

- 3.1 The polymers must be compatible with the present feed system at each facility.
- 3.2 Only cationic liquid emulsion polymer products will be accepted for the plant test trial. Anionic or neutral charge, dry solid polymer, and water solution polymers will not be accepted.
- 3.3 The bidder shall use the polymer equipment provided by the department for conducting polymer trial work on the belt filter press.
- 3.4 The department will select one belt filter press on the Eastbank and one belt filter press on the Westbank for running all trials. The same belt filter presses will be used for all trial work as much as possible.
- 3.5 The bidder will provide for the test at least one 10 gallon and one 5-gallon sample to be retained by the department. All polymers used in the trial and sample shall be provided by the bidder at no cost to the parish.
- 3.6 The trial will provide data to estimate polymer dosage, captured solids, filtrate clarity, cake dryness, and also provide operational characteristics of the belt filter press when using the test polymers.

Bid Specifications for Bid # 50-00142179

- 3.7 Since the department has a hauling contract for which the cost of disposal is based on the number of wet tons hauled, the performance factor will include an adjustment to reflect cake solids and polymer per ton of solids captured.
- 3.8 At the department's request, the bidder must provide additional testing during the contract period, should performance of polymer become an issue. Additional testing will only be required if performance requirements are not met. The bidder must be willing to adjust and supply the optimal polymer to meet performance requirements.

4.0 PLANT PERFORMANCE:

- 4.1 If the polymer consumption during normal operations exceeds the original pounds of polymer per ton of dry solids for the qualifications trial by 20 percent, the supplier shall respond to such problems at no additional cost to the department.
- 4.2 Jefferson Parish reserves the right to cancel the contract and re-bid if the corrective action exceeds the original dosage rate by 20 percent for the ten-day period.
- 4.3 The department reserves the right to run laboratory and/or plant trials of other polymers during the contract period.

5.0 TECHNICAL INFORMATION:

- 5.1 The bidder shall submit OSHA material safety data sheets and polymer products sheets with their bid.
- 5.2 Upon request, the bidder shall provide the department with a laboratory procedure to determine total active solids in their product during the contract period.
- 5.3 The bidder shall provide the department with technical assistance to develop and maintain optimum dewatering of the sludge with the belt filter presses, while using a minimal polymer dosage.

Bid Specifications for Bid # 50-00142179

6.0 DELIVERY:

- 6.1 Shipments and partial shipments shall be made by tank truck, according to users need, to the following locations:

Eastbank Wastewater Treatment Plant

#2 Humane Way

Harahan, LA 70123

Bridge City Wastewater Treatment Plant

1400 Highway 90

Bridge City, LA 70094

Harvey Wastewater Treatment Plant

2343 Paillet Street

Harvey, LA 70058

Marrero Wastewater Treatment Plant

6250 Lapalco Blvd.

Marrero, LA 70072

- 6.2 Deliveries to the Westbank plants are typically less than a truckload:

Approximately 500 gallons to the Bridge City Plant, approximately 1,000 gallons to the Marrero Plant, and approximately 1,000 gallons to the Harvey Plant. Although the department tries to combine and order for the three plants at one time, the department reserves the right to order the materials in quantities needed at just one plant.

- 6.3 Deliveries must be made no later than 12 days after orders are placed.

- 6.4 The bidder shall supply the necessary transfer pump and/or equipment to unload the polymer from the tank truck into the storage tanks in a safe and efficient manner.

Bid Specifications for Bid # 50-00142179

- 6.5** Certified weight scale tickets attached to the invoices shall substantiate the amount of material delivered.

- 6.6** Invoices with purchase order number, copy of delivery tickets with date of delivery, and copy of weight scale tickets should be sent to:

Department of Sewerage
1221 Elmwood Park Blvd., Suite 803
Harahan, LA 70123

DATE: 4/26/2023

INVITATION TO BID
THIS IS NOT AN ORDER

Page: 1

BID NO.: 50-00142179

JEFFERSON PARISH

PURCHASING DEPARTMENT
P.O. BOX 9
GRETNA, LA. 70054-0009
504-364-2678

BUYER: DABRAHAM@jeffparish.net

BIDS WILL BE RECEIVED ONLINE VIA WWW.JEFFPARISHBIDS.NET UNTIL 2:00 PM, 5/11/2023 AND PUBLICLY OPENED THEREAFTER IN THE WEST BANK PURCHASING DEPT, SUITE 4400, JEFFERSON PARISH GENERAL GOVERNMENT BUILDING, 200 DERBIGNY STREET, GRETNA, LA 70053. At no charge, bidders are to submit via Jefferson Parish's electronic procurement page by visiting www.jeffparishbids.net to register for this free site. Additional instructions are included in the text box highlighting electronic procurement.

LATE BIDS WILL NOT BE ACCEPTED

NOTE: ONLY BIDS WRITTEN IN INK OR TYPEWRITTEN, AND PROPERLY SIGNED BY A MEMBER OF THE FIRM OR AUTHORIZED REPRESENTATIVE, WILL BE ACCEPTED. PENCIL AND/OR PHOTOSTATIC FIGURES OR SIGNATURES SHALL RESULT IN BID REJECTION. HOWEVER, ELECTRONIC SIGNATURES AS DEFINED IN LSA - R.S. 9:2620(8) ARE ACCEPTABLE. SIGNATURE MUST BE A SECURED DIGITAL SIGNATURE.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

THE FOLLOWING INSTRUCTIONS APPLY TO ALL BIDS

All bids submitted are subject to these instructions and general conditions and any special conditions and specifications contained herein, all of which are made part of this bid proposal reference. By submitting a bid, vendor agrees to comply with all provisions of Louisiana Law as well be in compliance with the Jefferson Parish Code of Ordinances, Louisiana Code of Ethics, applicable Jefferson Parish ethical standards and Jefferson Parish Resolution No. 113646 and/or Resolution No. 113647 as amended.

Jefferson Parish adheres to the Louisiana Code of Governmental Ethics, contained in Louisiana Revised Statutes Annotated, R.S. 42:1101, et seq. Vendor/Proposer by this submission, warrants that there are no "conflicts of interest" related to this procurement that would violate applicable Louisiana Law. Violation of the Louisiana Code of Governmental Ethics may result in rescission of contract, permit or licenses, and the imposition of fines and/or penalties, without contractual liability to the public in accordance with applicable law.

All vendors submitting bids should register as a Jefferson Parish vendor if not already yet registered. Registration forms may be downloaded from <http://purchasing.jeffparish.net> and by clicking on Vendor Information. Current W-9 forms with respective Tax Identification numbers and vendor applications may be submitted at any time; however, if your company is not registered and/or a current W-9 form is not on file, vendor registration is mandatory. Vendors may experience a delay in payment if your company is not a registered vendor with Jefferson Parish.

All quotations shall be based on F.O.B. Agency warehouse or job site, anywhere within the Parish as designated by the Purchasing Department. This provision does not apply to public works projects

JEFFERSON PARISH requires all products to be new (current) and all work must be performed according to standard practices for the project. Unless otherwise specified, no aftermarket parts will be accepted. Unless otherwise specified, all workmanship and materials must have at least one (1) year guaranty, in writing, from the date of delivery and/or acceptance of the project. Any deviations or alterations from the specifications must be indicated and/or supporting documentation supplied with bid submission.

Bidders should submit all questions in writing via email to the buyer's email address as indicated above, no later than Five (5) working days prior to the bid opening. Bid numbers should be mentioned in all requests. If submitting online, vendors may send questions via the E-Procurement site no later than Five (5) working days prior to the bid opening.

If this bid requires a pre-bid conference (see Additional Requirements section), bidders are advised that such conference will be held to allow bidders the opportunity to identify any discrepancies in the bid specifications and seek further clarification regarding instructions. The Purchasing Department will issue a written response to bidders' questions in the form of an Addendum. Please note that all official communication will be expressed in the form of an addendum.

Visit our website at [HTTP://PURCHASING.JEFFPARISH.NET](http://PURCHASING.JEFFPARISH.NET)

All formal Addenda require written acknowledgement on the bid form by the bidder. Failure to acknowledge an Addendum on the bid form shall cause the bid to be rejected. JEFFERSON PARISH reserves the right to award bid to next lowest responsive and responsible bidder in this event.

JEFFERSON PARISH will accept one price for each item unless otherwise indicated. Two or more prices for one item will result in bid rejection. Bidders are required to complete, sign and return the bid form and/or complete and return the associated line item pricing forms as indicated. Vendors must not alter the bid forms. Doing so will cause the bid to be rejected.

A corporate resolution or written evidence of the individual signing the bid having such authority must be submitted with the bid. Failure to comply will cause bid to be rejected. For corporate entities, such written evidence may be a printout of the Louisiana Secretary of State's website listing the signatory as an officer. Such printout shall be included with the bid submission. Bids submitted by Owners or Sole Proprietorships must include certification that he or she owns the entity for which the bid is signed. This documentation must be submitted with the bid. Failure to do so will result in bid rejection.

NOTE: A sample corporate resolution can be downloaded from our website <http://purchasing.jeffparish.net> or you may provide your own document. A sample certification of sole proprietorship can also be downloaded from our website <http://purchasing.jeffparish.net> or you may provide your own document.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

A. AWARD OF CONTRACT: JEFFERSON PARISH reserves the right to award contracts or place orders on a lump sum or individual item basis, or such combination, as shall in its judgment be in the best interest of JEFFERSON PARISH. Every contract or order shall be awarded to the LOWEST RESPONSIVE and RESPONSIBLE BIDDER, taking into consideration the CONFORMITY WITH THE SPECIFICATIONS and the DELIVERY AND/OR COMPLETION DATE. SPLIT AWARDS MADE TO SEVERAL VENDORS WILL ONLY BE GRANTED TO THOSE DEEMED RESPONSIVE AND RESPONSIBLE.

All bid prices shall remain valid for 45 days. Jefferson Parish and the lowest responsive and responsible bidder(s) by mutual written consent may mutually agree to extend the deadline for award by one (1) or more extensions of thirty (30) calendar days.

PROTESTS: Only those vendors that submit bids in response to this solicitation may protest any element of the procurement, in writing to the Director of the Purchasing Department. Written protest must be received within 48 hours of the release of the bid tabulation by the Purchasing Department. After consultation, the Parish Attorney's Office will then respond to protests in writing. (For more information, please see Chapter 2, Article VII, Division 2, Sec. 2-914.1 of the Jefferson Parish Code of Ordinances.)

PREFERENCE: Unless federal funding is directly spent by Jefferson Parish for this purchase, preference is hereby given to materials, supplies, and provisions produced, manufactured or grown in Louisiana, quality being equal to articles offered by competitors outside the state. "LSA – R.S. 38:2251-2261"

B. USE OF BRAND NAMES AND STOCK NUMBERS: Where brand names and stock numbers are specified, it is for the purpose of establishing certain minimum standards of quality. Bids may be submitted for products of equal quality, provided brand names and stock numbers are specified. Complete product data may be required prior to award.

C. CANCELLATION OF CONTRACT: JEFFERSON PARISH reserves the right to cancel all or any part if not shipped promptly. No charges will be allowed for parking or cartage unless specified in quotation. The order must not be filled at a higher price than quoted. JEFFERSON PARISH reserves the right to cancel any contract at anytime and for any reason by issuing a THIRTY (30) day written notice to the contractor.

For good cause and as consideration for executing a contract with Jefferson Parish, vendor conveys, sells, assigns and transfers to Jefferson Parish or its assigns all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of Louisiana, relating to the particular good or services purchased or acquired by Jefferson Parish.

D. PRICES: Jefferson Parish is exempt from paying sales tax under LSA-R.S. 47:301 (8)(c). All prices for purchases by Jefferson Parish of supplies and materials shall be quoted in the unit of measure specified and unless otherwise specified, shall be exclusive of state and local taxes. The price quoted for work shall be stated in figures. In the event there is a difference in unit prices and totals, the unit price shall prevail.

Quantities listed are for bidding purposes only. Actual requirements may be more or less than quantities listed.

