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Addendum 1
Solicitation 26-AA28
2027 Water Treatment Chemicals

This addendum serves to notify all bidders of the following changes to the solicitation documents:

NOTICE:

- CARUS 4200 has been approved as an equal to the Orthophosphate in the specifications, however this product has a 7% lower concentration than the bid item so the bid form has been updated with a new line for Orthophosphate (Carus 4200) with a higher estimated quantity. Specification sheets for this product are attached to this addendum.

QUESTIONS: The following question was asked and has been answered in *italics* below.

1) Does this need to be a squirt fill? Or would you be able to take 20,000 lbs at a time?
   a) These volumes are estimates as we do not yet have storage tanks, but we anticipate having 2,500 to 3,000 gallons total storage volume. So we should be able to take loads of over 20,000 lbs or up to around 2,000 gallons.

Please acknowledge receipt of this Addendum by checking the acknowledgement box within the solicitation at www.bidexpress.com or on the submitted paper bid form.

Posted: 11/19/26



CARUS™ 4200 WATER TREATMENT CHEMICAL

MUNICIPAL DRINKING WATER DATA SHEET

CARUS 4200 is an effective corrosion inhibitor for use in potable and industrial water systems. The product is an alkaline liquid concentrate of exceptional purity, clarity, and stability.

BENEFITS OF CARUS™ 4200

- Inhibits corrosion of steel distribution system water lines, iron and galvanized piping, and lead and copper plumbing
- Forms a stable, evenly distributed film on the inside of the distribution piping and metal surfaces providing for effective corrosion control
- Decreases iron tuberculation extending the life of the distribution system
- Saves money by reducing corrosion and decreasing hydrant flushing, leaks, and failures
- Lowers lead and copper levels in the delivered potable water by inhibiting corrosion in the water system

PROPERTIES & CERTIFICATIONS

Description:	Clear homogeneous liquid
Specific Gravity:	1.47 - 1.55
pH (1% w:w):	≥9.5
NSF Maximum Feed Rate:	27 mg/L
NSF/ANSI Standard:	60
Shelf Life:	3 Years
Kosher Approved	

NSF Certified to NSF/ANSI/CAN 60

Certified Kosher Pareve



HANDLING & STORAGE

CARUS 4200 should be handled with care. Wear proper personal protective equipment for your application which can include safety glasses, goggles, face shield, apron, respirator, and proper gloves when handling this product.

CARUS 4200 has a shelf-life of 3 years when stored and handled properly. Protect containers from physical damage. Store in a cool, dry, temperature controlled area in closed containers set off the floor. Store inside a heated building and off the floor for best storage conditions at your facility. Exposure to temperatures < 50˚F (10˚C) for consecutive days may cause the product to increase in viscosity. It may become cloudy and/or freeze. In case of accidental release: contain spill by collecting the liquid in a pit or holding area behind a dam (sand or soil). Absorb with inert media and dispose of properly. Disposal of all materials shall be in full and strict compliance with federal, state, and local regulations. **Consult the Safety Data Sheet (SDS) for additional safety information.**

COMPATIBILITY INFORMATION

CARUS 4200 can be stored in high-medium density polyethylene, cross-linked polyethylene, fiberglass reinforced plastic, 316 stainless steel, glass lined /epoxy lined steel tanks. Piping materials may include schedule 80 PVC/CPVC piping, clear PVC, and white polyethylene tubing. Pump materials may include ceramic, Teflon™, Viton™, Hypalon, and PVC liquid end pump materials.

Metering equipment can include diaphragm and peristaltic type metering pumps and other pumps meeting compatibility requirements.



SHIPPING CONTAINERS

5 gallon (63 lb) Jerrican
Made of high density polyethylene (HDPE). Weighs 3.31 lbs. (1.5 kg). **The net weight is 63 lbs. (28.6 kg).**

30 gallon (378 lb) Drum
Made of high density polyethylene (HDPE).
Weighs 12.2 lbs. (5.5 kg).
The net weight is 378 lbs. (171.5 kg).

55 gallon (693 lb) Drum
Made of high density polyethylene (HDPE).
Weighs 20.5 lbs. (9.21 kg).
The net weight is 693 lbs. (314.3 kg).

275 gallon (3465 lb.) IBC (Intermediate Bulk Container)
The IBC has a 2 inch (5.08 cm) butterfly valve with NPT threads in bottom sump. Weighs 123.2 lbs. (55.9 kg).
The net weight is 3465 lbs. (1571.7 kg).

Bulk quantities up to 3500 gallons are available.

Other containers may be available, contact Carus at (800) 435-6856 for details.

SHIPPING

CARUS™ 4200 water treatment chemical is not regulated by US Department of Transportation, Canada TDG, UN, IMDG, IATA regulations.

