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CITY OF Grand Junction COLORADO

CONTRACT RENEWAL

#5820-26-KN

Date: January 22, 2026

Supplier: Polydyne, Inc.

Project: 3rd and Final Year Contract Renewal for Liquid Polymer

Congratulations, you have been awarded the 3rd and Final year renewal option for contract #5820-26-KN **Liquid Polymer,** dated January 22, 2026.

The Firm shall provide CLARIFLOC CE-2478/CLARIFLOC CE-2494 (Liquid Polymer) for the City of Grand Junction as needed for 2026. This annual extension continues to include the necessary work as required in the original contract documents. The 2026 contract price will be $1.68/lb.

Please notify Bret Holmes, Lead Wastewater Operator, at (970) 256-4165 or breth@gjcity.org for ordering.

CITY OF GRAND JUNCTION, COLORADO

Signed by:
Kassy Nelson
E099E221BE93450...

Kassy Nelson, Buyer

SUPPLIER ACKNOWLEDGEMENT

Receipt of this Contract Renewal is hereby acknowledged:

Contractor: Polydyne Inc.

By: Signed by: Boyd Stanley, Sr. Vice-President B7481AD4161847B... Boyd Stanley, Sr. Vice-President

Title: Sr. Vice-President

Date: 2/16/2026

Docusign Envelope ID: 31EEA801-2DDA-45DA-A06C-8B33DD6106B6

CITY OF Grand Junction COLORADO

CONTRACT RENEWAL

#5592-25-KN

Date: January 28, 2025

Supplier: Polydyne, Inc.

Project: 2nd Year Contract Renewal for Liquid Polymer

Congratulations, you have been awarded the 2nd year renewal option for contract #5592-25-KN **Liquid Polymer,** dated January 28, 2025.

The Firm shall provide CLARIFLOC CE-2478/CLARIFLOC CE-2494 (Liquid Polymer) for the City of Grand Junction as needed for 2025. This annual extension continues to include the necessary work as required in the original contract documents. The 2025 contract price will be $1.68/lb.

Please notify Jay Vancil, Operations Supervisor, at (970) 256-4166 or jayv@gjcity.org for ordering.

CITY OF GRAND JUNCTION, COLORADO

Signed by: Kassy Nelson

Kassy Nelson, Buyer

SUPPLIER ACKNOWLEDGEMENT

Receipt of this Contract Renewal is hereby acknowledged:

Contractor: Polydyne Inc.

By: Signed by: Boyd Stanley Boyd Stanley

Title: Sr. Vice-President

Date: 1/28/2025

DocuSign Envelope ID: 97D15062-2C6F-46D5-AF2D-BD8FEED780A0

CITY OF Grand Junction COLORADO

CONTRACT RENEWAL

#5395-24-KH

Date: February 14, 2024

Supplier: Polydyne, Inc.

Project: 1st Year Contract Renewal for Liquid Polymer

Congratulations, you have been awarded the 1st year renewal option for contract #5395-24-KH **Liquid Polymer,** dated February 14, 2024.

The Firm shall provide CLARIFLOC CE-2478/CLARIFLOC CE-2494 (Liquid Polymer) for the City of Grand Junction as needed for 2024. This annual extension continues to include the necessary work as required in the original contract documents. The 2024 contract price will be $1.68/lb.

Please notify Jay Vancil, Operations Supervisor, at (970) 256-4166 or javv@gjcity.org for ordering.

CITY OF GRAND JUNCTION, COLORADO

DocuSigned by:
Kassy Hackett
E099E221BE93450...
Kassy Hackett, Buyer

SUPPLIER ACKNOWLEDGEMENT

Receipt of this Contract Renewal is hereby acknowledged:

Contractor: Polydyne Inc.

By: DocuSigned by: Boyd Stanley — Boyd Stanley
B7481AB41618478...

Title: Sr. Vice-President

Date: 2/15/2024

CITY OF Grand Junction COLORADO

Purchase Order
No. 2023-00000033

DATE 03/24/2023

Ph. (970) 244-1546

Fax

Ship To
City of Grand Junction
Persigo Waste Water Plant
2145 River Rd.
GRAND JUNCTION, CO 81505

Bill To
City of Grand Junction
Persigo Waste Water Plant
2145 River Rd.
GRAND JUNCTION, CO 81505

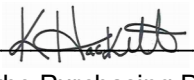
Vendor
VENDOR NO. 2867
Polydyne, Inc.
PO Box 404642
Atlanta, GA 30384-4642

SHIP VIA Best Way
DELIVER BY
FREIGHT TERMS FOB Dest, Frght Prepaid _Allow
Payment Terms: Net 30 Days
Buyer Name: Kassandra Hackett
Buyer Email: kassyh@gjcity.org

Award for IFB-5160-22-KH.

QUANTITY	UNIT	DESCRIPTION	UNIT COST	TOTAL COST
1.0000	Lump Su	CHEMICALS AND CHEMICAL RELATED ITEMS - Liquid Polymer for 2023 CLARIFLOC CE-2478/CLARIFLOC CE-2494 product priced at $1.68/lb. Stated dollar amount is annual budget allotment. Product will be ordered as needed and invoices will be paid against this PO for tracking purposes. 902-615-620-380.6145 - Chemical/Fertilizers 80,640.00	80,640.0000	$80,640.00
			PURCHASE ORDER TOTAL	$80,640.00

Special Instructions:PURCHASE ORDER No. MUST APPEAR ON ALL INVOICES, SHIPPERS, PACKAGES, CORRESPONDENCE
Tax Exempt No. 98-03544
This Purchase Order along with all other solicitation documents comprise the entire contract. Invoices to be paid by Persigo Wastewater Treatment Plant.

By: 

For Purchase Order Terms and Conditions, please visit www.gjcity.org, and select the Purchasing Department information page.

CITY OF Grand Junction COLORADO

Purchasing Division

Invitation for Bid

IFB-5160-23-KH

Liquid Polymer

ONLY FIRMS WHO HAVE BEEN PREAPPROVED THROUGH THE TESTING PROCESS DESCRIBED IN SECTION 3 WILL BE ALLOWED TO BID.

Responses Due:
January 24th, 2023 prior to 2:00 PM Local Time

Accepting Electronic Responses Only
Responses Only Submitted Through the Rocky Mountain E-Purchasing www.bidnetdirect.com/colorado

(Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor MUST contact RMEPS to resolve issue prior to the response deadline. 800-835-4603)

Purchasing Representative:
Kassy Hackett, Buyer
kassyh@gjcity.org
Phone (970) 244-1546

NOTE: All City solicitation openings will continue to be held virtually. See Section 1.4 for details.

This document has been developed specifically to solicit competitive responses for this solicitation, and may not be the same as previous City of Grand Junction solicitations. All vendors are urged to thoroughly review this solicitation prior to responding. Submittal by **FAX, EMAIL or HARD COPY IS NOT ACCEPTABLE** for this solicitation.

Invitation for Bids

Table of Contents

Section 1	Instruction to Bidders
Section 2	General Contract Conditions
Section 3	Statement of Work
Section 4	Bid Form
	Price Proposal/Bid Schedule Form

1. Instructions to Bidders

1.1. Purpose: The City of Grand Junction is soliciting competitive bids from qualified and interested companies for all labor, equipment, and materials required to supply a polymer product for dewatering and thickening aerobic and anaerobic sludge at the Persigo Wastewater Treatment Plant (WWTP). These specifications describe a polymer product to be used in dewatering and thickening. **ONLY LIQUID POLYMERS WILL BE CONSIDERED** for this application. All dimensions and scope of work should be verified by Bidders prior to submission of bids.