Bidders are not to exclude from participation in, deny the benefits of, or subject to discrimination under any program or activity, any person in the United States on the grounds of race, color, national origin, or sex; nor discriminate on the basis of age under the Age Discrimination Act of 1975, or with respect to an otherwise qualified handicapped individual as provided in Section 504 of the Rehabilitation Act of 1973, or on the basis of religion, except that any exemption from such prohibition against discrimination on the basis of religion as provided in the Civil Rights Act of 1964, or Title VI and VII of the Act of April 11, 1968, shall also apply. This assurance includes compliance with the administrative requirements of the Revenue Sharing final handicapped discrimination provisions contained in Section 51.55 (c), (d), (e), and (k)(5) of the Regulations. New construction or renovation projects must comply with Section 504 of the 1973 Rehabilitation Act, as amended, in accordance with the American National Standard Institute's specifications (ANSI A17.1-1961).

Jefferson Parish and its partners as the recipients of federal funds are fully committed to awarding a contract(s) to firm(s) that will provide high quality services and that are dedicated to diversity and to containing costs. Thus, Jefferson Parish strongly encourages the involvement of minority and/or woman-owned business enterprises (DBE's, including MBE's, WBE's and SBE's) to stimulate participation in procurement and assistance programs.

The purpose and intention of this invitation to bid is to afford all suppliers an equal opportunity to bid on all construction, maintenance, repair, operating supplies and/or equipment listed in this bid proposal. JEFFERSON PARISH WILL ACCEPT ONE BID ONLY FROM EACH VENDOR. Items bid must meet specifications.

Advertised bids will be tabulated and a copy of the tabulation will be forwarded to each responding bidder.

IN ACCORDANCE WITH STATE REGULATIONS JEFFERSON PARISH OFFERS ELECTRONIC PROCUREMENT TO ALL VENDORS

This electronic procurement system allows vendors the convenience of reviewing and submitting bids online. This is a secure site and authorized personnel have limited read access only. Bidders are to submit electronically using this free service; while the website accepts various file types, one single PDF file containing all appropriate and required bid documents is preferred. Bidders submitting uploaded images of bid responses are solely responsible for clarity. If uploaded images/documents are not legible, then bidder's submission will be rejected. Please note all requirements contained in this bid package for electronic bid submission.

Please visit our E-Procurement Page at www.jeffparishbids.net to register and view Jefferson Parish solicitations. For more information, please visit the Purchasing Department page at <http://purchasing.jeffparish.net>.

The general specifications for construction projects and the purchase of materials, services and/or supplies are those adopted by the JEFFERSON PARISH Council by Resolution No. 113646 or 113647 as amended. The general conditions adopted by this resolution shall be considered as much a part of this document as if they were written wholly herein. A copy may be obtained from the Office of the Parish Clerk, Suite 6700, Jefferson Parish General Government Building, 200 Derbigny Street, Gretna, LA 70053. You may also obtain a copy by visiting the Purchasing Department webpage at <http://purchasing.jeffparish.net> and clicking on Online Forms.

ADDITIONAL REQUIREMENTS FOR THIS BID

PLEASE MATCH THE NUMBERS PRINTED IN THIS BOX WITH THE CORRESPONDING INSTRUCTIONS BELOW.

10, 12, 13, 15

1. All bidders must attend the MANDATORY pre-bid conference and will be required to sign in and out as evidence of attendance. In accordance with LSA R.S. 38:2212(l), all prospective bidders shall be present at the beginning of the MANDATORY pre-bid conference and shall remain in attendance for the duration of the conference. Any prospective bidder who fails to attend the conference or remain for the duration shall be prohibited from submitting a bid for the project.
2. Attendance to this pre-bid conference is optional. However, failure to attend the pre-bid conference shall not relieve the bidder of responsibility for information discussed at the conference. Furthermore, failure to attend the pre-bid conference and inspection does not relieve the successful bidder from the necessity of furnishing materials or performing any work that may be required to complete the work in accordance with the specification with no additional cost to the owner.
3. Contractor must hold current applicable JEFFERSON PARISH licenses with the Department of Inspection and Code Enforcement. Contractor shall obtain any and all permits required by the JEFFERSON PARISH Department of Inspection and Code Enforcement. The contractor shall be responsible for the payment of these permits. All permits must be obtained prior to the start of the project. Contractor must also hold any and all applicable Federal and State licenses. Contractor shall be responsible for the payment of these permits and shall obtain them prior to the start of the project.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

4. A LA State Contractor's License will be required in accordance with LSA R.S. 37-2150 et. seq. and such license number will be shown on the outside of the bid electronic envelope. Failure to comply will cause the bid to be rejected. When submitting the bid electronically, the license number must be entered in the appropriate field in the electronic procurement system. Failure to comply will cause the bid to be rejected.
5. It is the bidder's responsibility to visit the job site and evaluate the job before submitting a bid.
6. Job site must be clean and free of all litter and debris daily and upon completion of the contract. Passageways must be kept clean and free of material, equipment, and debris at all times. Flammable material must be removed from the job site daily because storage will not be permitted on the premises. Precaution must be exercised at all times to safeguard the welfare of JEFFERSON PARISH and the general public.
7. PUBLIC WORKS BIDS: All awards for public works in excess of \$5,000.00 will be reduced to a formal contract which shall be recorded at the contractor's expense with the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. A price list of recordation costs may be obtained from the Clerk of Court and Ex-Officio Recorder of Mortgages for the Parish of Jefferson. All awards in excess of \$25,000.00 will require both a performance and a payment bond. Unless otherwise stated in the bid specifications, the performance bond requirements shall be 100% of the contract price. Unless otherwise state in the bid specifications, the payment bond requirements shall be 100% of the contract price. Both bonds shall be supplied at the signing of the contract.
8. NON-PUBLIC WORKS BIDS: A performance bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The performance bond shall be supplied at the signing of the contract.
9. NON-PUBLIC WORKS BIDS: A payment bond will be required for this bid. The amount of the bond will be 100% of the contract price unless otherwise indicated in the specifications. The payment bond shall be supplied at the signing of the contract.
10. All bidders must comply with the requirements stated in the attached "Standard Insurance Requirements" sheet attached to this bid solicitation. Failure to comply with this instruction will result in bid rejection.
11. A bid bond will be required with bid submission in the amount of 5% of the total bid, unless otherwise stated in the bid specifications. All sureties must be in original format (no copies) When submitting a bid online, vendors must submit an electronic bid bond through the respective online clearinghouse bond management system(s) as indicated in the electronic bid solicitation on Central Auction House. No scanned paper copies of any bid bond will be accepted as part of the electronic bid submission.
12. This is a requirements contract to be provided on an as needed basis. JEFFERSON PARISH makes no representations on warranties with regard to minimum guaranteed quantities unless otherwise stated in the bid specifications.
13. Freight charges should be included in total cost when quoting. If not quoted FOB DELIVERED, freight must be quoted as a separate item. Bid may be rejected if not quoted FOB DELIVERED or if freight charges are not indicated on bid form.
14. PUBLIC WORKS BIDS - Completed, Signed and Properly Notarized Affidavits Required; This applies to all solicitations for construction, alteration or demolition of public buildings or projects, in conformity with the provisions contained in LSA-RS 38:2212.9, LSA-RS 38:2212.10, LSA-RS 38:2224, and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Conviction Affidavit, Non-Collusion Affidavit, Campaign Contribution Affidavit, Debt Disclosures Affidavit and E-Verify Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

INSTRUCTIONS FOR BIDDERS AND GENERAL CONDITIONS

15. NON PUBLIC WORK BIDS - Completed, Signed and Properly Notarized Affidavits Required in conformity with the provisions contained in LSA – RS 38:2224 and Sec 2-923.1 of the Jefferson Parish Code of Ordinances. For bidding purposes, all bidders must submit with bid submission COMPLETED, SIGNED and PROPERLY NOTARIZED Affidavits, including: Non-Collusion Affidavit, Debt Disclosures Affidavit and Campaign Contribution Affidavit. For the convenience of vendors, all affidavits have been combined into one form entitled NON PUBLIC WORKS BID AFFIDAVIT. This affidavit must be submitted in its original format, and without material alteration, in order to be compliant and for the bid to be considered responsive. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid, however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

16. The ensuing contract for this bid solicitation may be eligible for FEMA reimbursement and/or Federal funding/reimbursement. As such, the referenced appendix will be applicable accordingly and shall be considered a part of the bid documents. All applicable certifications must be duly completed, signed and submitted with bid submission. Failure to submit applicable certifications with bid submission will result in bid rejection.

17. For this project, the Contractor shall not pay any state or local sales or use taxes on materials and equipment which are affixed and made part of the immovable property of the project or which is permanently incorporated in the project (hereinafter referred to as "applicable materials and equipment."). All purchases of applicable materials or equipment shall be made by the contractor on behalf of and as the agent of Jefferson Parish (Owner), a political subdivision of the State of Louisiana. No state and local sales and use taxes are owed on applicable materials and equipment under the provisions of Act 1029 of the 1991 Regular Session - Louisiana Revised Statute 47:301(8)(c). Owner will furnish to contractor a certificate form which certifies that Owner is not required to pay such state or local sales and use taxes, and contractor shall furnish a copy of such certificate to all vendors or suppliers of the applicable materials and equipment, and report to Owner the amount of taxes not incurred.

It shall be the duty of every parish officer, employee, department, agency, special district, board, and commission: and the duty of every contractor, subcontractor, and licensee of the parish, and the duty of every applicant for certification of eligibility for a parish contract or program, to cooperate with the Inspector General in any investigation, audit, inspection, performance review, or hearing pursuant to JPCO 2-155.10(19). By signing this document, every corporation, partnership, or person contracting with PARISH, whether by cooperative endeavor, intergovernmental agreement, bid, proposal, application or solicitation for a parish contract, and every application for certification of eligibility for a parish contract or program, attests that it understands and will abide by all provisions of JPCO 2-155.10.

All Public Work Projects are required to use the Louisiana Uniform Public Work Bid Form

All prices must be held firm unless an escalation provision is requested in this bid. Jefferson Parish will allow one escalation during the term of the contract, which may not exceed the U.S. Bureau of Labor Statistics National Index for all Urban Consumers, unadjusted 12 month figure. The most recently published figure issued at the time an adjustment is requested will be used. A request must be made in writing by the vendor, and the escalation will only be applied to purchases made after the request is made.

Are you requesting an escalation provision?

YES X NO _____

MAXIMUM ESCALATION PERCENTAGE REQUESTED 3 %

INITIAL BID PRICES WILL REMAIN FIRM THROUGH THE DATE OF One year from date of award.

For the purposes of comparison of bids when an escalation provision is requested, Jefferson Parish will apply the maximum escalation percentage quoted by the bidder to the period to which it is applied in the bid. The initial price and the escalation will be used to calculate the total bid price. It will be assumed, for comparison of prices only, that an equal amount of material or labor is purchased each month throughout the entire contract.

DELIVERY: FOB JEFFERSON PARISH

INDICATE DELIVERY DATE ON EQUIPMENT AND SUPPLIES

 7-12 Days ARO

LOUISIANA CONTRACTOR'S LICENSE NO.: (if applicable)

 N/A

THIS SECTION MUST BE COMPLETED BY BIDDER:

FIRM NAME: Polydyne Inc.

ADDRESS: 1 Chemical Plant Road

CITY, STATE: Riceboro, GA ZIP: 31323

TELEPHONE: (800) 848-7659 Opt. 2 FAX: (912) 880-2078

EMAIL ADDRESS: bids@polydyneinc.com

In the event that addenda are issued with this bid, bidders **MUST** acknowledge all addenda on the bid form. Bidder must acknowledge receipt of an addendum on the bid form by placing the addendum number as indicated. Failure to acknowledge any addendum on the bid form will result in bid rejection.

Acknowledge Receipt of Addenda: NUMBER: 1, dated 5/2/2023

NUMBER: 2, dated 5/5/2023

NUMBER: _____

NUMBER: _____

TOTAL PRICE OF ALL BID ITEMS: \$ 837,400.00

AUTHORIZED SIGNATURE: *Boyd Stanley*

 Boyd Stanley

Printed Name

TITLE: Sr. Vice-President

SIGNING INDICATES YOU HAVE READ AND COMPLY WITH THE INSTRUCTIONS AND CONDITIONS.

NOTE: All bids should be returned with the BID NUMBER and BID OPENING DATE indicated on the outside of the envelope submitted to the Purchasing Department.