CARUS VALUE ADDED

LABORATORY SUPPORT

Carus has technical assistance available to answer questions, evaluate treatment alternatives, and perform laboratory testing. Our laboratory capabilities include: consulting, treatability studies, feasibility studies, and analytical services.

FIELD SERVICES

As an integral part of our technical support, Carus provides extensive on-site treatment assistance. We offer full application services, including technical expertise, supervision, testing, and feed equipment design and installation in order to accomplish a successful evaluation and/or application.

CARUS

During its more than 100-year history, Carus' ongoing emphasis on research and development, technical support, and customer service has enabled the company to become the world leader in permanganate, manganese, oxidation, and base-metal catalyst technologies.

CARUS®

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carusllc.com | salesmkt@carusllc.com

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The information contained herein is accurate to the best of our knowledge. However, data, safety standards and government regulations are subject to change; and the conditions of handling, use or misuse of the product are beyond our control. Carus makes no warranty, either expressed or implied, including any warranties of merchantability and fitness for a particular purpose. Carus also disclaims all liability for reliance on the completeness or confirming accuracy of any information included herein. Users should satisfy themselves that they are aware of all current data relevant to their particular use(s).

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RESPONSIBLE CARE™
Driving Safety & Sustainability

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Rev.2/2025

SAFETY DATA SHEET

1. Identification

Product identifier **C A R U S ™ 4200 WAT E R T R E A T M E N T C H E M I C A L**

Other means of identification

SDS number -

Recommended use An effective corrosion inhibitor developed specifically for use in portable and industrial water systems.
C A R U S ™ 4200 water treatment chemical is an effective corrosion inhibitor for use in potable and industrial water systems.

Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor information

Company name CARUS LLC

Address 315 Fifth Street,
Peru, IL 61354, USA

Telephone +1 815 223-1500 - All other non-emergency inquiries about the product should be directed to the company

E-mail salesmkt@carusllc.com

Website www.carusllc.com

Contact person Sr. Manager Global Corporate Product Stewardship, RCMS Coordinator

Emergency Telephone For Hazardous Materials [or Dangerous Goods] Incidents ONLY
(spill, leak, fire, exposure or accident), call CHEMTREC at
CHEMTREC®, USA: 001 (800) 424-9300
CHEMTREC®, Mexico (Toll-Free - must be dialed from within country): 01-800-681-9531
CHEMTREC®, Other countries: 001 (703) 527-3887

2. Hazard(s) identification

Physical hazards Not classified.

Health hazards Not classified.

OSHA defined hazards Not classified.

Label elements

Hazard symbol None.

Signal word None.

Hazard statement The mixture does not meet the criteria for classification.

Precautionary statement

Prevention Observe good industrial hygiene practices.

Response Wash hands after handling.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) Not classified.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

The manufacturer lists no ingredients as hazardous to health according to OSHA 29 CFR 1910.1200.

Composition comments The components are not hazardous or are below required disclosure limits.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact	Wash off with soap and water. Get medical attention if irritation develops and persists.
Eye contact	Rinse with water. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. Get medical attention if symptoms occur.
Most important symptoms/effects, acute and delayed	Direct contact with eyes may cause temporary irritation.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials.
Unsuitable extinguishing media	Not assigned.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed such as: Metal oxides. Phosphorus Oxides (PxOy).
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Selection of respiratory protection for firefighting: follow the general fire precautions indicated in the workplace.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
General fire hazards	The product is not flammable.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination. Never return spills in original containers for re-use. For waste disposal, see section 13 of the SDS.
Environmental precautions	Prevent further leakage or spillage if safe to do so.

7. Handling and storage

Precautions for safe handling	Avoid inhalation and contact with skin and eyes. Wear appropriate personal protective equipment (See Section 8). Wash thoroughly after handling. Observe good industrial hygiene practices. Ensure adequate ventilation.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store away from water, dust and incompatible materials (see section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits	No exposure limits noted for ingredient(s).
Biological limit values	No biological exposure limits noted for the ingredient(s).
Appropriate engineering controls	General ventilation normally adequate.

Individual protection measures, such as personal protective equipment

Eye/face protection	If contact is likely, safety glasses with side shields are recommended.
Skin protection	
Hand protection	For prolonged or repeated skin contact use suitable protective gloves. Suitable gloves can be recommended by the glove supplier.
Skin protection	
Other	Wear suitable protective clothing.
Respiratory protection	In case of inadequate ventilation or risk of inhalation of vapors, use suitable respiratory equipment.

Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. Physical and chemical properties

Appearance	Colorless solution.
Physical state	Liquid.
Form	Liquid.
Color	Colorless.
Odor	None.
Odor threshold	Not spplicable.
pH	1% solution = 9.5±0.5
Melting point/freezing point	< 32 °F (< 0 °C)
Initial boiling point and boiling range	Not available.
Flash point	Not applicable.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not applicable.
Explosive limit - upper (%)	Not applicable.
Vapor pressure	Not available.
Vapor density	Not available.
Relative density	1.51±0.03 at 25°C
Solubility(ies)	
Solubility (water)	Completely soluble.
Partition coefficient (n-octanol/water)	Not applicable for mixtures.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not available.

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization will not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents. Strong acids. Strong bases.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation	In high concentrations, vapors may be irritating to the respiratory system.
Skin contact	Prolonged or repeated skin contact may cause irritation.
Eye contact	May cause eye irritation on direct contact.
Ingestion	May cause discomfort if swallowed.
Symptoms related to the physical, chemical and toxicological characteristics	Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity	Not expected to be acutely toxic.
Skin corrosion/irritation	Prolonged contact may cause dryness of the skin.
Serious eye damage/eye irritation	Direct contact with eyes may cause temporary irritation.

Respiratory or skin sensitization

Respiratory sensitization	This product is not expected to cause respiratory sensitization.
Skin sensitization	Not a skin sensitizer.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Not classified.

12. Ecological information

Ecotoxicity	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
Persistence and degradability	The product is not expected to be readily biodegradable.
Bioaccumulative potential	No data available for this product.
Mobility in soil	The product is soluble in water.
Other adverse effects	No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose in accordance with local regulations.
Contaminated packaging	Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not available.

15. Regulatory information

US federal regulations	This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Toxic Substances Control Act (TSCA) All components of the mixture on the TSCA 8(b) inventory are designated "active".

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical No

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act (SDWA) Not regulated.

US state regulations

US. Massachusetts RTK - Substance List

Not regulated.

US. New Jersey Worker and Community Right-to-Know Act

Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

US. Rhode Island RTK

Not regulated.

California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to www.P65Warnings.ca.gov.

International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Industrial Chemicals (AICIS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes

Country(s) or region	Inventory name	On inventory (yes/no)*
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

16. Other information, including date of preparation or last revision

Issue date 19-May-2023

Revision date -

Version # 01

HMIS® ratings
Health: 0
Flammability: 0
Physical hazard: 0
Personal protection: B

References HSDB® - Hazardous Substances Data Bank

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BID FORM
BID # 26-AA28
WATER TREATMENT CHEMICALS FOR 2027

ITEM NO.	ITEM	QTY	UOM	UNIT PRICE	EXTENDED PRICE
1	Liquid Aluminum Sulfate	160,000	GAL		
2	Liquid Caustic Soda	90,000	GAL		
3	Wet Hydrofluorosilicic Acid	174,000	LBS		
4	Liquid Chlorine	64	TON		
5	Nonionic Polymer (Clarifloc N-3300P or equivalent)	3,000	LBS		
6	Liquid Ammonium Sulfate Solution	20,000	GAL		
7	Orthophosphate (Hawkins LPC-DP or Equivalent)	18,000	GAL		
8	Orthophosphate (Carus 4200)	19,260	GAL		

IF YOU DO NOT WISH TO SUBMIT A BID FOR AN ITEM – PLEASE WRITE "NO BID" ON THAT LINE

ACKNOWLEDGMENT OF ADDENDA

ADDENDUM # _____ INITIAL/DATE _____

ADDENDUM # _____ INITIAL/DATE _____

Signature _____ Date _____

Name/Title _____

Company Name _____

Address _____

City, State, Zip _____

Tel. _____ E-Mail _____

** BidExpress® is the official site for bid documents, which can be viewed and downloaded for free at www.bidexpress.com. Although the City of Duluth makes every effort to notify potential bidders, it is the bidder's responsibility to periodically check for updates to the bid request within the Bid Express solicitation.

DECLARATION OF NON-COLLUSION

I hereby swear (or affirm) under penalty of perjury:

1) That I am the bidder (if the bidder is an individual), a partner in the bidder (if the bidder is a partnership), or an officer or employee of the bidding corporation having authority to sign on its behalf (if the bidder is a corporation);

2) That the attached bid or bids have been arrived at by the bidder independently and have been submitted without collusion with and without agreement, understanding, or planned common course of action with any other vendor of materials, supplies, equipment or services described in the invitation to bid, designed to limit independent bidding or competition;

3) That the contents of the bid or bids have not been communicated by the bidder or its employees or agents to any person not an employee or agent of the bidder or its surety on any bond furnished with the bid or bids and will not be communicated to any such person prior to the official opening of the bid or bids;

4) That a family relationship between a City of Duluth employee and bidder/proposer are in non-collusion; and

5) That I have fully informed myself regarding the accuracy of the statements made in this declaration.

Signed: _____

Firm Name: _____

Bidder's Federal Identification Number _____