The City would like to remind all Contractors, Sub-Contractors, Vendors, Suppliers, Manufacturers, Service Providers, etc. that (with the exception of Pre-Bid or Site Visit Meetings) all questions, inquiries, comments, or communication pertaining to any formal solicitation (whether process, specifications, scope, etc.) must be directed (in writing) to the Purchasing Agent assigned to the project, or Purchasing Division. Direct communication with the City assigned Project Managers/Engineers is not appropriate for public procurement, and may result in disqualification.

1.2. The Owner: The Owner is the City of Grand Junction, Colorado and is referred to throughout this Solicitation. The term Owner means the Owner or his authorized representative.

1.3. Procurement Process: Procurement processes shall be governed by the most current version of the City of Grand Junction Purchasing Policy and Procedure Manual.

1.4. Submission: ***Each proposal shall be submitted in electronic format only, and only through the Rocky Mountain E-Purchasing website (www.bidnetdirect.com/colorado).*** *This site offers both "free" and "paying" registration options that allow for full access of the Owner's documents and for electronic submission of proposals. (Note: "free" registration may take up to 24 hours to process. Please Plan accordingly.)* Please view our "**Electronic Vendor Registration Guide**" at https://www.gjcity.org/501/Purchasing-Bids for details. (Purchasing Representative does not have access or control of the vendor side of RMEPS. If website or other problems arise during response submission, vendor **MUST** contact RMEPS to resolve issue prior to the response deadline. **800-835-4603**)

Solicitation Opening, Liquid Polymer IFB-5160-23-KH
Jan 24, 2023, 2:00 – 2:30 PM (America/Denver)

Please join my meeting from your computer, tablet or smartphone.
https://meet.goto.com/478917565

You can also dial in using your phone.
Access Code: 478-917-565
United States: +1 (872) 240-3311
- One-touch: tel:+18722403311,,478917565#

Join from a video-conferencing room or system.
Meeting ID: 478-917-565
Dial in or type: 67.217.95.2 or inroomlink.goto.com
Or dial directly: 478917565@67.217.95.2 or 67.217.95.2##478917565

Get the app now and be ready when your first meeting starts:
https://meet.goto.com/install

1.5. Printed Form for Price Bid: All Price Bids must be made upon the Bid Form attached, and should give the amounts both in words and in figures, and must be signed and acknowledged by the bidder.

1.6. Exclusions: No oral, telephonic, emailed, or facsimile bid will be considered

1.7. Contract Documents: The complete IFB and bidder's response compose the Contract Documents. Copies of these documents can be obtained from the City Purchasing website, https://www.gjcity.org/501/Purchasing-Bids.

1.8. Examination of Specifications: Bidders shall thoroughly examine and be familiar with the project Statement of Work. The failure or omission of any Bidder to receive or examine any form, addendum, or other document shall in no way relieve any Bidder from any obligation with respect to his bid. The submission of a bid shall be taken as evidence of compliance with this section.

1.9. Questions Regarding Statement of Work: Any information relative to interpretation of Scope of Work or specifications shall be requested of the Purchasing Representative, in writing, in ample time prior to the response time.

1.10. Addenda & Interpretations: All Questions shall be submitted in writing to the appropriate person as shown in Section 1.1. Any interpretations, corrections and changes to this solicitation or extensions to the opening/receipt date shall be made by a written Addendum to the solicitation by the Owner. Sole authority to authorize addenda shall be vested in the Purchasing Representative. Addenda will be issued electronically through the Rocky Mountain E-Purchasing website at www.bidnetdirect.com/colorado. Bidders shall acknowledge receipt of all addenda in their response and are solely responsible for obtaining all solicitation documents.

1.11. Taxes: The Owner is exempt from State retail and Federal tax. The bid price must be net, exclusive of taxes.

1.12. Offers Binding 60 Days: Unless otherwise specified, all formal offers submitted shall be binding for sixty (60) calendar days following opening date, unless the Bidder, upon request of the Purchasing Representative, agrees to an extension.

1.13. Collusion Clause: Each bidder by submitting a bid certifies that it is not party to any collusive action or any action that may be in violation of the Sherman Antitrust Act. Any and all bids shall be rejected if there is evidence or reason for believing

that collusion exists among bidders. The Owner may, or may not, accept future bids for the same services or commodities from participants in such collusion.

1.14. Public Disclosure Record: If the bidder has knowledge of their employee(s) or sub-contractors having an immediate family relationship with an Owner employee or elected official, the bidder must provide the Purchasing Representative with the name(s) of these individuals. These individuals are required to file an acceptable "Public Disclosure Record", a statement of financial interest, before conducting business with the Owner.

1.15. Public Opening: Responses shall be opened virtually immediately following the proposal deadline. Offerors, their representatives and interested persons may be present. Only the names and locations on the proposing firms will be disclosed.

2. General Contract Conditions

2.1. The Contract: This Invitation for Bid, submitted documents, and any negotiations, when properly accepted by the Owner, shall constitute a contract equally binding between the Owner and Bidder. The contract represents the entire and integrated agreement between the parties hereto and supersedes all prior negotiations, representations, or agreements. The contract may be amended or modified with Change Orders, Field Orders, or Amendment(s).

2.2. Execution, Correlation, Intent, and Interpretations: The Contract Documents and/or Purchase Order shall be signed by the Owner (Owner) and Contractor. Owner will provide the contract/purchase order. By executing the contract/purchase order, the Bidder represents that they have familiarized themselves with the local conditions under which the work is to be performed, and correlated his observations with the requirements of the Contract Documents. The Contract Documents are complementary, and what is required by any one, shall be as binding as if required by all. The intention of the documents is to include all labor, materials, equipment and other items necessary for the proper execution and completion of the scope of work as defined herein. All drawings, specifications and copies furnished by the Owner are, and shall remain, Owner property. They are not to be used on any other project, and with the exception of one contract set for each party to the contract, are to be returned to the owner on request at the completion of the work.

2.3. The Owner: The Owner is the City of Grand Junction, Colorado and is referred to throughout the Contract Documents. The term Owner means the Owner or his authorized representative. The Owner shall, at all times, have access to the work wherever it is in preparation or progress. The Contractor shall provide facilities for such access. The Owner will familiarize himself generally with the progress and quality of work and to determine, in general, if the work is proceeding in accordance with the contract documents. The Owner will not be responsible for the acts or omissions of the Contractor, and sub-Contractor, or any of their agents or employees, or any other persons performing any of the work.

2.4. Contractor: The Contractor is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents. The term Contractor means the Contractor or his authorized representative. The Contractor shall carefully study and compare the General Contract Conditions of the Contract, Specification and/or Drawings, Scope of Work, Addenda and Modifications and shall at once report to the Owner any error, inconsistency or omission he may discover. Contractor shall not be liable to the Owner for any damage resulting from such errors, inconsistencies or omissions. The Contractor shall not commence work without clarifying Drawings, Specifications, or Interpretations.

2.5. Warranty: The Contractor warrants to the Owner that all materials and equipment furnished under this contract will be new unless otherwise specified, be of good quality, free from faults and defects and in conformance with the Contract Documents. All materials and equipment not so conforming to these standards may be considered defective. If required by Owner, the Contractor shall furnish satisfactory evidence as to the kind and quality of materials and equipment. If within ten (10) days after written notice to the Contractor requesting such repairs or replacement, the Contractor should neglect to make or undertake with due diligence to the same, the City may make such replacements. All indirect and direct costs of such correction or replacement shall be at the Contractor's expense.