INVITATION TO BID FROM JEFFERSON PARISH - continued

BID NO.: 50-00142179

SEALED BID

ITEM NUMBER	QUANTITY	U/M	DESCRIPTION OF ARTICLES	UNIT PRICE QUOTED	TOTALS
1	250,000.00	LB	<p>Two (2) Year Contract for a Supply of Cationic Polymers for the Jefferson Parish Department of Sewerage</p> <p>0001 - Belt filter press polymer Clarifloc CE-293* and Clarifloc CE-293A*</p>	\$ 1.58/Lb.	\$ 395,000.00
2	280,000.00	LB	<p>0002 - Belt filter press polymer Clarifloc C-6254*</p>	\$ 1.58/Lb.	\$ 442,400.00
<p>PER ATTACHED SPECIFICATIONS ***</p>					
<p>DELIVERY TO VARIOUS WASTERWATER TREATMENT PLANTS</p>					
<p>*Products offered by Polydyne Inc.</p>					

CORPORATE RESOLUTION

EXCERPT FROM MINUTES OF MEETING OF THE BOARD OF DIRECTORS OF
Polydyne Inc.

INCORPORATED.

AT THE MEETING OF DIRECTORS OF Polydyne Inc.
INCORPORATED, DULY NOTICED AND HELD ON January 8, 2020,
A QUORUM BEING THERE PRESENT, ON MOTION DULY MADE AND SECONDED. IT
WAS:

RESOLVED THAT Boyd Stanley, BE AND IS HEREBY
APPOINTED, CONSTITUTED AND DESIGNATED AS AGENT AND ATTORNEY-IN-
FACT OF THE CORPORATION WITH FULL POWER AND AUTHORITY TO ACT ON
BEHALF OF THIS CORPORATION IN ALL NEGOTIATIONS, BIDDING, CONCERNS
AND TRANSACTIONS WITH THE PARISH OF JEFFERSON OR ANY OF ITS AGENCIES,
DEPARTMENTS, EMPLOYEES OR AGENTS, INCLUDING BUT NOT LIMITED TO, THE
EXECUTION OF ALL BIDS, PAPERS, DOCUMENTS, AFFIDAVITS, BONDS, SURETIES,
CONTRACTS AND ACTS AND TO RECEIVE ALL PURCHASE ORDERS AND NOTICES
ISSUED PURSUANT TO THE PROVISIONS OF ANY SUCH BID OR CONTRACT, THIS
CORPORATION HEREBY RATIFYING, APPROVING, CONFIRMING, AND ACCEPTING
EACH AND EVERY SUCH ACT PERFORMED BY SAID AGENT AND ATTORNEY-IN-
FACT.

I HEREBY CERTIFY THE FOREGOING TO BE
A TRUE AND CORRECT COPY OF AN
EXCERPT OF THE MINUTES OF THE ABOVE
DATED MEETING OF THE BOARD OF
DIRECTORS OF SAID CORPORATION, AND
THE SAME HAS NOT BEEN REVOKED OR
RESCINDED.



SECRETARY-TREASURER
Mark Schlag, Vice-President, Assistant-Secretary, Treasurer

5/10/2023

DATE

POLYDYNE INC
CERTIFICATE OF RESOLUTIONS

I, Christopher J. Gannon, Secretary of Polydyne Inc., a Delaware corporation (the "Company"), do hereby certify that at a duly called meeting of the Board of Directors of the Company, held on January 8, 2020, the Board of Directors unanimously approved the following Resolutions:

RESOLVED, that Boyd Stanley, René Pich, John Pittman, Mark Schlag, Bobby Wise and Ken Luke be and hereby are authorized, empowered and directed to bid, in the name of and on behalf of the Corporation, upon such municipal projects as he may deem appropriate; and further

RESOLVED, that Boyd Stanley, René Pich, John Pittman, Mark Schlag, Bobby Wise and Ken Luke be and hereby are authorized and empowered to execute and deliver, in the name of and on behalf of the Corporation, all documents, instruments, certificate, agreements and papers as he may deem advisable or necessary or proper to effect the Corporation's municipal bids or the transactions contemplated thereby; and further

RESOLVED, that any Officer of the Corporation be and hereby is authorized and empowered, and to the extent necessary or advisable, directed, to attest the execution of any document executed pursuant to these resolutions, and to affix the seal of the Corporation thereto, and to certify under seal to any municipality the adoption of these resolutions; and further

RESOLVED, that the authorizations granted under these Resolutions shall continue in full force and effect until successors to the foregoing representatives of the Corporation shall have been duly appointed or until the death, resignation or removal of each such representative.

IN WITNESS WHEREOF, the undersigned has signed this Certificate of Resolutions with effect this 8th day of January 2020.



Christopher J. Gannon, Secretary



I attest the authenticity of this copy of the Resolution of the Board of Directors. This resolution is still valid and in effect as of date signed.



Mark Schlag
Vice President Finance, Assistant-Secretary & Treasurer
Date: 5/10/2023

**Polydyne Inc.
General Information**

Federal Identification No. 34-1810283

State of Incorporation: Delaware

Date of Incorporation: August 21, 1995

Administrative Offices: P.O. Box 279,
1 Chemical Plant Road
Riceboro, GA 31323

Payment Address: P.O. Box 404642
Atlanta, GA 30384-4642

Board of Directors

John Pittman

Officers

President	John Pittman
Secretary	Christopher Gannon
VP-Finance, CFO, Treasurer & Assistant Secretary	Mark Schlag
Senior Vice President	Boyd Stanley
Vice President	Ken Luke

***Authorized Signers-Non Officers**

Bobby Wise	Controller
-------------------	-------------------

Ownership Disclosure

Corporation	Percent Ownership	Owner
Polydyne Inc.	100	SNF Holding Company
SNF Holding Company	100	SPCM SA
SPCM SA	100	Mr. René PICH holds and/or controls 100% of the shares of SPCM SA, a company duly organized and existing under the laws of France, whose registered office is in ZAC de Milieux, Andrézieux, (42163), FRANCE, registered under the number 312 327 737 in the Commercial Registry of the town of Saint-Etienne (42000), FRANCE.

Non-Public Works Bid Affidavit Instructions

- **Affidavit is supplied as a courtesy to Affiants, but it is the responsibility of the affiant to insure the affidavit they submit to Jefferson Parish complies, in both form and content, with federal, state and parish laws.**
- **Affidavit must be signed by an authorized representative of the entity or the affidavit will not be accepted.**
- **Affidavit must be notarized or the affidavit will not be accepted.**
- **Notary must sign name, print name, and include bar/notary number, or the affidavit will not be accepted.**
- **Affiant MUST select either A or B when required or the affidavit will not be accepted.**
- **Affiants who select choice A must include an attachment or the affidavit will not be accepted.**
- **If both choice A and B are selected, the affidavit will not be accepted.**
- **Affidavit marked N/A will not be accepted.**
- **It is the responsibility of the Affiant to submit a new affidavit if any additional campaign contributions are made after the affidavit is executed but prior to the time the council acts on the matter.**

Instruction sheet may be omitted when submitting the affidavit

Debt Disclosures

(Choose A or B, if option A is indicated please include the required attachment):

Choice A _____ Attached hereto is a list of all debts owed by the affiant to any elected or appointed official of the Parish of Jefferson, and any and all debts owed by any elected or appointed official of the Parish to the Affiant.

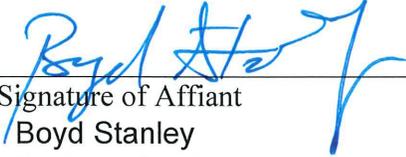
Choice B X _____ There are **NO** debts which would require disclosure under Choice A of this section.

Affiant further said:

That Affiant has employed no person, corporation, firm, association, or other organization, either directly or indirectly, to secure the public contract under which he received payment, other than persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project or in securing the public contract were in the regular course of their duties for Affiant; and

[The remainder of this page is intentionally left blank.]

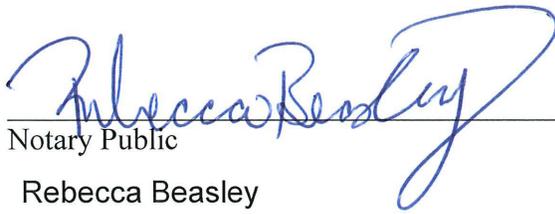
That no part of the contract price received by Affiant was paid or will be paid to any person, corporation, firm, association, or other organization for soliciting the contract, other than the payment of their normal compensation to persons regularly employed by the Affiant whose services in connection with the construction, alteration or demolition of the public building or project were in the regular course of their duties for Affiant.



Signature of Affiant
Boyd Stanley
Sr. Vice-President

Printed Name of Affiant

SWORN AND SUBSCRIBED TO BEFORE ME
ON THE 10th DAY OF May, 2023.



Notary Public
Rebecca Beasley

Printed Name of Notary
N/A

Notary/Bar Roll Number



My commission expires December 17, 2026 **My Commission Expires**

STANDARD INSURANCE REQUIREMENTS FOR BIDDING PURPOSES

All required insurance under this bid shall conform to Jefferson Parish Resolution No. 113646 or No. 113647, as applicable. Contractors may not commence any work under any ensuing contract unless and until all required insurance and associated evidentiary requirements thereto have been met, along with any additional specifications contained in the **Invitation to Bid**. Except as where otherwise precluded by law, the Parish Attorney or his designee, with the concurrence of the Director of Risk Management or his designee, may agree on a case-by-case basis, to deviate from Jefferson Parish's standard insurance requirements, as provided in this Section. Vendors requesting deviation therefrom shall submit such requests in writing, along with compelling substantiation, to the Purchasing Department prior to the bid's due date. Any changes to the insurance requirements will be reflected in the bid specifications and addenda. Prior to contract execution and at all times thereafter during the term of such contract, contractors must provide and continuously maintain all coverages as required by the foregoing Resolutions, and the contract documents. Failure to do so shall be grounds for suspension, discontinuation or termination of the contract.

For bidding purposes, bidders must submit with bid submission a current (valid) insurance certificate evidencing the required coverages. Failure to comply will cause bid to be rejected. The current insurance certificate will be used for proof of insurance at time of evaluation. Thereafter, and prior to contract execution, the low bidder will be required to provide final insurance certificates to the Parish which shall name **the Jefferson Parish, its Districts Departments and Agencies under the direction of the Parish President and the Parish Council** as additional insureds regarding negligence by the contractor for the Commercial General Liability and the Comprehensive Automobile Liability policies. Additionally, said certificates should reflect the name of the Parish Department receiving goods and services and reference the respective Jefferson Parish bid number.

JEFFERSON PARISH REQUIRED STANDARD INSURANCE

WORKER'S COMPENSATION INSURANCE

As required by Louisiana State Statute, exception; Employer's Liability, Section B shall be \$1,000,000 per occurrence when Work is to be over water and involves maritime exposures to cover all employees not covered under the State Worker's Compensation Act, otherwise this limit shall be no less than \$500,000 per occurrence.

Note: If your company is not required by law to carry workmen's compensation insurance, i.e. not a Louisiana company, sole employee of the company, then bidders must request a workmen's compensation insurance declaration affidavit prior to the bid opening date. This insurance declaration affidavit must be fully completed, signed, properly notarized and submitted with the bid. A scanned copy may be submitted with the bid; however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being

rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

COMMERCIAL GENERAL LIABILITY

Shall provide limits not less than the following: \$1,000,000.00 Combined Single Limit per Occurrence for bodily injury and property damage.

COMPREHENSIVE AUTOMOBILE LIABILITY

Bodily injury liability \$1,000,000.00 each person; \$1,000,000.00 each occurrence.
Property Damage Liability \$1,000,000.00 each occurrence.

Note: This category may be omitted if bidders do not/will not utilize company vehicles for the project or do not possess company vehicles. Bidder must request an automobile insurance declaration affidavit prior to the bid opening date. This insurance declaration affidavit must be fully completed, signed, properly notarized and submitted with the bid. A scanned copy of the completed, signed and properly notarized affidavit may be submitted with the bid; however, the successful bidder must submit the original affidavit in its original format and without material alteration upon contract execution. Failure to comply will result in the bid submission being rejected as non-responsive. The Parish reserves the right to award bid to the next lowest responsive and responsible bidder in this event.

DEDUCTIBLES - The Parish Attorney with concurrence of the Director of Risk Management have waived the deductible section of the Terms and Conditions for all Invitations to Bid, until further notice.

UMBRELLA LIABILITY COVERAGE

An umbrella policy or excess may be used to meet minimum requirements.

FOR CONSTRUCTION AND RENOVATION PROJECTS:

The following are required if selected below. Such insurance is due upon contract execution.

OWNER'S PROTECTIVE LIABILITY

To be for the same limits of liability for bodily injury and property damage liability established for commercial general liability.