2.6. Insurance Requirements: The selected Contractor agrees to procure and maintain, at its own cost, policy(s) of insurance sufficient to insure against all liability, claims, demands, and other obligations assumed by the Contractor pursuant to this Section. Such insurance shall be in addition to any other insurance requirements imposed by this Contract or by law. The Contractor shall not be relieved of any liability, claims, demands, or other obligations assumed pursuant to this Section by reason of its failure to procure or maintain insurance in sufficient amounts, durations, or types. Contractor shall procure and maintain and, if applicable, shall cause any Subcontractor of the Contractor to procure and maintain insurance coverage listed below. Such coverage shall be procured and maintained with forms and insurers acceptable to the Owner. In the case of any claims-made policy, the necessary retroactive dates and extended reporting periods shall be procured to maintain such continuous coverage. Minimum coverage limits shall be as indicated below unless specified otherwise:

(a) Worker Compensation: Contractor shall comply with all State of Colorado Regulations concerning Workers' Compensation insurance coverage.

(b) General Liability insurance with minimum limits of:

ONE MILLION DOLLARS ($1,000,000) each occurrence and
ONE MILLION DOLLARS ($1,000,000) per job aggregate.

The policy shall be applicable to all premises and operations. The policy shall include coverage for bodily injury, broad form property damage (including completed operations), personal injury (including coverage for contractual and employee acts), blanket contractual, products, and completed operations. The policy shall include coverage for explosion, collapse, and underground hazards. The policy shall contain a severability of interests provision.

(c) Comprehensive Automobile Liability insurance with minimum limits for bodily injury and property damage of not less than:

ONE MILLION DOLLARS ($1,000,000) each occurrence and
ONE MILLION DOLLARS ($1,000,000) aggregate

With respect to each of Contractors owned, hired, or non-owned vehicles assigned to be used in performance of the Work. The policy shall contain a severability of interests provision. The policies required by paragraph (b) above shall be endorsed to include the Owner, and the Owner's officers and employees as additional insureds. Every policy required above shall be primary insurance, and any insurance carried by the Owner, its officers, or its employees, or carried by or provided through any insurance pool of the Owner, shall be excess and not contributory insurance to that provided by Bidder. No additional insured endorsement to any required policy shall contain any exclusion for bodily injury or property damage arising from completed operations. The Bidder shall be solely responsible for any deductible losses under any policy required above.

2.7. Indemnification: The Contractor shall defend, indemnify and save harmless the Owner, and all its officers, employees, insurers, and self-insurance pool, from and against all liability, suits, actions, or other claims of any character, name and description brought for or on account of any injuries or damages received or sustained by any person, persons, or property on account of any negligent act or fault of the Contractor, or of any Contractor's agent, employee, sub-contractor or supplier in the execution of, or performance under, any contract which may result from proposal award. Contractor shall pay any judgment with cost which may be obtained against the Owner growing out of such injury or damages.

2.8. Miscellaneous Conditions: Material Availability: Contractors must accept responsibility for verification of material availability, production schedules, and other pertinent data prior to submission of bid. It is the responsibility of the bidder to notify the Owner immediately if materials specified are discontinued, replaced, or not available for an extended period of time. OSHA Standards: All bidders agree and warrant that services performed in response to this invitation shall conform to the standards declared by the US Department of Labor under the Occupational Safety and Health Act of 1970 (OSHA). In the event the services do not conform to OSHA standards, the Owner may require the services to be redone at no additional expense to the Owner.

2.9. Time: The Contract Time is the period of time allotted in the Contract Documents for completion of product/material receipt. The date of commencement of the contract is the date established in the Contract Documents.

2.10. Payment & Completion: The Contract Sum is stated in the Contract and is the total amount payable by the Owner to the Contractor for the products/materials under the Contract Documents. Upon receipt of the products/materials or written notice that the products/materials is ready for final inspection and acceptance and upon receipt of application for payment, the Owner's Project Manager will promptly make such inspection and, when he finds the products/materials acceptable under

the Contract Documents and the Contract fully performed, the Owner shall make payment in the manner provided in the Contract Documents.

2.11. Protection of Persons & Property: The Contractor shall comply with all applicable laws, ordinances, rules, regulations and orders of any public authority having jurisdiction for the safety of persons or property or to protect them from damage, injury or loss. Contractor shall erect and maintain, as required by existing safeguards for safety and protection, and all reasonable precautions, including posting danger signs or other warnings against hazards promulgating safety regulations and notifying owners and users of adjacent utilities. When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct by the Contractor in the execution of the Contract, or in consequence of the non-execution thereof, the Contractor shall restore, at their own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing, rebuilding, or otherwise restoring as may be directed, or they shall make good such damage or injury in an acceptable manner.

2.12. Change Order/Amendment: No oral statement of any person shall modify or otherwise change, or affect the terms, conditions or specifications stated in the resulting contract. All Change Orders/Amendments to the contract shall be made in writing by the Owner.

2.13. Assignment: The Contractor shall not sell, assign, transfer or convey any contract resulting from this Solicitation, in whole or in part, without the prior written approval from the Owner.

2.14. Cancelation of Solicitation: Any solicitation may be canceled by the Owner or any solicitation response by a vendor may be rejected in whole or in part when it is in the best interest of the Owner.

2.15. Compliance with Laws: Bids must comply with all Federal, State, County and local laws governing or covering this type of service and the fulfillment of all ADA (Americans with Disabilities Act) requirements.

2.16. Confidentiality: All materials submitted in response to this Solicitation shall ultimately become public record and shall be subject to inspection after contract award. "**Proprietary or Confidential Information**" is defined as any information that is not generally known to competitors and which provides a competitive advantage. Unrestricted disclosure of proprietary information places it in the public domain. Only submittal information clearly identified with the words "***Confidential Disclosure***" and uploaded as a separate document shall establish a confidential, proprietary relationship. Any material to be treated as confidential or proprietary in nature must include a justification for the request. The request shall be reviewed and either approved or denied by the Owner. If denied, the proposer shall have the opportunity to withdraw its entire proposal, or to remove the confidential or proprietary restrictions. Neither cost nor pricing information nor the total response shall be considered confidential or proprietary.

2.17. Conflict of Interest: No public official and/or Owner employee shall have interest in any contract resulting from this Solicitation.

2.18. Contract Termination: This contract shall remain in effect until any of the following occurs: (1) contract expires; (2) completion of work; (3) acceptance of work or, (4) for convenience terminated by either party with a written *Notice of Cancellation* stating therein the reasons for such cancellation and the effective date of cancellation.

2.19. Employment Discrimination: During the performance of any services per agreement with the Owner, the Contractor, by submitting a response, agrees to the following conditions:

2.19.1. The Contractor shall not discriminate against any employee or applicant for employment because of race, religion, color, sex, age, handicap, or national origin except when such condition is a legitimate occupational qualification reasonably necessary for the normal operations of the Contractor. The Contractor agrees to post in conspicuous places, visible to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.

2.19.2. The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor, shall state that such Contractor is an Equal Opportunity Employer.

2.19.3. Notices, advertisements, and solicitations placed in accordance with federal law, rule, or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

2.20. Immigration Reform and Control Act of 1986 and Immigration Compliance: The Contractor certifies that it does not and will not during the performance of the contract employ illegal alien workers or otherwise violate the provisions of the Federal Immigration Reform and Control Act of 1986 and/or the immigration compliance requirements of State of Colorado C.R.S. § 8-17.5-101, *et.seq.* (House Bill 06-1343).

2.21. Ethics: The Contractor shall not accept or offer gifts or anything of value nor enter into any business arrangement with any employee, official, or agent of the Owner.

2.22. Failure to Deliver: In the event of failure of the Contractor to deliver products/materials in accordance with the contract terms and conditions, the Owner, after due oral or written notice, may procure the products/materials from other sources and hold the Contractor responsible for any costs resulting in additional purchase and administrative services. This remedy shall be in addition to any other remedies that the Owner may have.

2.23. Failure to Enforce: Failure by the Owner at any time to enforce the provisions of the contract shall not be construed as a waiver of any such provisions. Such failure to enforce shall not affect the validity of the contract or any part thereof or the right of the Owner to enforce any provision at any time in accordance with its terms.

2.24. Force Majeure: The Contractor shall not be held responsible for failure to perform the duties and responsibilities imposed by the contract due to legal strikes, fires, riots, rebellions, and acts of God beyond the control of the Contractor, unless otherwise specified in the contract.

2.25. Independent Contractor: The Contractor shall be legally considered an Independent Contractor and neither the Contractor nor its employees shall, under any circumstances, be considered servants or agents of the Owner. The Owner shall be at no time legally responsible for any negligence or other wrongdoing by the Contractor, its servants, or agents. The Owner shall not withhold from the contract payments to the Contractor any federal or state unemployment taxes, federal or state income taxes, Social Security Tax or any other amounts for benefits to the Contractor. Further, the Owner shall not provide to the Contractor any insurance coverage or other benefits, including Workers' Compensation, normally provided by the Owner for its employees.

2.26. Nonconforming Terms and Conditions: A response that includes terms and conditions that do not conform to the terms and conditions of this Solicitation is subject to rejection as non-responsive. The Owner reserves the right to permit the Contractor to withdraw nonconforming terms and conditions from its response prior to a determination by the Owner of non-responsiveness based on the submission of nonconforming terms and conditions.

2.27. Ownership: All plans, prints, designs, concepts, etc., shall become the property of the Owner.

2.28. Patents/Copyrights: The Contractor agrees to protect the Owner from any claims involving infringements of patents and/or copyrights. In no event shall the Owner be liable to the Contractor for any/all suits arising on the grounds of patent(s)/copyright(s) infringement. Patent/copyright infringement shall null and void any agreement resulting from response to this Solicitation.

2.29. Remedies: The Contractor and Owner agree that both parties have all rights, duties, and remedies available as stated in the Uniform Commercial Code.

2.30. Venue: Any agreement as a result of responding to this Solicitation shall be deemed to have been made in, and shall be construed and interpreted in accordance with, the laws of the City of Grand Junction, Mesa County, Colorado.

2.31. Expenses: Expenses incurred in preparation, submission and presentation of this Solicitation are the responsibility of the company and cannot be charged to the Owner.

2.32. Sovereign Immunity: The Owner specifically reserves its right to sovereign immunity pursuant to Colorado State Law as a defense to any action arising in conjunction to this agreement.

2.33. Non-Appropriation of Funds: The contractual obligation of the Owner under this contract is contingent upon the availability of appropriated funds from this fiscal

year budget as approved by the City Council or Board of County Commissioners from this fiscal year only. **State of Colorado Statutes prohibit obligation of public funds beyond the fiscal year for which the budget was approved.** Anticipated expenditures/obligations beyond the end of the current Owner's fiscal year budget shall be subject to budget approval. Any contract shall be subject to, and must contain, a governmental non-appropriation of funds clause.

2.34. Cooperative Purchasing: Purchases as a result of this solicitation are primarily for the Owner. Other governmental entities may be extended the opportunity to utilize the resultant contract award with the agreement of the successful provider and the participating agencies. All participating entities shall be required to abide by the specifications, terms, conditions and pricings established in this Solicitation. The quantities furnished in this bid document are for only the Owner. It does not include quantities for any other jurisdiction. The Owner shall be responsible only for the award for its jurisdiction. Other participating entities shall place their own awards on their respective Contract/Purchase Orders through their Purchasing Office or use their Purchasing Card for purchase/payment as authorized or agreed upon between the provider and the individual entity. The Owner accepts no liability for payment of orders placed by other participating jurisdictions that choose to piggy-back on our solicitation. Orders placed by participating jurisdictions under the terms of this solicitation shall indicate their specific delivery and invoicing instructions.

2.35. Definitions:

2.35.1. The term "Work" includes all labor, materials, equipment, and/or services necessary to produce the requirements of the Contract Documents.

2.35.2. "Contractor" is the person or organization identified as such in the Agreement and is referred to throughout the Contract Documents. The term Contractor means the Contractor or his authorized representative. The Contractor shall carefully study and compare the General Contract Conditions of the Contract, Specification and Drawings, Scope of Work, Addenda and Modifications and shall at once report to the Owner any error, inconsistency or omission he may discover. Contractor shall not be liable to the Owner for any damage resulting from such errors, inconsistencies or omissions. The Contractor shall not commence work without clarifying Drawings, Specifications, or Interpretations.

2.35.3. "Sub-Contractor is a person or organization who has a direct contract with the Contractor to perform any of the work at the site. The term sub-contractor is referred to throughout the contract documents and means a sub-contractor or his authorized representative.

3. Specifications and Special Conditions & Provisions

3.1. General: The City of Grand Junction is accepting competitive pricing, from qualified and interested companies, to supply a polymer product for dewatering and thickening aerobic and anaerobic sludge at the Persigo Wastewater Treatment Plant (WWTP). These specifications describe a polymer product to be used in dewatering and thickening. **ONLY LIQUID POLYMERS WILL BE CONSIDERED** for this application.

3.2. Project Description: This solicitation will consist of two steps.

3.2.1. First, prospective vendors must jar test Persigo WWTP sludge and select their single best product meeting the specifications in Section 3.5. Vendors are required to collect sludge samples from each process at a time and place designated by the Project Manager. Vendors are responsible for conducting all jar testing and for determining their preferred polymer product for each application. **Jar testing will be done M-F, 8:00 A.M. to 3:00 P.M. from December 19th through January 6th.** The Project Manager will be Jay Vancil, Wastewater Operations Supervisor, 970-256-4166, jayv@gjcity.org.

3.2.2. Second, if jar testing produces favorable results, batch testing will follow. Vendors shall submit sufficient product for a minimum of six (6) batches. Product will be supplied at vendor's expense.

3.3. Qualification: In order to qualify as a prospective vendor of polymer, vendors shall meet and comply with all aspects of these specifications.

3.4. Product: Products that are not tested as part of this solicitation will not be considered. Pricing will be allowed only on prequalified products.

3.5. Process Description and Applications: The process applications for polymer are sludge dewatering with belt filter presses and sludge thickening with Dissolved Air Flotation (DAF).

3.5.1. Sludge and Characteristics: The waste activated sludge is thickened using a Dissolved Air Flotation (DAF) process prior to dewatering. The primary sludge is anaerobically digested prior to dewatering. Currently the digested sludge is blended at an average 24% anaerobic and 76% aerobic based on flow. Blending ratios are subject to change.

3.5.2. Dewatering: Following anaerobic digestion, mechanical dewatering is accomplished using four (4) belt filter presses. The sludge feed rate to each belt press is in the range of 80 gpm to 100 gpm with an average feed solids concentration of 1.2% to 3.0%. Polymer is added to the influent sludge stream prior to distribution on the gravity zone on the belt press. **It is desired to produce a sludge cake with the highest solids concentration possible. Feed solids and flow range are subject to change.**

3.6. Polymer Product Specifications: The polymer product specifications are as follows:

3.6.1. Polymer Type: The only polymer types that will be considered for these applications are liquid polymers; **dry polymer formulations will not be considered**.

3.6.2. Polymer Characteristics: The viscosity and other physical/chemical characteristics of the polymer to be provided shall be compatible with the existing polymer storage and feed equipment, metering devices, pumps, gravity belt thickeners, belt presses, and other appurtenant equipment

associated with the existing sludge thickening and/or dewatering operations at Persigo WWTP.