BUILDER'S RISK INSURANCE

The contractor shall maintain Builder's Risk Insurance at his own expense to insure both the owner (Parish of Jefferson) and contractor as their interest may appear.



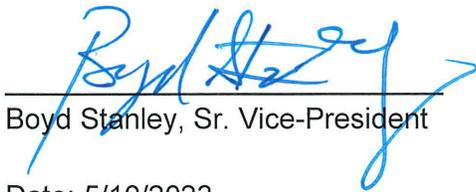
WATER SCIENCE

polydyneinc.com

Louisiana Preference - LA Rev Stat § 38:2251

Bid Number: 50-00142179, Supply of Cationic Polymers

Polydyne Inc. herein states that cationic emulsion polymer is produced at our Plaquemine, LA production facility located at 26790 Hwy 405, Plaquemine, LA 70764. Accordingly, Polydyne Inc. requests preference for Louisiana producers.

A handwritten signature in blue ink, appearing to read 'Boyd Stanley, Sr.', written over a horizontal line.

Boyd Stanley, Sr. Vice-President

Date: 5/10/2023

Request for Taxpayer Identification Number and Certification

**Give Form to the
 requester. Do not
 send to the IRS.**

▶ Go to www.irs.gov/FormW9 for instructions and the latest information.

Print or type. See Specific Instructions on page 3.	<p>1 Name (as shown on your income tax return). Name is required on this line; do not leave this line blank. Polydyne Inc.</p> <p>2 Business name/disregarded entity name, if different from above</p>	
	<p>3 Check appropriate box for federal tax classification of the person whose name is entered on line 1. Check only one of the following seven boxes.</p> <p><input type="checkbox"/> Individual/sole proprietor or single-member LLC <input checked="" type="checkbox"/> C Corporation <input type="checkbox"/> S Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Trust/estate</p> <p><input type="checkbox"/> Limited liability company. Enter the tax classification (C=C corporation, S=S corporation, P=Partnership) ▶ _____</p> <p>Note: Check the appropriate box in the line above for the tax classification of the single-member owner. Do not check LLC if the LLC is classified as a single-member LLC that is disregarded from the owner unless the owner of the LLC is another LLC that is not disregarded from the owner for U.S. federal tax purposes. Otherwise, a single-member LLC that is disregarded from the owner should check the appropriate box for the tax classification of its owner.</p> <p><input type="checkbox"/> Other (see instructions) ▶ _____</p>	<p>4 Exemptions (codes apply only to certain entities, not individuals; see instructions on page 3):</p> <p>Exempt payee code (if any) _____</p> <p>Exemption from FATCA reporting code (if any) _____</p> <p><small>(Applies to accounts maintained outside the U.S.)</small></p>
	<p>5 Address (number, street, and apt. or suite no.) See instructions. 1 Chemical Plant Road</p> <p>6 City, state, and ZIP code Riceboro, GA 31323</p> <p>7 List account number(s) here (optional)</p>	<p>Requester's name and address (optional)</p>

Part I Taxpayer Identification Number (TIN)

Enter your TIN in the appropriate box. The TIN provided must match the name given on line 1 to avoid backup withholding. For individuals, this is generally your social security number (SSN). However, for a resident alien, sole proprietor, or disregarded entity, see the instructions for Part I, later. For other entities, it is your employer identification number (EIN). If you do not have a number, see *How to get a TIN*, later.

Note: If the account is in more than one name, see the instructions for line 1. Also see *What Name and Number To Give the Requester* for guidelines on whose number to enter.

Social security number									
or									
Employer identification number									
3	4	-	1	8	1	0	2	8	3

Part II Certification

Under penalties of perjury, I certify that:

- The number shown on this form is my correct taxpayer identification number (or I am waiting for a number to be issued to me); and
- I am not subject to backup withholding because: (a) I am exempt from backup withholding, or (b) I have not been notified by the Internal Revenue Service (IRS) that I am subject to backup withholding as a result of a failure to report all interest or dividends, or (c) the IRS has notified me that I am no longer subject to backup withholding; and
- I am a U.S. citizen or other U.S. person (defined below); and
- The FATCA code(s) entered on this form (if any) indicating that I am exempt from FATCA reporting is correct.

Certification instructions. You must cross out item 2 above if you have been notified by the IRS that you are currently subject to backup withholding because you have failed to report all interest and dividends on your tax return. For real estate transactions, item 2 does not apply. For mortgage interest paid, acquisition or abandonment of secured property, cancellation of debt, contributions to an individual retirement arrangement (IRA), and generally, payments other than interest and dividends, you are not required to sign the certification, but you must provide your correct TIN. See the instructions for Part II, later.

Sign Here	Signature of U.S. person ▶	Date ▶ 5/10/2023
------------------	----------------------------	------------------

General Instructions

Section references are to the Internal Revenue Code unless otherwise noted.

Future developments. For the latest information about developments related to Form W-9 and its instructions, such as legislation enacted after they were published, go to www.irs.gov/FormW9.

Purpose of Form

An individual or entity (Form W-9 requester) who is required to file an information return with the IRS must obtain your correct taxpayer identification number (TIN) which may be your social security number (SSN), individual taxpayer identification number (ITIN), adoption taxpayer identification number (ATIN), or employer identification number (EIN), to report on an information return the amount paid to you, or other amount reportable on an information return. Examples of information returns include, but are not limited to, the following.

- Form 1099-DIV (dividends, including those from stocks or mutual funds)
- Form 1099-MISC (various types of income, prizes, awards, or gross proceeds)
- Form 1099-B (stock or mutual fund sales and certain other transactions by brokers)
- Form 1099-S (proceeds from real estate transactions)
- Form 1099-K (merchant card and third party network transactions)
- Form 1098 (home mortgage interest), 1098-E (student loan interest), 1098-T (tuition)
- Form 1099-C (canceled debt)
- Form 1099-A (acquisition or abandonment of secured property)

Use Form W-9 only if you are a U.S. person (including a resident alien), to provide your correct TIN.

If you do not return Form W-9 to the requester with a TIN, you might be subject to backup withholding. See What is backup withholding, later.

CLARIFLOC CE-293 POLYMER

PRINCIPAL USES

CLARIFLOC CE-293 is a **high** charge cationic polyacrylamide in emulsion form that is used as a flocculant in a wide variety of municipal wastewater treatment applications. It has been successfully applied in all liquid/solids separation systems including clarification, thickening, and dewatering.

TYPICAL PROPERTIES

Physical Form	Clear to Milky White Liquid
Cationicity	60 %
Active Polyacrylamide Min.	42 %
Freezing Point	7 F. (-14 C.)
Density	8.5 - 8.7 lbs/gal.

PREPARATION AND FEEDING

CLARIFLOC CE-293 is a single component emulsion polymer that must be pre-diluted in water before use. In most cases, this product should not be applied neat. One method for dilution is adding the neat polymer into the vortex of a mixed tank at a concentration between 0.25-1.0% polymer (0.5% is optimum) by weight. The polymer can also be injected through a number of commercially available systems that provide in-line mechanical mixing. The best feed systems use initial high energy mixing (>1000 rpm) for a short time (<30 sec) to achieve good dispersion followed by low energy mixing (<400 rpm) for a longer time (10-30 min). Polymer solutions should be aged for 15-60 minutes for best results. Solution shelf life is 8-16 hours.

MATERIALS OF CONSTRUCTION

Cross-linked polyethylene, fiberglass, stainless steel or lined steel are the preferred materials of construction for bulk tanks. Avoid natural rubber and Buna-N gaskets as these materials swell when placed in contact with neat polymer. Unlined mild steel, black iron, galvanized steel, copper or brass are not recommended in any part of the feed system. Stainless steel, Viton or Teflon are the best choices for pump heads. For feed lines, use PVC or reinforced Tygon tubing.

MANUFACTURING SPECIFICATIONS

Total Solids	45 - 52 %
Residual AcAm	< 1000 ppm
Neat Viscosity	500 - 2000 cPs
UL Viscosity	2.3 - 3.3 cPs

HANDLING AND STORAGE

Suggested in-plant storage life is 6 months in unopened drums. For best results, store at 50-80 F. Bulk tanks should be mixed by periodically recirculating the contents bottom to top. Bulk tanks can also be fitted with an agitator type mixer that reaches the bottom 2 feet of the tank. Drums and bins should be mixed very well before first use and weekly after that. Do not allow emulsion polymers to freeze. Should freezing occur, allow the product to thaw thoroughly in a heated area and mix well before attempting to use it. For spills of CLARIFLOC CE-293, sprinkle vermiculite or equivalent absorbant over the spill area and sweep the material into approved chemical disposal containers. Do not spray water onto a spill because the resulting gel is very difficult to clean up.

SAFETY INFORMATION

CLARIFLOC CE-293 is a mildly acidic product that can irritate the skin and eyes and should be handled accordingly. Gloves, goggles and apron are highly recommended. Anyone responsible for the procurement, use or disposal of this product should familiarize themselves with the appropriate safety and handling precautions involved. Such information is outlined in the POLYDYNE Material Safety Data Sheet. In the event of an emergency with this product, contact Chemtrec anytime day or night at (800) 424-9300.

SHIPPING

CLARIFLOC CE-293 Polymer is shipped in 55 gallon drums containing 450 pounds net or in 275 gallon tote bins containing 2300 pounds net. Bulk quantities are also available.

ADDITIONAL INFORMATION

To place an order or obtain technical information from anywhere in the continental United States, call toll free:

(800) 848-7659

For additional information, please refer to the Safety Data Sheet (SDS)

All statements, information and data given herein are believed to be accurate, but are presented without warranty, expressed or implied. Statements concerning possible use are made without representation or warranty that any such use is free of patent infringement, and is not a recommendation to infringe on any patent. The user should not assume that all safety measures are indicated or that other measures may not be required. Any determination of the suitability of a particular product for any use contemplated by the user is the sole responsibility of the user.



SAFETY DATA SHEET

According to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: **CLARIFLOC™ CE-293**

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: POLYDYNE INC
1 Chemical Plant Road
PO BOX 279
Riceboro, GA 31323

Telephone: 1-800-848-7659

Telefax: (912)-884-8770

E-mail address: -

1.4. Emergency telephone number

24-hour emergency number: 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified.

2.2. Label elements

Labelling according to paragraph (f) of 29 CFR 1910.1200:

Hazard symbol(s): None.

Signal word: None.

Hazard statement(s): None.

Precautionary statement(s): None.

2.3. Other hazards

Spills produce extremely slippery surfaces.

For explanation of abbreviations see Section 16.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable, this product is a mixture.

3.2. Mixtures

Hazardous components

Distillates (petroleum), hydrotreated light

Concentration/-range: 20 - 30%

CAS Number: 64742-47-8

Classification according to paragraph (d)
of 29 CFR 1910.1200: Asp. Tox. 1;H304

Notes

Does not result in classification of the mixture if the kinematic viscosity is greater than 20.5 mm²/s measured at 40°C.

Poly(oxy-1,2-ethanediyl), α -tridecyl-w-hydroxy-, branched

Concentration/-range: < 5%

CAS Number: 69011-36-5

Classification according to paragraph (d)
of 29 CFR 1910.1200: Acute Tox. 4;H302, Eye Dam. 1;H318

For explanation of abbreviations see section 16

SECTION 4: First aid measures

SECTION 4: First aid measures**4.1. Description of first aid measures***Inhalation:*

Move to fresh air. No hazards which require special first aid measures.

Skin contact:

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. In case of persistent skin irritation, consult a physician.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.

Ingestion:

Rinse mouth with water. Do NOT induce vomiting. Call a physician or poison control centre immediately.

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

None under normal use.

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

None reasonably foreseeable.

Other information:

None.

SECTION 5: Firefighting measures**5.1. Extinguishing media***Suitable extinguishing media:*

Water. Water spray. Foam. Carbon dioxide (CO₂). Dry powder.
Warning! Spills produce extremely slippery surfaces.

Unsuitable extinguishing media:

None known.

5.2. Special hazards arising from the substance or mixture*Hazardous decomposition products:*

Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NO_x), carbon oxides (CO_x). Ammonia (NH₃). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

5.3. Advice for firefighters*Protective measures:*

Wear self-contained breathing apparatus and protective suit.

Other information:

Spills produce extremely slippery surfaces.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures***Personal precautions:*

Do not touch or walk through spilled material. Spills produce extremely slippery surfaces.