3.6.2.1. The polymer shall not contain substances that are inhibitory or toxic to bacteria characteristic of the treatment process.

3.6.2.2. Polymer shall be suitable for storage in plastic vessels, and shall not be corrosive to the polymer storage, pumping or hauling equipment, and the thickening/dewatering equipment or related appurtenances.

3.6.2.3. Potential polymer suppliers must visit and inspect the Persigo WWTP facilities to determine that their polymer products are compatible with existing dewatering equipment and will not inhibit performance, operation or damage existing equipment. Vendors shall be required to submit a letter with their response certifying that the polymer is acceptable for use in the existing dewatering installation. No changes will be made to existing facilities to accommodate the use of a particular vendor polymer product. If damage does occur as a result of using a polymer product not compatible with existing facility equipment, the polymer supplier shall be responsible for all necessary repairs and/or equipment replacement costs to return the equipment to its operating condition.

3.6.2.4. Polymer performance shall not be significantly altered due to weather or temperature conditions. Polymer shall not be allowed to freeze prior to delivery.

3.6.2.5. Polymer shall have a shelf life of not less than 6 months during which the polymer shall exhibit no degradation in performance due to separation. The physical and chemical characteristics of the polymer shall not change during this period.

3.6.2.6. Polymer shall have good mixing characteristics and produce minimum nuisance conditions such as scum or foam. The polymer shall be miscible with water in all dilutions and capable of being diluted to any ratio desired to meet dosage requirements.

3.6.2.7. The polymer manufacturer shall submit with their response a certificate of analysis verifying the polymer satisfies all required physical and chemical characteristics listed above.

3.7. Special Conditions & Provisions:

3.7.1 Polymer Testing: All vendors selected shall supply product for testing January 9-13, 2023. Each polymer will be tested side by side with the existing polymer using normal operating procedures to measure polymer usage per dry ton of sludge dewatered under normal operating procedures. **The polymer will be provided for testing at no cost to Persigo WWTP.**

3.7.2 Rejection of Products/Supplies: The City of Grand Junction reserves the right to return products/supplies due to product flaws and/or not meeting

specifications. Judgment of non-conformity will be at the discretion of the City of Grand Junction Project Manager.

3.7.3 Delivery after award: All trucks used to deliver polymer shall protect the polymer during transport. The transport vehicles shall comply with all applicable safety regulations.

Liquid polymer shall be delivered in bins not to exceed 3600 gross pounds each.

The polymer shall be delivered to Persigo WWTP within 20 days following notification, either by telephone or written email notice. Regular truck delivery of polymer shall be scheduled to arrive at the plant between the hours of 8:00 A.M. and 3:00 P.M., Monday through Friday. Persigo will not be responsible for any shipping charges. Add deliveries are F.O.B. 2145 River Road, Grand Junction, CO 81505.

Notice of delivery is required 24 hours in advance. The truck driver will be required to check in at the administrative building upon arriving at the plant, and must provide a certified weight ticket with each delivery. The driver will not be permitted to offload the polymer. Plant personnel will be responsible for offloading the product once the driver has placed it within reach of the forklift.

Persigo reserves the right to inspect and reject any polymer shipment. If the polymer does not meet the requirements of these specifications, or does not perform as well as the quality control sample, or damages equipment or facilities as a result of impurities; the supplier shall reimburse Persigo for the cost of repair, maintenance or replacement resulting there from.

Return of empty containers shall be included in the price submitted.

3.7.4 Estimated Quantities: The quantities indicated in this Invitation for Bid are estimates that pertain to the total aggregate quantities that may be ordered throughout the stated contract period. Variation of quantities may increase or decrease. The estimates do not indicate single order amounts unless otherwise stated. The Owner makes no guarantees about single order quantities or total aggregate order quantities.

Persigo WWTP estimates the need to dewater 1,000 to 2,000 dry tons of sludge per operating year. Plant operations will be monitored and managed to assure appropriate utilization of the selected polymer.

3.7.5 Minimum Order Quantities: The bidder shall not establish a minimum order quantity for items under contract.

3.7.6 Contract: A binding contract shall consist of: (1) the IFB and any amendments thereto, (2) the bidder's response (bid) to the IFB, (3) clarification of the bid, if any, and (4) the City's Purchasing Department's acceptance of the bid by "Notice of Award" or by "Purchase Order". All Exhibits and Attachments included in the IFB shall be incorporated into the contract by reference.

A. The contract expresses the complete agreement of the parties and, performance shall be governed solely by the specifications and requirements contained therein.

B. Any change to the contract, whether by modification and/or supplementation, must be accomplished by a formal contract amendment signed and approved by and between the duly authorized representative of the bidder and the City Purchasing Division or by a modified Purchase Order prior to the effective date of such modification. The bidder expressly and explicitly understands and agrees that no other method and/or no other document, including acts and oral communications by or from any person, shall be used or construed as an amendment or modification to the contract.

3.7.7 Technical Support Services: The Contractor shall be required, at no cost to Persigo WWTP, to provide onsite technical assistance as needed. In case of emergency, the polymer supplier will be required to provide onsite technical assistance within 24 hours of notification. In the event the consumption of polymer, for which the contract is awarded, exceeds the original pounds of polymer per ton of dry solids, the supplier shall provide technical assistance within 72 hours of notification. The Contractor shall have ten working days to correct the problem at no additional cost to Persigo WWTP.

3.8. Contractor Bid Documents: For Contractor's convenience, the following is a list of forms/items to be submitted with the Contractor's bid response. However, should a form/item not be listed in this section, but required in the solicitation documents, it is the Contractor's responsibility to ensure all forms/items are submitted.

- Contractor's Bid Form Pages 1-2

3.9. IFB Tentative Time Schedule:

• Invitation for Bids available	December 9, 2022
• Jar Testing	December 19- January 6
• Product Production Testing	January 9-13, 2023
• Inquiry deadline, no questions after this date	January 13, 2023
• Addendum Posted	January 17, 2023
• Response Deadline	January 24, 2023
• Purchase Order/Contract execution	January 31, 2023

3.10. Questions Regarding Scope of Services:

Kassy Hackett, Buyer
kassyh@gjcity.org

CITY OF Grand Junction COLORADO

Purchasing Division

ADDENDUM NO. 1

DATE: December 15, 2022
FROM: City of Grand Junction Purchasing Division
TO: All Offerors
RE: Liquid Polymer IFB-5160-23-KH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

1. **Q:** I have some concerns about the subject testing dates and guidelines, with testing required around the Christmas and New Year's holiday. As it stands right now, I would need to do my jar testing the week of 1/2/23 and then need to have product on site the very next week, which is not very practical at this time of year. Could you please extend out the Product Production Testing in order to allow enough time to get product on site after bench testing, since there is a high possibility of weather/travel delays in early-mid January?

   A: Section 3.9 IFB Tentative Time Schedule shall be revised as follows:

   3.9 IFB Tentative Time Schedule:

• Invitation for Bids available	December 9, 2022
• Jar Testing	December 19, 2022 - January 20, 2023
• Product Production Testing	January 23 – February 10, 2023
• Inquiry deadline, no questions after this date	February 10, 2023
• Addendum Posted	February 14, 2023
• Response Deadline	February 21, 2023
• Purchase Order/Contract execution	March 1, 2023

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,

Kassy Hackett, Buyer
City of Grand Junction, Colorado

CITY OF Grand Junction COLORADO

Purchasing Division

ADDENDUM NO. 2

DATE: February 6, 2023
FROM: City of Grand Junction Purchasing Division
TO: All Offerors
RE: Liquid Polymer IFB-5160-23-KH

Offerors responding to the above referenced solicitation are hereby instructed that the requirements have been clarified, modified, superseded and supplemented as to this date as hereinafter described.