Protective equipment:

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

Emergency procedures:

Keep people away from spill/leak. Prevent further leakage or spillage if safe to do so.

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. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Large spills:

Do not flush with water. Dam up. Soak up with inert absorbent material. Clean up promptly by scoop or vacuum.

Residues:

After cleaning, flush away traces with water.

6.4. Reference to other sections

SECTION 7: Handling and storage; SECTION 8: Exposure controls/personal protection; SECTION 13: Disposal considerations;

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid contact with skin and eyes. Renders surfaces extremely slippery when spilled. When using, do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material. Incompatible with oxidizing agents.

7.3. Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters***Occupational exposure limits:*

Distillates (petroleum), hydrotreated light
ACGIH: 200 mg/m³ (8 hours) (vapors)

8.2. Exposure controls

Appropriate engineering controls:

Ensure adequate ventilation, especially in confined areas. Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

Individual protection measures, such as personal protective equipment:

a) Eye/face protection:

Safety glasses with side-shields. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

b) Skin protection:

i) *Hand protection:* PVC or other plastic material gloves. Be aware that liquid may permeate gloves, frequent change is advised. Suitable gloves can be recommended by the glove supplier. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

ii) *Other:* Wear coveralls and/or chemical apron and rubber footwear where physical contact can occur. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

c) Respiratory protection:

No personal respiratory protective equipment normally required.

d) Additional advice:

Wash hands before breaks and immediately after handling the product. Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls:

Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance:	Viscous liquid, Milky.
b) Odour:	Aliphatic.
c) Odour Threshold:	No data available.
d) pH:	Not applicable.
e) Melting point/freezing point:	< 5°C
f) Initial boiling point and boiling range:	> 100°C

g) Flash point:	Does not flash.
h) Evaporation rate:	No data available.
i) Flammability (solid, gas):	Not applicable.
j) Upper/lower flammability or explosive limits:	Not expected to create explosive atmospheres.
k) Vapour pressure:	2.3 kPa @ 20°C
l) Vapour density:	0.804 g/L @ 20°C
m) Relative density:	1.0 - 1.2 (See Technical Bulletin or Product Specifications for a more precise value, if available)
n) Solubility(ies):	Completely miscible.
o) Partition coefficient n-octanol/water (log value):	Not applicable.
p) Autoignition temperature:	Not applicable.
q) Decomposition temperature:	> 150°C
r) Viscosity:	> 20.5 mm ² /s @ 40°C
s) Kinematic viscosity:	No data available.
t) Explosive properties:	Not expected to be explosive based on the chemical structure.
u) Oxidizing properties:	Not expected to be oxidising based on the chemical structure.
v) Particle characteristics:	Not applicable.

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

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

Protect from frost, heat and sunlight.

10.5. Incompatible materials

Oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NO_x), carbon oxides (CO_x). Ammonia (NH₃). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on the product as supplied:

<i>Acute oral toxicity:</i>	LD50/oral/rat > 5000 mg/kg (Estimated)
<i>Acute dermal toxicity:</i>	LD50/dermal/rat > 5000 mg/kg. (Estimated)
<i>Acute inhalation toxicity:</i>	The product is not expected to be toxic by inhalation.
<i>Skin corrosion/irritation:</i>	Non-irritating to skin.
<i>Serious eye damage/eye irritation:</i>	Not irritating. (OECD 437)
<i>Respiratory/skin sensitisation:</i>	Not sensitizing.
<i>Mutagenicity:</i>	Not mutagenic.
<i>Carcinogenicity:</i>	Not carcinogenic.
<i>Reproductive toxicity:</i>	Not toxic for reproduction.
<i>STOT - Single exposure:</i>	No known effects.
<i>STOT - Repeated exposure:</i>	No known effect.
<i>Aspiration hazard:</i>	Due to the viscosity, this product does not present an aspiration hazard.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

<i>Acute oral toxicity:</i>	LD50/oral/rat > 5000 mg/kg (OECD 401)
<i>Acute dermal toxicity:</i>	LD50/dermal/rabbit > 5000 mg/kg (OECD 402)
<i>Acute inhalation toxicity:</i>	LC0/inhalation/4 hours/rat \geq 4951 mg/m ³ (vapors) (OECD 403) (Based on results obtained from tests on analogous products)
<i>Skin corrosion/irritation:</i>	Not irritating. (OECD 404) Repeated exposure may cause skin dryness or cracking.

<i>Serious eye damage/eye irritation:</i>	Not irritating. (OECD 405)
<i>Respiratory/skin sensitisation:</i>	By analogy with similar products, this product is not expected to be sensitizing. (OECD 406)
<i>Mutagenicity:</i>	Not mutagenic. (OECD 471, 473, 474, 476, 478, 479)
<i>Carcinogenicity:</i>	Carcinogenicity study in rats (OECD 451): Negative.
<i>Reproductive toxicity:</i>	By analogy with similar substances, this substance is not expected to be toxic for reproduction. NOAEL/rat = 300 ppm. (OECD 421)
<i>STOT - Single exposure:</i>	No known effects.
<i>STOT - Repeated exposure:</i>	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/90 days \geq 3000 mg/kg/day (OECD 408) (Based on results obtained from tests on analogous products)
<i>Aspiration hazard:</i>	May be fatal if swallowed and enters airways.
<u><i>Poly(oxy-1,2-ethanediyl), α-tridecyl-w-hydroxy-, branched</i></u>	
<i>Acute oral toxicity:</i>	LD50/oral/rat = 500 - 2000 mg/kg
<i>Acute dermal toxicity:</i>	LD50/dermal/rabbit > 2000 mg/kg
<i>Acute inhalation toxicity:</i>	No data available.
<i>Skin corrosion/irritation:</i>	Not irritating. (OECD 404)
<i>Serious eye damage/eye irritation:</i>	Causes serious eye irritation. (OECD 405)
<i>Respiratory/skin sensitisation:</i>	The results of testing on guinea pigs showed this material to be non-sensitizing.
<i>Mutagenicity:</i>	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
<i>Carcinogenicity:</i>	Based on the absence of mutagenicity, it is unlikely that the substance is carcinogenic.

<i>Reproductive toxicity:</i>	Based on available data, product is not expected to be toxic for reproduction. Two-Generation Reproduction Toxicity (OECD 416) - NOAEL/rat > 250 mg/kg/day Prenatal Development Toxicity Study (OECD 414) - NOAEL/Maternal toxicity/rat > 50 mg/kg/day - NOAEL/Developmental toxicity/rat > 50 mg/kg/day
<i>STOT - Single exposure:</i>	No known effects.
<i>STOT - Repeated exposure:</i>	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/600 days = 50 mg/kg/day
<i>Aspiration hazard:</i>	No known effects.

SECTION 12: Ecological information

12.1. Toxicity

Information on the product as supplied:

<i>Acute toxicity to fish:</i>	LC50/Fish/96 hours = 10 - 100 mg/L (Estimated)
<i>Acute toxicity to invertebrates:</i>	EC50/Daphnia magna/48 hours = 10 - 100 mg/L (Estimated)
<i>Acute toxicity to algae:</i>	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.
<i>Chronic toxicity to fish:</i>	No data available.
<i>Chronic toxicity to invertebrates:</i>	No data available.
<i>Toxicity to microorganisms:</i>	No data available.
<i>Effects on terrestrial organisms:</i>	No data available.
<i>Sediment toxicity:</i>	No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

<i>Acute toxicity to fish:</i>	LC0/Oncorhynchus mykiss/96 hours > 1000 mg/L (OECD 203)
<i>Acute toxicity to invertebrates:</i>	EC0/Daphnia magna/48 hours > 1000 mg/L (OECD 202)
<i>Acute toxicity to algae:</i>	IC0/Pseudokirchneriella subcapitata/72 hours > 1000 mg/L (OECD 201)

<i>Chronic toxicity to fish:</i>	NOEC/Oncorhynchus mykiss/28 days > 1000 mg/L
<i>Chronic toxicity to invertebrates:</i>	NOEC/Daphnia magna/21 days > 1000 mg/L
<i>Toxicity to microorganisms:</i>	EC50/Tetrahymena pyriformis/ 48h > 1000 mg/L.
<i>Effects on terrestrial organisms:</i>	No data available.
<i>Sediment toxicity:</i>	No data available. Readily biodegradable, exposure to sediment is unlikely.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

<i>Acute toxicity to fish:</i>	LC50/Cyprinus carpio/96 hours = 1 - 10 mg/L (OECD 203)
<i>Acute toxicity to invertebrates:</i>	EC50/Daphnia/48 hours = 1 - 10 mg/L (OECD 202)
<i>Acute toxicity to algae:</i>	IC50/Desmodesmus subspicatus/72 hours = 1 - 10 mg/L (OECD 201)
<i>Chronic toxicity to fish:</i>	No data available.
<i>Chronic toxicity to invertebrates:</i>	NOEC/Daphnia magna/21 days > 1 mg/L (OECD 202)
<i>Toxicity to microorganisms:</i>	EC10/activated sludge/17 hours > 10000 mg/L (DIN 38412-8)
<i>Effects on terrestrial organisms:</i>	No data available.
<i>Sediment toxicity:</i>	No data available.

12.2. Persistence and degradability

Information on the product as supplied:

<i>Degradation:</i>	Based on the degradability data of the components, this product is expected to be readily (bio)degradable according to OECD criteria.
<i>Hydrolysis:</i>	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.
<i>Photolysis:</i>	No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Degradation: Readily biodegradable. 67.6% / 28 days (OECD 301 F) ; 68.8% / 28 days (OECD 306) ; 61.2% / 61 days (OECD 304 A)

Hydrolysis: Does not hydrolyse.

Photolysis: No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Degradation: Readily biodegradable. > 60% / 28 days (OECD 301 B)

Hydrolysis: Does not hydrolyse.

Photolysis: No data available.

12.3. Bioaccumulative potential

Information on the product as supplied:

The product is not expected to bioaccumulate.

Partition co-efficient (Log Pow): Not applicable.

Bioconcentration factor (BCF): No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Partition co-efficient (Log Pow): 3 - 6

Bioconcentration factor (BCF): No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Partition co-efficient (Log Pow): > 3

Bioconcentration factor (BCF): No data available.

12.4. Mobility in soil

Information on the product as supplied:

No data available.

Relevant information on the hazardous components:Distillates (petroleum), hydrotreated light

Koc: No data available.

Poly(oxy-1,2-ethanediyl), α -tridecyl-w-hydroxy-, branched

Koc: > 5000

12.5. Other adverse effects

None known.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**Waste from residues/unused products:

Dispose in accordance with local and national regulations.

Contaminated packaging:

Rinse empty containers with water and use the rinse-water to prepare the working solution. If recycling is not practicable, dispose of in compliance with local regulations. Can be landfilled or incinerated, when in compliance with local regulations.

Recycling:

Store containers and offer for recycling of material when in accordance with the local regulations.

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 as active on the inventory or are exempt from listing.

US SARA Reporting Requirements:

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

SARA Title III Sections:

Section 302 (TPQ) - Reportable Quantity:
Not concerned.

Section 304 - Reportable Quantity:
Not concerned.

Section 313 (De minimis concentration):
Not concerned.

Clean Water Act

Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity:
Not concerned.

Clean Air Act

Section 112(r) Accidental release prevention requirements (40 CFR 68) - Reportable Quantity:
Not concerned.

CERCLA

Hazardous Substances List (40 CFR 302.4) - Reportable Quantity:
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

SECTION 16: Other informationNFPA and HMIS Ratings:

NFPA:

SAFETY DATA SHEET

CLARIFLOC™ CE-293

Health: 0
Flammability: 1
Instability: 0



HMIS:

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

This data sheet contains changes from the previous version in section(s):

SECTION 8. Exposure controls/personal protection, SECTION 9. Physical and chemical properties, SECTION 16. Other Information.

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

Acronyms

STOT = Specific target organ toxicity

Abbreviations

Acute Tox. 4 = Acute toxicity Category Code 4
Asp. Tox. 1 = Aspiration hazard Category Code 1
Eye Dam 1 = Serious eye damage/eye irritation Category Code 1

Hazard statements

H302 - Harmful if swallowed
H304 - May be fatal if swallowed and enters airways
H318 - Causes serious eye damage

Training advice:

Do not handle until all safety precautions have been read and understood.