Please make note of the following clarifications:

1. Section 3.9 IFB Tentative Time Schedule shall be revised as follows:

   3.9 IFB Tentative Time Schedule:

• Invitation for Bids available	December 9, 2022
• Jar Testing	December 19, 2022 - January 20, 2023
• **Product Production Testing**	**January 23 – March 3, 2023**
• **Inquiry deadline, no questions after this date**	**March 3, 2023**
• **Addendum Posted**	**March 6, 2023**
• **Response Deadline**	**March 13, 2023**
• **Purchase Order/Contract execution**	**March 20, 2023**

2. Firm shall continue to use provided link in Section 1.4 for virtual solicitation opening on March 13th at 2:00 PM.

The original solicitation for the project noted above is amended as noted.

All other conditions of subject remain the same.

Respectfully,

Kassy Hackett, Buyer
City of Grand Junction, Colorado

4. Contractor's Bid Form (Page 1)

Bid Date: 3/13/23

Project: IFB-5160-23-KH "Liquid Polymer"

Bidding Company: Polydyne Inc.

Name of Authorized Agent: Boyd Stanley

Email bids@polydyneinc.com

Telephone (800) 848-7659 Opt. 2 **Address** 1 Chemical Plant Road

City Riceboro **State** GA **Zip** 31323

The undersigned Bidder, in compliance with the Invitation for Bids, having examined the Instruction to Bidders, General Contract Conditions, Statement of Work, Specifications, and any and all Addenda thereto, having investigated the location of, and conditions affecting the proposed work, hereby proposes to furnish all labor, materials and supplies, and to perform all work for the Project in accordance with Contract Documents, within the time set forth and at the prices stated below. These prices are to cover all expenses incurred in performing the work required under the Contract Documents, of which this Contractor's Bid Form is a part.

The undersigned Contractor does hereby declare and stipulate that this offer is made in good faith without collusion or connection to any person(s) providing an offer for the same work, and that it is made in pursuance of, and subject to, all terms and conditions of the Instructions to Bidders, the Specifications, and all other Solicitation Documents, all of which have been examined by the undersigned.

The Contractor also agrees that if awarded the Contract, to provide insurance certificates within ten (10) working days of the date of Notification of Award. Submittal of this offer will be taken by the Owner as a binding covenant that the Contractor will be prepared to complete the project in its entirety.

The Owner reserves the right to make the award on the basis of the offer deemed most favorable, to waive any formalities or technicalities and to reject any or all offers. It is further agreed that this offer may not be withdrawn for a period of sixty (60) calendar days after closing time. Submission of clarifications and revised offers automatically establish a new thirty day (30) period.

Prices in the bid proposal have not knowingly been disclosed with another provider and will not be prior to award.

- Prices in this bid proposal have been arrived at independently, without consultation, communication or agreement for the purpose of restricting competition.
- No attempt has been made nor will be to induce any other person or firm to submit a bid proposal for the purpose of restricting competition.
- The individual signing this bid proposal certifies they are a legal agent of the offeror, authorized to represent the offeror and is legally responsible for the offer with regard to supporting documentation and prices provided.
- Direct purchases by the City of Grand Junction are tax exempt from Colorado Sales or Use Tax. Tax exempt No. 98-903544. The undersigned certifies that no Federal, State, County or Municipal tax will be added to the above quoted prices.
- City of Grand Junction payment terms shall be Net 30 days.
- Prompt payment discount of Zero percent of the net dollar will be offered to the Owner if the invoice is paid within Net 30 days after the receipt of the invoice. The Owner reserves the right to take into account any such discounts when determining the bid award that are no less than Net 10 days

RECEIPT OF ADDENDA: the undersigned Contractor acknowledges receipt of Addenda to the Solicitation, Specifications, and other Contract Documents.

State number of Addenda received: 2.

It is the responsibility of the Bidder to ensure all Addenda have been received and acknowledged.
By signing below, the Undersigned agree to comply with all terms and conditions contained herein.

Company: Polydyne Inc.

Authorized Signature:

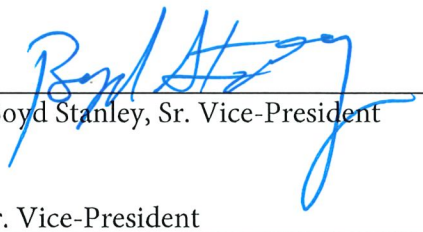
Title: Sr. Vice-President

4. Contractor's Bid Form (Page 2)

ONLY FIRMS WHO HAVE BEEN PREAPPROVED THROUGH THE TESTING PROCESS DESCRIBED IN SECTION 3 WILL BE ALLOWED TO BID.

1. STATE PRODUCT PRICE PER POUND: $ $1.68/Lb.
   One dollar and sixty-eight cents per pound.
2. STATE PRODUCT NAME: CLARIFLOC CE-2478 , CLARIFLOC CE-2494

Company: Polydyne Inc.

Authorized Signature: 
Boyd Stanley, Sr. Vice-President

Title: Sr. Vice-President

Empty Drum Pickup Service:

Polydyne Inc. utilizes Mauser Packaging Solutions for the removal of empty totes and drums. Please coordinate directly with Mauser for the return of these containers. Mauser's Container Acceptance Policy and Pickup Request Form is attached. The City may also use the web form found at https://snf.com/mauser to request pickups.

Boyd Stanley
Sr. Vice-President

MAUSER Packaging Solutions	Container Acceptance Policy

General Acceptance Criteria

All used containers sent to MPS must conform to the following standards per applicable State and Federal regulations:[1]

- All closures (plugs, covers, closing rings, IBC caps, etc.) must be in place and secured in the same manner as if the container was being shipped full of product.
- Original content labels showing product name, manufacturer and associated health hazards must be intact and legible.
- All containers must be properly emptied:
  1. Containers must be as empty as possible using normal emptying methods (pouring, pumping or aspirating) ***and:***
     a. Non-bulk containers (under 119 gallons) can contain no more than one inch (or 3% by weight of the total capacity of the container) of solid (non-pourable) residue.
     b. Bulk containers (over 119 gallons) can contain no more than one inch (or .3% by weight of the total capacity of the container) of solid (non-pourable) residue.
  2. Used containers processed in California must be empty as defined by California regulations:[2]
     a. No material can be poured or drained from the container when it is held in any orientation (e.g., tilted, inverted, etc.).
     b. If the material is not pourable, no residues can remain in or on the container that can feasibly be removed by physical methods (excluding rinsing).

Product Review and Approval

- GENERAL MATERIAL CLASSES
  - Any drum or IBC generator new to the MPS system that operates in SIC Codes 28XX and 29XX must provide MPS with Safety Data Sheets (SDS) for all DOT hazardous materials they wish to ship to an MPS reconditioning facility.
- SPECIAL MATERIAL CLASSES
  - MPS does not accept residue types listed in Appendix A.
  - Containers that previously held materials listed in Appendix B must be triple-rinsed with a "triple rinse" label affixed to each container unless the MPS receiving facility has provided a specific exemption.
  - DOT Hazard Class 5.1 products must be drip-dry but do not have to be triple-rinsed.
  - DOT Hazard Class 5.2 products must be drip dry and are accepted only at the locations in Appendix C.

Non-Conforming Containers

Containers delivered to an MPS facility that are found upon inspection to be non-conforming to this policy will not be processed. Non-conforming containers (NCC) will be quarantined until such time as the generator arranges removal from the MPS site at their expense. All NCC will be removed within 10 business days of notification.