This SDS was prepared in accordance with the following:

U.S. Code of Federal Regulations 29 CFR 1910.1200

Version: 21.01.a

ENCC046

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.

CLARIFLOC CE-293A POLYMER

PRINCIPAL USES

CLARIFLOC CE-293A is a **high** charge cationic polyacrylamide in emulsion form that is used as a flocculant in a wide variety of municipal wastewater treatment applications. It has been successfully applied in all liquid/solids separation systems including clarification, thickening, and dewatering.

TYPICAL PROPERTIES

Physical Form	Clear to Milky White Liquid
Cationicity	60 %
Active Polyacrylamide Min.	35 %
Freezing Point	7 F. (-14 C.)
Density	8.5 - 8.7

PREPARATION AND FEEDING

CLARIFLOC CE-293A is a single component emulsion polymer that must be pre-diluted in water before use. In most cases, this product should not be applied neat. One method for dilution is adding the neat polymer into the vortex of a mixed tank at a concentration between 0.25-1.0% polymer (0.5% is optimum) by weight. The polymer can also be injected through a number of commercially available systems that provide in-line mechanical mixing. The best feed systems use initial high energy mixing (>1000 rpm) for a short time (<30 sec) to achieve good dispersion followed by low energy mixing (<400 rpm) for a longer time (10-30 min). Polymer solutions should be aged for 15-60 minutes for best results. Solution shelf life is 8-16 hours.

MATERIALS OF CONSTRUCTION

Cross-linked polyethylene, fiberglass, stainless steel or lined steel are the preferred materials of construction for bulk tanks. Avoid natural rubber and Buna-N gaskets as these materials swell when placed in contact with neat polymer. Unlined mild steel, black iron, galvanized steel, copper or brass are not recommended in any part of the feed system. Stainless steel, Viton or Teflon are the best choices for pump heads. For feed lines, use PVC or reinforced Tygon tubing.

MANUFACTURING SPECIFICATIONS

Total Solids	41.0 - 49.0 %
Residual AcAm	< 1000 ppm
Neat Viscosity	300 - 2000 cPs
UL Viscosity	3.0 - 4.0 cPs

HANDLING AND STORAGE

Suggested in-plant storage life is 6 months in unopened drums. For best results, store at 50-80 F. Bulk tanks should be mixed by periodically recirculating the contents bottom to top. Bulk tanks can also be fitted with an agitator type mixer that reaches the bottom 2 feet of the tank. Drums and bins should be mixed very well before first use and weekly after that. Do not allow emulsion polymers to freeze. Should freezing occur, allow the product to thaw thoroughly in a heated area and mix well before attempting to use it. For spills of CLARIFLOC CE-293A, sprinkle vermiculite or equivalent absorbent over the spill area and sweep the material into approved chemical disposal containers. Do not spray water onto a spill because the resulting gel is very difficult to clean up.

SAFETY INFORMATION

CLARIFLOC CE-293A is a mildly acidic product that can irritate the skin and eyes and should be handled accordingly. Gloves, goggles and apron are highly recommended. Anyone responsible for the procurement, use or disposal of this product should familiarize themselves with the appropriate safety and handling precautions involved. Such information is outlined in the **POLYDYNE** Material Safety Data Sheet. In the event of an emergency with this product, contact Chemtrec anytime day or night at (800) 424-9300.

SHIPPING

CLARIFLOC CE-293A Polymer is shipped in 55 gallon drums containing 450 pounds net or in 275 gallon totes containing 2300 pounds. Bulk quantities are also available.

ADDITIONAL INFORMATION

To place an order or obtain technical information from anywhere in the continental United States, call toll free:

(800) 848-7659

For additional information, please refer to the Safety Data Sheet (SDS)

All statements, information and data given herein are believed to be accurate, but are presented without warranty, expressed or implied. Statements concerning possible use are made without representation or warranty that any such use is free of patent infringement, and is not a recommendation to infringe on any patent. The user should not assume that all safety measures are indicated or that other measures may not be required. Any determination of the suitability of a particular product for any use contemplated by the user is the sole responsibility of the user.



SAFETY DATA SHEET

According to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: **CLARIFLOC CE-293A**

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: POLYDYNE INC
1 Chemical Plant Road
PO BOX 279
Riceboro, GA 31323

Telephone: 1-800-848-7659

Telefax: (912)-884-8770

E-mail address: -

1.4. Emergency telephone number

24-hour emergency number: 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified.

2.2. Label elements

Labelling according to paragraph (f) of 29 CFR 1910.1200:

Hazard symbol(s): None.

Signal word: None.

Hazard statement(s): None.

Precautionary statement(s): None.

2.3. Other hazards

Spills produce extremely slippery surfaces.

For explanation of abbreviations see Section 16.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable, this product is a mixture.

3.2. Mixtures

Hazardous components

Distillates (petroleum), hydrotreated light

Concentration/ -range: 20 - 30%

CAS Number: 64742-47-8

Classification according to paragraph (d)
of 29 CFR 1910.1200: Asp. Tox. 1;H304

Notes

Does not result in classification of the mixture if the kinematic viscosity is greater than 20.5 mm²/s measured at 40°C.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Concentration/ -range: < 5%

CAS Number: 69011-36-5

Classification according to paragraph (d)
of 29 CFR 1910.1200: Acute Tox. 4;H302, Eye Dam. 1;H318

For explanation of abbreviations see section 16

SECTION 4: First aid measures

SECTION 4: First aid measures*4.1. Description of first aid measures**Inhalation:*

Move to fresh air. No hazards which require special first aid measures.

Skin contact:

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. In case of persistent skin irritation, consult a physician.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.

Ingestion:

Rinse mouth with water. Do NOT induce vomiting. Call a physician or poison control centre immediately.

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

None under normal use.

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

None reasonably foreseeable.

Other information:

None.

SECTION 5: Firefighting measures*5.1. Extinguishing media**Suitable extinguishing media:*

Water. Water spray. Foam. Carbon dioxide (CO₂). Dry powder.

Warning! Spills produce extremely slippery surfaces.

Unsuitable extinguishing media:

None known.

*5.2. Special hazards arising from the substance or mixture**Hazardous decomposition products:*

Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NO_x), carbon oxides (CO_x). Ammonia (NH₃). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

*5.3. Advice for firefighters**Protective measures:*

Wear self-contained breathing apparatus and protective suit.

Other information:

Spills produce extremely slippery surfaces.

SECTION 6: Accidental release measures*6.1. Personal precautions, protective equipment and emergency procedures**Personal precautions:*

Do not touch or walk through spilled material. Spills produce extremely slippery surfaces.

Protective equipment:

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

Emergency procedures:

Keep people away from spill/leak. Prevent further leakage or spillage if safe to do so.

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. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Large spills:

Do not flush with water. Dam up. Soak up with inert absorbent material. Clean up promptly by scoop or vacuum.

Residues:

After cleaning, flush away traces with water.

6.4. Reference to other sections

SECTION 7: Handling and storage; SECTION 8: Exposure controls/personal protection; SECTION 13: Disposal considerations;

SECTION 7: Handling and storage*7.1. Precautions for safe handling*

Avoid contact with skin and eyes. Renders surfaces extremely slippery when spilled. When using, do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material. Incompatible with oxidizing agents.

7.3. Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection*8.1. Control parameters**Occupational exposure limits:*

Distillates (petroleum), hydrotreated light

ACGIH: 200 mg/m³ (8 hours) (vapors)

8.2. Exposure controls

Appropriate engineering controls:

Ensure adequate ventilation, especially in confined areas. Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

Individual protection measures, such as personal protective equipment:

a) Eye/face protection:

Safety glasses with side-shields. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

b) Skin protection:

i) *Hand protection:* PVC or other plastic material gloves. Be aware that liquid may permeate gloves, frequent change is advised. Suitable gloves can be recommended by the glove supplier. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

ii) *Other:* Wear coveralls and/or chemical apron and rubber footwear where physical contact can occur. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

c) Respiratory protection:

No personal respiratory protective equipment normally required.

d) Additional advice:

Wash hands before breaks and immediately after handling the product. Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls:

Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance:	Viscous liquid, Milky.
b) Odour:	Aliphatic.
c) Odour Threshold:	No data available.
d) pH:	Not applicable.
e) Melting point/freezing point:	< 5°C
f) Initial boiling point and boiling range:	> 100°C

g) Flash point:	Does not flash.
h) Evaporation rate:	No data available.
i) Flammability (solid, gas):	Not applicable.
j) Upper/lower flammability or explosive limits:	Not expected to create explosive atmospheres.
k) Vapour pressure:	2.3 kPa @ 20°C
l) Vapour density:	0.804 g/L @ 20°C
m) Relative density:	1.0 - 1.2 (See Technical Bulletin or Product Specifications for a more precise value, if available)
n) Solubility(ies):	Completely miscible.
o) Partition coefficient n-octanol/water (log value):	Not applicable.
p) Autoignition temperature:	Not applicable.
q) Decomposition temperature:	> 150°C
r) Viscosity:	> 20.5 mm ² /s @ 40°C
s) Kinematic viscosity:	No data available.
t) Explosive properties:	Not expected to be explosive based on the chemical structure.
u) Oxidizing properties:	Not expected to be oxidising based on the chemical structure.
v) Particle characteristics:	Not applicable.

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

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

Protect from frost, heat and sunlight.

10.5. Incompatible materials

Oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NO_x), carbon oxides (CO_x). Ammonia (NH₃). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on the product as supplied:

Acute oral toxicity:	LD50/oral/rat > 5000 mg/kg (Estimated)
Acute dermal toxicity:	LD50/dermal/rat > 5000 mg/kg. (Estimated)
Acute inhalation toxicity:	The product is not expected to be toxic by inhalation.
Skin corrosion/irritation:	Non-irritating to skin.
Serious eye damage/eye irritation:	Not irritating. (OECD 437)
Respiratory/skin sensitisation:	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 effect.
Aspiration hazard:	Due to the viscosity, this product does not present an aspiration hazard.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Acute oral toxicity:	LD50/oral/rat > 5000 mg/kg (OECD 401)
Acute dermal toxicity:	LD50/dermal/rabbit > 5000 mg/kg (OECD 402)
Acute inhalation toxicity:	LC0/inhalation/4 hours/rat \geq 4951 mg/m ³ (vapors) (OECD 403) (Based on results obtained from tests on analogous products)
Skin corrosion/irritation:	Not irritating. (OECD 404) Repeated exposure may cause skin dryness or cracking.

<i>Serious eye damage/eye irritation:</i>	Not irritating. (OECD 405)
<i>Respiratory/skin sensitisation:</i>	By analogy with similar products, this product is not expected to be sensitizing. (OECD 406)
<i>Mutagenicity:</i>	Not mutagenic. (OECD 471, 473, 474, 476, 478, 479)
<i>Carcinogenicity:</i>	Carcinogenicity study in rats (OECD 451): Negative.
<i>Reproductive toxicity:</i>	By analogy with similar substances, this substance is not expected to be toxic for reproduction. NOAEL/rat = 300 ppm. (OECD 421)
<i>STOT - Single exposure:</i>	No known effects.
<i>STOT - Repeated exposure:</i>	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/90 days \geq 3000 mg/kg/day (OECD 408) (Based on results obtained from tests on analogous products)
<i>Aspiration hazard:</i>	May be fatal if swallowed and enters airways.
<u><i>Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched</i></u>	
<i>Acute oral toxicity:</i>	LD50/oral/rat = 500 - 2000 mg/kg
<i>Acute dermal toxicity:</i>	LD50/dermal/rabbit > 2000 mg/kg
<i>Acute inhalation toxicity:</i>	No data available.
<i>Skin corrosion/irritation:</i>	Not irritating. (OECD 404)
<i>Serious eye damage/eye irritation:</i>	Causes serious eye irritation. (OECD 405)
<i>Respiratory/skin sensitisation:</i>	The results of testing on guinea pigs showed this material to be non-sensitizing.
<i>Mutagenicity:</i>	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
<i>Carcinogenicity:</i>	Based on the absence of mutagenicity, it is unlikely that the substance is carcinogenic.

<i>Reproductive toxicity:</i>	Based on available data, product is not expected to be toxic for reproduction. Two-Generation Reproduction Toxicity (OECD 416) - NOAEL/rat > 250 mg/kg/day Prenatal Development Toxicity Study (OECD 414) - NOAEL/Maternal toxicity/rat > 50 mg/kg/day - NOAEL/Developmental toxicity/rat > 50 mg/kg/day
<i>STOT - Single exposure:</i>	No known effects.
<i>STOT - Repeated exposure:</i>	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/600 days = 50 mg/kg/day
<i>Aspiration hazard:</i>	No known effects.

SECTION 12: Ecological information

12.1. Toxicity

Information on the product as supplied:

<i>Acute toxicity to fish:</i>	LC50/Fish/96 hours = 10 - 100 mg/L (Estimated)
<i>Acute toxicity to invertebrates:</i>	EC50/Daphnia magna/48 hours = 10 - 100 mg/L (Estimated)
<i>Acute toxicity to algae:</i>	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.
<i>Chronic toxicity to fish:</i>	No data available.
<i>Chronic toxicity to invertebrates:</i>	No data available.
<i>Toxicity to microorganisms:</i>	No data available.
<i>Effects on terrestrial organisms:</i>	No data available.
<i>Sediment toxicity:</i>	No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

<i>Acute toxicity to fish:</i>	LC0/Oncorhynchus mykiss/96 hours > 1000 mg/L (OECD 203)
<i>Acute toxicity to invertebrates:</i>	EC0/Daphnia magna/48 hours > 1000 mg/L (OECD 202)
<i>Acute toxicity to algae:</i>	IC0/Pseudokirchneriella subcapitata/72 hours > 1000 mg/L (OECD 201)

Chronic toxicity to fish:	NOEC/Oncorhynchus mykiss/28 days > 1000 mg/L
Chronic toxicity to invertebrates:	NOEC/Daphnia magna/21 days > 1000 mg/L
Toxicity to microorganisms:	EC50/Tetrahymena pyriformis/ 48h > 1000 mg/L.
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available. Readily biodegradable, exposure to sediment is unlikely.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Acute toxicity to fish:	LC50/Cyprinus carpio/96 hours = 1 - 10 mg/L (OECD 203)
Acute toxicity to invertebrates:	EC50/Daphnia/48 hours = 1 - 10 mg/L (OECD 202)
Acute toxicity to algae:	IC50/Desmodesmus subspicatus/72 hours = 1 - 10 mg/L (OECD 201)
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	NOEC/Daphnia magna/21 days > 1 mg/L (OECD 202)
Toxicity to microorganisms:	EC10/activated sludge/17 hours > 10000 mg/L (DIN 38412-8)
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

12.2. Persistence and degradability

Information on the product as supplied:

Degradation:	Based on the degradability data of the components, this product is expected to be readily (bio)degradable according to OECD criteria.
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.
Photolysis:	No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Degradation: Readily biodegradable. 67.6% / 28 days (OECD 301 F) ; 68.8% / 28 days (OECD 306) ; 61.2% / 61 days (OECD 304 A)

Hydrolysis: Does not hydrolyse.

Photolysis: No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Degradation: Readily biodegradable. > 60% / 28 days (OECD 301 B)

Hydrolysis: Does not hydrolyse.

Photolysis: No data available.

12.3. *Bioaccumulative potential*

Information on the product as supplied:

The product is not expected to bioaccumulate.

Partition co-efficient (Log Pow): Not applicable.

Bioconcentration factor (BCF): No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Partition co-efficient (Log Pow): 3 - 6

Bioconcentration factor (BCF): No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Partition co-efficient (Log Pow): > 3

Bioconcentration factor (BCF): No data available.

12.4. *Mobility in soil*

Information on the product as supplied:

No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Koc: No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Koc: > 5000

12.5. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products:

Dispose in accordance with local and national regulations.

Contaminated packaging:

Rinse empty containers with water and use the rinse-water to prepare the working solution. If recycling is not practicable, dispose of in compliance with local regulations. Can be landfilled or incinerated, when in compliance with local regulations.

Recycling:

Store containers and offer for recycling of material when in accordance with the local regulations.

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 as active on the inventory or are exempt from listing.

US SARA Reporting Requirements:

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

SARA Title III Sections:

Section 302 (TPQ) - Reportable Quantity:
Not concerned.

Section 304 - Reportable Quantity:
Not concerned.

Section 313 (De minimis concentration):
Not concerned.

Clean Water Act

Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity:
Not concerned.

Clean Air Act

Section 112(r) Accidental release prevention requirements (40 CFR 68) - Reportable Quantity:
Not concerned.

CERCLA

Hazardous Substances List (40 CFR 302.4) - Reportable Quantity:
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

SECTION 16: Other informationNFPA and HMIS Ratings:

NFPA:

Health: 0
Flammability: 1
Instability: 0



HMIS:

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

This data sheet contains changes from the previous version in section(s):

SECTION 8. Exposure controls/personal protection, SECTION 9. Physical and chemical properties, SECTION 16. Other Information.

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

Acronyms

STOT = Specific target organ toxicity

Abbreviations

Acute Tox. 4 = Acute toxicity Category Code 4

Asp. Tox. 1 = Aspiration hazard Category Code 1

Eye Dam 1 = Serious eye damage/eye irritation Category Code 1

Hazard statements

H302 - Harmful if swallowed

H304 - May be fatal if swallowed and enters airways

H318 - Causes serious eye damage

Training advice:

Do not handle until all safety precautions have been read and understood.

This SDS was prepared in accordance with the following:

U.S. Code of Federal Regulations 29 CFR 1910.1200

Version: 21.01.a

ENCC046

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.

CLARIFLOC C-6254 POLYMER

PRINCIPAL USES

CLARIFLOC C-6254 is a **medium** charge cationic polyacrylamide in emulsion form that is used as a flocculant in a wide variety of municipal and industrial wastewater treatment applications. It has been successfully applied in all liquid/solids separation systems including clarification, thickening, and dewatering.

TYPICAL PROPERTIES

Physical Form	Clear to Milky White Liquid
Cationicity	60 %
Active Polyacrylamide Min.	42 %
Freezing Point	7 F. (-14 C.)
Density	8.5 - 8.7 lb/gal

PREPARATION AND FEEDING

CLARIFLOC C-6254 is a single component emulsion polymer that must be pre-diluted in water before use. In most cases, this product should not be applied neat. One method for dilution is adding the neat polymer into the vortex of a mixed tank at a concentration between 0.25-1.0% polymer (0.5% is optimum) by weight. The polymer can also be injected through a number of commercially available systems that provide in-line mechanical mixing. The best feed systems use initial high energy mixing (>1000 rpm) for a short time (<30 sec) to achieve good dispersion followed by low energy mixing (<400 rpm) for a longer time (10-30 min). Polymer solutions should be aged for 15-60 minutes for best results. Solution shelf life is 8-16 hours.

MATERIALS OF CONSTRUCTION

Cross-linked polyethylene, fiberglass, stainless steel or lined steel are the preferred materials of construction for bulk tanks. Avoid natural rubber and Buna-N gaskets as these materials swell when placed in contact with neat polymer. Unlined mild steel, black iron, galvanized steel, copper or brass are not recommended in any part of the feed system. Stainless steel, Viton or Teflon are the best choices for pump heads. For feed lines, use PVC or reinforced Tygon tubing.

MANUFACTURING SPECIFICATIONS

Total Solids	45 - 52 %
Residual AcAm	< 1000 ppm
Neat Viscosity	500 - 2000 cPs
UL Viscosity	2.3 - 3.3 cPs

HANDLING AND STORAGE

Suggested in-plant storage life is 6 months in unopened drums. For best results, store at 50-80 F. Bulk tanks should be mixed by periodically recirculating the contents bottom to top. Bulk tanks can also be fitted with an agitator type mixer that reaches the bottom 2 feet of the tank. Drums and bins should be mixed very well before first use and weekly after that. Do not allow emulsion polymers to freeze. Should freezing occur, allow the product to thaw thoroughly in a heated area and mix well before attempting to use it. For spills of CLARIFLOC C-6254, sprinkle vermiculite or equivalent absorbant over the spill area and sweep the material into approved chemical disposal containers. Do not spray water onto a spill because the resulting gel is very difficult to clean up.

SAFETY INFORMATION

CLARIFLOC C-6254 is a mildly acidic product that can irritate the skin and eyes and should be handled accordingly. Gloves, goggles and apron are highly recommended. Anyone responsible for the procurement, use or disposal of this product should familiarize themselves with the appropriate safety and handling precautions involved. Such information is outlined in the **POLYDYNE** Material Safety Data Sheet. In the event of an emergency with this product, contact Chemtrec anytime day or night at (800) 424-9300.

SHIPPING

CLARIFLOC C-6254 Polymer is shipped in 55 gallon drums containing 450 pounds net or in 275 gallon totes containing 2300 pounds net. Bulk quantities are also available.

ADDITIONAL INFORMATION

To place an order or obtain technical information from anywhere in the continental United States, call toll free:

(800) 848-7659

For additional information, please refer to the Safety Data Sheet (SDS)

All statements, information and data given herein are believed to be accurate, but are presented without warranty, expressed or implied. Statements concerning possible use are made without representation or warranty that any such use is free of patent infringement, and is not a recommendation to infringe on any patent. The user should not assume that all safety measures are indicated or that other measures may not be required. Any determination of the suitability of a particular product for any use contemplated by the user is the sole responsibility of the user.



SAFETY DATA SHEET

According to U.S. Code of Federal Regulations 29 CFR 1910.1200, Hazard Communication.

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name: **CLARIFLOC™ C-6254**

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: POLYDYNE INC
1 Chemical Plant Road
PO BOX 279
Riceboro, GA 31323

Telephone: 1-800-848-7659

Telefax: (912)-884-8770

E-mail address: -

1.4. Emergency telephone number

24-hour emergency number: 1-800-424-9300

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified.

2.2. Label elements

Labelling according to paragraph (f) of 29 CFR 1910.1200:

Hazard symbol(s): None.

Signal word: None.

Hazard statement(s): None.

Precautionary statement(s): None.

2.3. Other hazards

Spills produce extremely slippery surfaces.

For explanation of abbreviations see Section 16.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable, this product is a mixture.

3.2. Mixtures

Hazardous components

Distillates (petroleum), hydrotreated light

Concentration/ -range: 20 - 30%

CAS Number: 64742-47-8

Classification according to paragraph (d)
of 29 CFR 1910.1200: Asp. Tox. 1;H304

Notes

Does not result in classification of the mixture if the kinematic viscosity is greater than 20.5 mm²/s measured at 40°C.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Concentration/ -range: < 5%

CAS Number: 69011-36-5

Classification according to paragraph (d)
of 29 CFR 1910.1200: Acute Tox. 4;H302, Eye Dam. 1;H318

For explanation of abbreviations see section 16

SECTION 4: First aid measures

SECTION 4: First aid measures**4.1. Description of first aid measures***Inhalation:*

Move to fresh air. No hazards which require special first aid measures.

Skin contact:

Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. In case of persistent skin irritation, consult a physician.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.

Ingestion:

Rinse mouth with water. Do NOT induce vomiting. Call a physician or poison control centre immediately.

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

None under normal use.

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

None reasonably foreseeable.

Other information:

None.

SECTION 5: Firefighting measures**5.1. Extinguishing media***Suitable extinguishing media:*

Water. Water spray. Foam. Carbon dioxide (CO₂). Dry powder.
Warning! Spills produce extremely slippery surfaces.

Unsuitable extinguishing media:

None known.

5.2. Special hazards arising from the substance or mixture*Hazardous decomposition products:*

Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NO_x), carbon oxides (CO_x). Ammonia (NH₃). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

5.3. Advice for firefighters*Protective measures:*

Wear self-contained breathing apparatus and protective suit.

Other information:

Spills produce extremely slippery surfaces.

SECTION 6: Accidental release measures**6.1. Personal precautions, protective equipment and emergency procedures***Personal precautions:*

Do not touch or walk through spilled material. Spills produce extremely slippery surfaces.

Protective equipment:

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

Emergency procedures:

Keep people away from spill/leak. Prevent further leakage or spillage if safe to do so.

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. Soak up with inert absorbent material. Sweep up and shovel into suitable containers for disposal.

Large spills:

Do not flush with water. Dam up. Soak up with inert absorbent material. Clean up promptly by scoop or vacuum.

Residues:

After cleaning, flush away traces with water.

6.4. Reference to other sections

SECTION 7: Handling and storage; SECTION 8: Exposure controls/personal protection; SECTION 13: Disposal considerations;

SECTION 7: Handling and storage**7.1. Precautions for safe handling**

Avoid contact with skin and eyes. Renders surfaces extremely slippery when spilled. When using, do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Keep away from heat and sources of ignition. Freezing will affect the physical condition and may damage the material. Incompatible with oxidizing agents.