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[1] 40 CFR 261.7; 49 CFR 173.29(a); 40 CFR 261.33(e);
[2] 22 CCR 66261.7

Appendix A: Products Never Accepted By MPS

- Acutely hazardous residues as defined by 40 CFR 261.33 "The RCRA P List"
- Biological Waste
- Cyclotetrasiloxane
- Dioxin bearing waste
- Explosives or flammable solids (DOT Class 1 & 4)
- Hydrofluoric Acid
- Hydrogen-Bonded Silicone Compounds not in compliance with Appendix D – SiH Approval Criteria
- Malathion/ Parathion
- Mercaptans, Pyridine and other extremely high odor compounds
- Mercury/Lead bearing materials
- PCBs
- Radioactive Materials
- Sodium / Potassium Permanganate

Appendix B: Products Accepted With Pre-Approval And/Or Triple-Rinse

- Acids of concentrations greater than 50%*
- DOT Class 5.1*
- DOT Class 5.2*
- FIFRA Regulated Materials
- Halogenated Organic Compounds
- Poisons: DOT Class 6, Packing Group I and II
- Poisons: Class B
- Poisons: WHMIS (Canada)
- Acrylonitrile
- Alkyl Chloride
- Ammonia Perchlorate
- Ammonium Bisulfite
- Ammonium Fluoride
- Aqua Ammonia
- Benzene
- Benzyl Chloride
- Butylacrylate
- Carbon Tetrachloride
- Chlorinated Parrafin
- Chlorinated Phenols
- Chloroform
- Chloroprene
- Dimethyl cyclohexylamine
- Ethylene Dichloride
- Formaldehyde
- Formic Acid
- Hexachlorobenzene
- Hydrogen Chloride
- Methyl Chloroform
- N,N---Ethyl Chloride
- Perchloric Acid
- Sodium Bisulfide
- Sodium Perchlorate
- Triethylamine
- Vinylidene Chloride

- ***Preapproved exemptions are listed in Appendix C***

Please note that certain MPS facilities may restrict the acceptance of additional materials due to high odor or other hazardous properties that conflict with their local operating circumstances.

Appendix C: Exemption List

Product	Facilities Exempt From Triple-Rinse Stipulation	Exemption Criteria
DOT Class 5.1	All facilities except: Clarkston (Reco IBC), Chillicothe (Reco IBC), San Bernardino (Reco IBC), Seattle (Reco Steel)	Container must meet "Drip-Dry" standard
DOT Class 5.2	Charlotte (Reco IBC), Chicago (Reco IBC), Cincinnati (Reco IBCy), Cleveland (Reco IBC), Hutchins (Reco IBC), Kemp (Reco IBC), North Wales (Reco IBC)	Container must meet "Drip-Dry Standard
Acids > 50%	Camden (Reco IBC), North Wales (Reco IBC), Charlotte (Reco IBC), Hastings (Reco IBC), Cannon Falls (Reco IBC), Cleveland (Reco IBC), Delphi (Reco IBC), Cincinnati (Reco IBC), St Louis (Reco IBC), Chicago (Reco IBC), Midland (Reco IBC), Kemp (Reco IBC), Houston (Reco IBC)	None
Agricultural Products not otherwise referenced in Appendix A or B:	Delphi (Reco IBC), Webster City (Reco IBC),	None

Appendix D: SiH Approval Criteria

Hydrogen-Bonded Silicon Compounds (SiH) are reactive under certain conditions and care is required when handling these materials. These hydrogen functional silicon compounds include some silanes, siloxanes and silicones, such as the methyl hydrogen polysiloxanes, and come in many forms, such as emulsions, fluids, elastomers and resins.

Any material containing SiH must be specifically reviewed and approved by Corporate EHS and Divisional leadership. Acceptable materials in this category require less than 50 ppb SiH and must not be at risk for generating hydrogen gas in explosive concentrations when exposed to water, or alkaline washes.

MPS maintains a list of approved SiH/silicone materials (IPS/TBL-ENV-003).

MAUSER Packaging Solutions

Container Acceptance Policy

Date	Revision	Authorization
2021-06-08	Updated Appendix C to reflect operational changes and improved appendices formatting.	Ed Konyen
2021-05-14	Added to Exemption List	Bryant McCracken
2021-04-08	Updated list of materials, added Appendix D SIH material references, removed isocyanates from Appendix B and document reference numbers.	Bryant McCracken
2021-03-12	Original Release	Kimberly Miller

MAUSER
Packaging Solutions

Container Max Pickup Request Form

email: inboundpickup@mauserpackaging.com

Or Call 800.774.6956

Date of Request:

Company Name:
Street Address:
City: **State:** **Zip Code:**

Company Contact: **Telephone:** **Extension** _____
Alternate Contact: **Telephone:** **Extension** _____
Email Address:

Dock Hours: **Appointment (Yes/No or With Notice)**
Rebranded Unit? (Yes/No, if Yes enter Original Filler)

PO# or PCard for Junk Freight Fee:

				Check Container Type			Number of Containers By Size			
Product Manufacturer	Product Once Contained	Haz Mat?	Silicone Based Product?	Poly Drum	Caged Totes Steel Bottom	All Poly Tote Ecolab only	30 Gallon	55 Gallon	275 Gallon	330 Gallon

Comments:

AFFIDAVIT OF COMPLIANCE

Polydyne Inc. hereby certifies that CLARIFLOC CE-2478 and CLARIFLOC CE-2494 fully complies with bid IFB-5160-23-KH, Liquid Polymer specifications and both are acceptable for use in the existing dewatering installation.

Certificate of Analysis, Product Data Sheet and Safety Data Sheets are attached.

POLYDYNE INC.
Company

Boyd Stanley, Sr. Vice-President

3/7/23
Date

SNF POLYDYNE

CERTIFICATE OF ANALYSIS

Polydyne Inc.
13931 SOUTH INDIANA AVE

DOLTON IL 60419

CUSTOMER NAME :
GRAND JUNCTION - PERSIGO WWTP

OA # : 1673453 - 1 - 1

GRAND JUNC 000

GRAND JUNCTION
PERSIGO WWTP
2145 RIVER ROAD
(970) 256 4166
GRAND JUNCTION CO 81505
UNITED STATES

POLYDYNE PRODUCT NAME : CLARIFLOC CE-2478

PURCHASE ORDER NR : TRIAL **DATE : 01/07/2023**

AMOUNT : 450 LB

	UNIT	SPECIFICATION	QUALITY CONTROL BATCH NUMBER RC19/7721M	QC TEST
BULK BROOKFIELD VISCOSITY	cps	500 - 2000	1120	1010 A
NON VOLATILE SOLIDS	%	45.0 - 52.0	48.7	1050 A
UL BROOKFIELD VISCOSITY	cps	3.30 - 4.30	3.91	1019 A
RESIDUAL ACRYLAMIDE	ppm	0 - 999	60	1001 A

Date : 01/07/2023
Signature
Amy Herndon

If the # symbol appears in the QC-TEST column, then the data on that line is given for information only, and does not constitute a specification.
If ND appears in the result column, that means under the limit of detection.
For Personal Care ingredients, the generic name is corresponding to the INCI name.

SUP NR: OG-0098 REVISION: 04

SNF POLYDYNE

PRODUCT BULLETIN

CLARIFLOC CE-2478 POLYMER

PRINCIPAL USES

CLARIFLOC CE-2478 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
Density	8.5 - 8.7 lbs/gal
Specific Gravity	1.02 - 1.04
Cationicity	60 %
Active Polyacrylamide Min.	42 %
Freezing Point	7 F. (-14 C.)

PREPARATION AND FEEDING

CLARIFLOC CE-2478 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	3.3 - 4.3 cPs

HANDLING AND STORAGE

Suggested in-plant storage life is 12 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-2478, 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-2478 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-2478 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.