7.3. Specific end use(s)

This information is not available.

SECTION 8: Exposure controls/personal protection**8.1. Control parameters***Occupational exposure limits:*

Distillates (petroleum), hydrotreated light

ACGIH: 200 mg/m³ (8 hours) (vapors)

8.2. Exposure controls

Appropriate engineering controls:

Ensure adequate ventilation, especially in confined areas. Use local exhaust if misting occurs. Natural ventilation is adequate in absence of mists.

Individual protection measures, such as personal protective equipment:

a) Eye/face protection:

Safety glasses with side-shields. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

b) Skin protection:

i) *Hand protection:* PVC or other plastic material gloves. Be aware that liquid may permeate gloves, frequent change is advised. Suitable gloves can be recommended by the glove supplier. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.

ii) *Other:* Wear coveralls and/or chemical apron and rubber footwear where physical contact can occur. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

c) Respiratory protection:

No personal respiratory protective equipment normally required.

d) Additional advice:

Wash hands before breaks and immediately after handling the product. Wash hands before breaks and at the end of workday. Handle in accordance with good industrial hygiene and safety practice.

Environmental exposure controls:

Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

a) Appearance:	Viscous liquid, Milky.
b) Odour:	Aliphatic.
c) Odour Threshold:	No data available.
d) pH:	Not applicable.
e) Melting point/freezing point:	< 5°C
f) Initial boiling point and boiling range:	> 100°C

<i>g) Flash point:</i>	Does not flash.
<i>h) Evaporation rate:</i>	No data available.
<i>i) Flammability (solid, gas):</i>	Not applicable.
<i>j) Upper/lower flammability or explosive limits:</i>	Not expected to create explosive atmospheres.
<i>k) Vapour pressure:</i>	2.3 kPa @ 20°C
<i>l) Vapour density:</i>	0.804 g/L @ 20°C
<i>m) Relative density:</i>	1.0 - 1.2 (See Technical Bulletin or Product Specifications for a more precise value, if available)
<i>n) Solubility(ies):</i>	Completely miscible.
<i>o) Partition coefficient n-octanol/water (log value):</i>	Not applicable.
<i>p) Autoignition temperature:</i>	Not applicable.
<i>q) Decomposition temperature:</i>	> 150°C
<i>r) Viscosity:</i>	> 20.5 mm ² /s @ 40°C
<i>s) Kinematic viscosity:</i>	No data available.
<i>t) Explosive properties:</i>	Not expected to be explosive based on the chemical structure.
<i>u) Oxidizing properties:</i>	Not expected to be oxidising based on the chemical structure.
<i>v) Particle characteristics:</i>	Not applicable.

9.2. Other information

None.

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

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

Protect from frost, heat and sunlight.

10.5. Incompatible materials

Oxidizing agents.

10.6. Hazardous decomposition products

Thermal decomposition may produce: hydrogen chloride gas, nitrogen oxides (NO_x), carbon oxides (CO_x). Ammonia (NH₃). Hydrogen cyanide (hydrocyanic acid) may be produced in the event of combustion in an oxygen deficient atmosphere.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on the product as supplied:

Acute oral toxicity:	LD50/oral/rat > 5000 mg/kg (Estimated)
Acute dermal toxicity:	LD50/dermal/rat > 5000 mg/kg. (Estimated)
Acute inhalation toxicity:	The product is not expected to be toxic by inhalation.
Skin corrosion/irritation:	Non-irritating to skin.
Serious eye damage/eye irritation:	Not irritating. (OECD 437)
Respiratory/skin sensitisation:	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 effect.
Aspiration hazard:	Due to the viscosity, this product does not present an aspiration hazard.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Acute oral toxicity:	LD50/oral/rat > 5000 mg/kg (OECD 401)
Acute dermal toxicity:	LD50/dermal/rabbit > 5000 mg/kg (OECD 402)
Acute inhalation toxicity:	LC0/inhalation/4 hours/rat \geq 4951 mg/m ³ (vapors) (OECD 403) (Based on results obtained from tests on analogous products)
Skin corrosion/irritation:	Not irritating. (OECD 404) Repeated exposure may cause skin dryness or cracking.

<i>Serious eye damage/eye irritation:</i>	Not irritating. (OECD 405)
<i>Respiratory/skin sensitisation:</i>	By analogy with similar products, this product is not expected to be sensitizing. (OECD 406)
<i>Mutagenicity:</i>	Not mutagenic. (OECD 471, 473, 474, 476, 478, 479)
<i>Carcinogenicity:</i>	Carcinogenicity study in rats (OECD 451): Negative.
<i>Reproductive toxicity:</i>	By analogy with similar substances, this substance is not expected to be toxic for reproduction. NOAEL/rat = 300 ppm. (OECD 421)
<i>STOT - Single exposure:</i>	No known effects.
<i>STOT - Repeated exposure:</i>	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/90 days \geq 3000 mg/kg/day (OECD 408) (Based on results obtained from tests on analogous products)
<i>Aspiration hazard:</i>	May be fatal if swallowed and enters airways.
<u><i>Poly(oxy-1,2-ethanediyl), α-tridecyl-ω-hydroxy-, branched</i></u>	
<i>Acute oral toxicity:</i>	LD50/oral/rat = 500 - 2000 mg/kg
<i>Acute dermal toxicity:</i>	LD50/dermal/rabbit > 2000 mg/kg
<i>Acute inhalation toxicity:</i>	No data available.
<i>Skin corrosion/irritation:</i>	Not irritating. (OECD 404)
<i>Serious eye damage/eye irritation:</i>	Causes serious eye irritation. (OECD 405)
<i>Respiratory/skin sensitisation:</i>	The results of testing on guinea pigs showed this material to be non-sensitizing.
<i>Mutagenicity:</i>	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
<i>Carcinogenicity:</i>	Based on the absence of mutagenicity, it is unlikely that the substance is carcinogenic.

<i>Reproductive toxicity:</i>	Based on available data, product is not expected to be toxic for reproduction. Two-Generation Reproduction Toxicity (OECD 416) - NOAEL/rat > 250 mg/kg/day Prenatal Development Toxicity Study (OECD 414) - NOAEL/Maternal toxicity/rat > 50 mg/kg/day - NOAEL/Developmental toxicity/rat > 50 mg/kg/day
<i>STOT - Single exposure:</i>	No known effects.
<i>STOT - Repeated exposure:</i>	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/600 days = 50 mg/kg/day
<i>Aspiration hazard:</i>	No known effects.

SECTION 12: Ecological information

12.1. Toxicity

Information on the product as supplied:

<i>Acute toxicity to fish:</i>	LC50/Fish/96 hours = 10 - 100 mg/L (Estimated)
<i>Acute toxicity to invertebrates:</i>	EC50/Daphnia magna/48 hours = 10 - 100 mg/L (Estimated)
<i>Acute toxicity to algae:</i>	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.
<i>Chronic toxicity to fish:</i>	No data available.
<i>Chronic toxicity to invertebrates:</i>	No data available.
<i>Toxicity to microorganisms:</i>	No data available.
<i>Effects on terrestrial organisms:</i>	No data available.
<i>Sediment toxicity:</i>	No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

<i>Acute toxicity to fish:</i>	LC0/Oncorhynchus mykiss/96 hours > 1000 mg/L (OECD 203)
<i>Acute toxicity to invertebrates:</i>	EC0/Daphnia magna/48 hours > 1000 mg/L (OECD 202)
<i>Acute toxicity to algae:</i>	IC0/Pseudokirchneriella subcapitata/72 hours > 1000 mg/L (OECD 201)

<i>Chronic toxicity to fish:</i>	NOEC/Oncorhynchus mykiss/28 days > 1000 mg/L
<i>Chronic toxicity to invertebrates:</i>	NOEC/Daphnia magna/21 days > 1000 mg/L
<i>Toxicity to microorganisms:</i>	EC50/Tetrahymena pyriformis/ 48h > 1000 mg/L.
<i>Effects on terrestrial organisms:</i>	No data available.
<i>Sediment toxicity:</i>	No data available. Readily biodegradable, exposure to sediment is unlikely.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

<i>Acute toxicity to fish:</i>	LC50/Cyprinus carpio/96 hours = 1 - 10 mg/L (OECD 203)
<i>Acute toxicity to invertebrates:</i>	EC50/Daphnia/48 hours = 1 - 10 mg/L (OECD 202)
<i>Acute toxicity to algae:</i>	IC50/Desmodesmus subspicatus/72 hours = 1 - 10 mg/L (OECD 201)
<i>Chronic toxicity to fish:</i>	No data available.
<i>Chronic toxicity to invertebrates:</i>	NOEC/Daphnia magna/21 days > 1 mg/L (OECD 202)
<i>Toxicity to microorganisms:</i>	EC10/activated sludge/17 hours > 10000 mg/L (DIN 38412-8)
<i>Effects on terrestrial organisms:</i>	No data available.
<i>Sediment toxicity:</i>	No data available.

12.2. Persistence and degradability

Information on the product as supplied:

<i>Degradation:</i>	Based on the degradability data of the components, this product is expected to be readily (bio)degradable according to OECD criteria.
<i>Hydrolysis:</i>	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.
<i>Photolysis:</i>	No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Degradation: Readily biodegradable. 67.6% / 28 days (OECD 301 F) ; 68.8% / 28 days (OECD 306) ; 61.2% / 61 days (OECD 304 A)

Hydrolysis: Does not hydrolyse.

Photolysis: No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Degradation: Readily biodegradable. > 60% / 28 days (OECD 301 B)

Hydrolysis: Does not hydrolyse.

Photolysis: No data available.

12.3. Bioaccumulative potential

Information on the product as supplied:

The product is not expected to bioaccumulate.

Partition co-efficient (Log Pow): Not applicable.

Bioconcentration factor (BCF): No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Partition co-efficient (Log Pow): 3 - 6

Bioconcentration factor (BCF): No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Partition co-efficient (Log Pow): > 3

Bioconcentration factor (BCF): No data available.

12.4. Mobility in soil

Information on the product as supplied:

No data available.

Relevant information on the hazardous components:Distillates (petroleum), hydrotreated light

Koc: No data available.

Poly(oxy-1,2-ethanediyl), a-tridecyl-w-hydroxy-, branched

Koc: > 5000

12.5. Other adverse effects

None known.

SECTION 13: Disposal considerations**13.1. Waste treatment methods**Waste from residues/unused products:

Dispose in accordance with local and national regulations.

Contaminated packaging:

Rinse empty containers with water and use the rinse-water to prepare the working solution. If recycling is not practicable, dispose of in compliance with local regulations. Can be landfilled or incinerated, when in compliance with local regulations.

Recycling:

Store containers and offer for recycling of material when in accordance with the local regulations.

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 as active on the inventory or are exempt from listing.

US SARA Reporting Requirements:

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

SARA Title III Sections:

Section 302 (TPQ) - Reportable Quantity:
Not concerned.

Section 304 - Reportable Quantity:
Not concerned.

Section 313 (De minimis concentration):
Not concerned.

Clean Water Act

Section 311 Hazardous Substances (40 CFR 117.3) - Reportable Quantity:
Not concerned.

Clean Air Act

Section 112(r) Accidental release prevention requirements (40 CFR 68) - Reportable Quantity:
Not concerned.

CERCLA

Hazardous Substances List (40 CFR 302.4) - Reportable Quantity:
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

SECTION 16: Other informationNFPA and HMIS Ratings:

NFPA:

Health: 0
Flammability: 1
Instability: 0



HMIS:

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

This data sheet contains changes from the previous version in section(s):

SECTION 8. Exposure controls/personal protection, SECTION 9. Physical and chemical properties, SECTION 16. Other Information.

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

Acronyms

STOT = Specific target organ toxicity

Abbreviations

Acute Tox. 4 = Acute toxicity Category Code 4

Asp. Tox. 1 = Aspiration hazard Category Code 1

Eye Dam 1 = Serious eye damage/eye irritation Category Code 1

Hazard statements

H302 - Harmful if swallowed

H304 - May be fatal if swallowed and enters airways

H318 - Causes serious eye damage

Training advice:

Do not handle until all safety precautions have been read and understood.

This SDS was prepared in accordance with the following:

U.S. Code of Federal Regulations 29 CFR 1910.1200

Version: 21.01.a

ENCC046

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.