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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-2478**

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 (NOx), carbon oxides (COx). 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 (NOx), carbon oxides (COx). 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 >= 4951 mg/m³ (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.

Serious eye damage/eye irritation:	Not irritating. (OECD 405)
Respiratory/skin sensitisation:	By analogy with similar products, this product is not expected to be sensitizing. (OECD 406)
Mutagenicity:	Not mutagenic. (OECD 471, 473, 474, 476, 478, 479)
Carcinogenicity:	Carcinogenicity study in rats (OECD 451): Negative.
Reproductive toxicity:	By analogy with similar substances, this substance is not expected to be toxic for reproduction. NOAEL/rat = 300 ppm. (OECD 421)
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/90 days >= 3000 mg/kg/day (OECD 408) (Based on results obtained from tests on analogous products)
Aspiration hazard:	May be fatal if swallowed and enters airways.

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

Acute oral toxicity:	LD50/oral/rat = 500 - 2000 mg/kg
Acute dermal toxicity:	LD50/dermal/rabbit > 2000 mg/kg
Acute inhalation toxicity:	No data available.
Skin corrosion/irritation:	Not irritating. (OECD 404)
Serious eye damage/eye irritation:	Causes serious eye irritation. (OECD 405)
Respiratory/skin sensitisation:	The results of testing on guinea pigs showed this material to be non-sensitizing.
Mutagenicity:	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Carcinogenicity:	Based on the absence of mutagenicity, it is unlikely that the substance is carcinogenic.

Reproductive toxicity:	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
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/600 days = 50 mg/kg/day
Aspiration hazard:	No known effects.

SECTION 12: Ecological information

12.1. Toxicity

Information on the product as supplied:

Acute toxicity to fish:	LC50/Fish/96 hours = 10 - 100 mg/L (Estimated)
Acute toxicity to invertebrates:	EC50/Daphnia magna/48 hours = 10 - 100 mg/L (Estimated)
Acute toxicity to algae:	Algal inhibition tests are not appropriate. The flocculation characteristics of the product interfere directly in the test medium preventing homogenous distribution which invalidates the test.
Chronic toxicity to fish:	No data available.
Chronic toxicity to invertebrates:	No data available.
Toxicity to microorganisms:	No data available.
Effects on terrestrial organisms:	No data available.
Sediment toxicity:	No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Acute toxicity to fish:	LC0/Oncorhynchus mykiss/96 hours > 1000 mg/L (OECD 203)
Acute toxicity to invertebrates:	EC0/Daphnia magna/48 hours > 1000 mg/L (OECD 202)
Acute toxicity to algae:	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 information

NFPA 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.

SNF POLYDYNE

CERTIFICATE OF ANALYSIS

Polydyne Inc.
13931 SOUTH INDIANA AVE

DOLTON IL 60419

CUSTOMER NAME :
GRAND JUNCTION - PERSIGO WWTP

OA # : 1682282 - 1 - 1

GRAND JUNC 000

GRAND JUNCTION
PERSIGO WWTP
2145 RIVER ROAD
(970) 256 4166
GRAND JUNCTION CO 81505
UNITED STATES

POLYDYNE PRODUCT NAME : CLARIFLOC CE-2494

PURCHASE ORDER NR : TRIAL **DATE : 02/07/2023**

AMOUNT : 450 LB

	UNIT	SPECIFICATION	QUALITY CONTROL BATCH NUMBER RC19/7671M	QC TEST
BULK VISCOSITY	cP	500 - 2000	1100	1010 A
NON VOLATILE SOLIDS	%	45.0 - 52.0	51.4	1050 A
UL BROOKFIELD VISCOSITY	cP	3.30 - 4.30	3.76	1019 A
RESIDUAL ACRYLAMIDE	ppm	0 - 999	220	1001 A

Date : 02/07/2023
Signature
Amy Herndon

If the # symbol appears in the QC-TEST column, then the data on that line is given for information only, and does not constitute a specification.
If ND appears in the result column, that means under the limit of detection.
For Personal Care ingredients, the generic name is corresponding to the INCI name.

SUP NR: OG-0098 REVISION: 04

SNF POLYDYNE

PRODUCT BULLETIN

CLARIFLOC CE-2494 POLYMER

PRINCIPAL USES

CLARIFLOC CE-2494 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
Density	8.5 - 8.7 lbs/gal
Specific Gravity	1.02 - 1.04
Cationicity	60 %
Active Polyacrylamide Min.	42 %
Freezing Point	7 F. (-14 C.)

PREPARATION AND FEEDING

CLARIFLOC CE-2494 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	3.3 - 4.3 cPs

HANDLING AND STORAGE

Suggested in-plant storage life is 12 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-2494, 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-9545 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-2494 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.

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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-2494**

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 (NOx), carbon oxides (COx). 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 (NOx), carbon oxides (COx). 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 >= 4951 mg/m³ (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.

Serious eye damage/eye irritation:	Not irritating. (OECD 405)
Respiratory/skin sensitisation:	By analogy with similar products, this product is not expected to be sensitizing. (OECD 406)
Mutagenicity:	Not mutagenic. (OECD 471, 473, 474, 476, 478, 479)
Carcinogenicity:	Carcinogenicity study in rats (OECD 451): Negative.
Reproductive toxicity:	By analogy with similar substances, this substance is not expected to be toxic for reproduction. NOAEL/rat = 300 ppm. (OECD 421)
STOT - Single exposure:	No known effects.
STOT - Repeated exposure:	Based on available data, product is not expected to demonstrate chronic toxic effects. NOAEL/oral/rat/90 days >= 3000 mg/kg/day (OECD 408) (Based on results obtained from tests on analogous products)
Aspiration hazard:	May be fatal if swallowed and enters airways.

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

Acute oral toxicity:	LD50/oral/rat = 500 - 2000 mg/kg
Acute dermal toxicity:	LD50/dermal/rabbit > 2000 mg/kg
Acute inhalation toxicity:	No data available.
Skin corrosion/irritation:	Not irritating. (OECD 404)
Serious eye damage/eye irritation:	Causes serious eye irritation. (OECD 405)
Respiratory/skin sensitisation:	The results of testing on guinea pigs showed this material to be non-sensitizing.
Mutagenicity:	In vitro tests did not show mutagenic effects. In vivo tests did not show mutagenic effects.
Carcinogenicity:	Based on the absence of mutagenicity, it is unlikely that the substance is carcinogenic.

Reproductive toxicity: 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

STOT - Single exposure: No known effects.

STOT - Repeated exposure: Based on available data, product is not expected to demonstrate chronic toxic effects.
NOAEL/oral/rat/600 days = 50 mg/kg/day

Aspiration hazard: No known effects.

SECTION 12: Ecological information

12.1. Toxicity

Information on the product as supplied:

Acute toxicity to fish: LC50/Fish/96 hours = 10 - 100 mg/L (Estimated)

Acute toxicity to invertebrates: EC50/Daphnia magna/48 hours = 10 - 100 mg/L (Estimated)

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

Chronic toxicity to fish: No data available.

Chronic toxicity to invertebrates: No data available.

Toxicity to microorganisms: No data available.

Effects on terrestrial organisms: No data available.

Sediment toxicity: No data available.

Relevant information on the hazardous components:

Distillates (petroleum), hydrotreated light

Acute toxicity to fish: LC0/Oncorhynchus mykiss/96 hours > 1000 mg/L (OECD 203)

Acute toxicity to invertebrates: EC0/Daphnia magna/48 hours > 1000 mg/L (OECD 202)

Acute toxicity to algae: 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 information

NFPA 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.