

ITEM A-65-23 LIQUID CALCIUM CHLORIDE

DATED: JANUARY 2023

CONTRACT PERIOD: 3/31/23 - 3/30/24

SCOPE

Under this specification, the successful bidder shall provide Liquid Calcium Chloride for use in dust control, ice control, and for other highway related purposes.

MATERIAL REQUIREMENTS

Liquid Calcium Chloride shall be supplied as a mixed solution, which upon analysis shall not less than 35% +/- 1% Calcium Chloride.

Corrosion Inhibited Calcium Chloride Solution

The Calcium Chloride shall meet the following material specification (see ASTM Designation D98; AASHTO-M144).

Calcium Chloride	32%±
Alkali Chloride as NaCl	2% Max
Magnesium as MgCl	0.1%
Phosphates	<5.000 PPM
Cyanide	<0.050 PPM
Arsenic	<1.000 PPM
Copper	<0.200 PPM
Lead	<0.400 PPM
Mercury	<0.005 PPM*
Chromium	<0.100 PPM
Cadmium	<0.100 PPM

Test Method: Standard Methods for the determination of water and waste water, 19th Edition, 1995 Method 3120B*3112B

Typical (In lb. per gallon)

	<u>32%</u>	
Calcium Chloride		4.50
Sodium Chloride		0.2
Magnesium Chloride		0.004
Calcium Sulfate		0.004
Water		<u>5.800</u>
		10.50

Corrosion Inhibitor

The inhibited Calcium Chloride should contain no less than the minimum inhibitor specified by the supplier.

Corrosion Rate

The corrosion rate shall be at least 70% lower than reagent grade sodium chloride tested under similar conditions. Testing methods for confirmation shall conform to the following requirements:

°Coupon dip test, 72 hours, 10 min. in/50 min. out @ 65-80 degrees F ambient Temp.

°Deicer diluted to 3% by weight.

°Testing Method: NACE Standard TM01169-95
SHRP-H205.7

The successful contractor must submit results from testing to confirm results from an independent laboratory pertaining to Corrosion Rate, by neglecting to submit results will cause the disqualification of bidder.

Precipitation & Flocculation:

The successful bidder must provide Calcium Chloride with No Precipitation or Flocculation & Solidification.

Test Method: Standing sample for 168 hours @ -2F

Specific Gravity

Minimum Specific Gravity shall be 1.317.

DELIVERY

Liquid Calcium Chloride shall be delivered in bulk shipments on either a supplied-and-applied basis, or for transfer into other bulk storage units within Montgomery County.

When requested for supplied-and-applied basis, the delivery equipment shall be capable of applying the liquid solution at the specified rates. The delivery equipment shall be equipped with suitable calibration devices to insure the correct rate of application. Each shipment shall be accompanied with the manufacturer's invoice.

When requested for bulk storage units, the delivery equipment shall be capable of transferring the liquid solution from the transport vehicle into the bulk storage tanks.

Delivery shall be made to any point within Montgomery County.

APPLICATION

All liquid calcium chloride will be applied with an approved New York State Department of Transportation bituminous material distributor.

EQUIPMENT

The bituminous material distributor shall be so designed, equipped, maintained and operated so that the bituminous material can be applied uniformly on variable widths of surface up to 15 feet at readily determined and controlled areas from 0.05 to 2.0 gallons per square yard, with uniform pressure, and with an allowable variation from any specified rate not to exceed 0.02 gallons per square yard. Distributor equipment shall include tachometer, accurate volume measuring devices or calibrated tank. Distributors shall be equipped with a power unit for the pump, and full circulation spray bars adjustable laterally and vertically.

SPEED CONTROL

Mechanical distributors must be fitted with an accurate means of indicating the road speed when the vehicle is traveling at operational speeds. The road speed indicator must be independent of the normal vehicle speedometer and must be:

- (a) so placed that the driver can read it with the least possible distraction from driving the vehicle or operating the plant.
- (b) tested and certified as accurate to within + or - 5 percent.

Digital speed meters may be used provided the digits are clearly visible.

PUMPING SYSTEM

A positive system must be provided to circulate the material in the spray bar and tank and another positive system should be provided to clean the pump and spray bar if the tank is not emptied.

The supply system to the nozzles must be such that all nozzles in use substantially commence spraying simultaneously, with a full spray at the start of a run, and shut off simultaneously and cleanly at the end of a run so that excessive discharge occurs (i.e. linkages should not be worn, etc.)

The material distributing system is supplied from a pipe carrying material under pressure; the spray rate of the material must be controlled by the following methods:

- (a) Using a metering pump synchronized with the road speed of the vehicle. In this case the pump must be driven at a speed which remains proportional to that of the vehicle.
- (b) During full-width spraying, the whole delivery of the pump must be passed to the spray bar, any by-pass or excess valve being closed.

SAMPLE VALVE

The distributor shall be equipped with a sampling valve so designed and installed as to the non-clogging and safe. The type of valve and its general location shall be according to written instructions by the Department.

SPRAY RATE

Information regarding pump revolutions, road speed, etc. must be supplied with each machine, to enable the operator to ensure that the specified spray rate is obtained. This will normally be in the form of a spray chart and the relevant information should be tabulated.

BASIS OF ACCEPTANCE

Liquid Calcium Chloride may be accepted on the basis of manufacturer's certification that his product conforms to the above specifications. This certification shall reference the invoice numbers associated with each delivery.

PRICE BID

All bids will be on standard proposal forms, as furnished by the County of Montgomery. On his proposal, the bidder shall indicate a bid price per gallon delivered. A bid price will also be entered for application rate, when the material is to be applied by the contractor.

OTHER MUNICIPALITIES

All provisions of this specification and the ensuing contract, including insurance, shall be extended to all municipalities in the County of Montgomery, and work ordered by them, shall be furnished according to their needs at the prices and terms of the contract.

AWARD OF BID

Award of bid will be made to the lowest responsible bidder. The county reserves the right to reject any or all proposals, waive minor informalities, advertise for new proposals, or split the award if in the best interests of the County.

CONTRACT EXTENSION

The County of Montgomery reserves the right to extend any contract issued, based on this specification, under the same terms and conditions for a one-year period from date of expiration provided such extension is mutually agreeable to both County and Contractor.

OTHER MUNICIPALITIES

All provisions of this specification and the ensuing contract, including insurance, shall be extended to all municipalities in the County of Montgomery, and work ordered by them, shall be furnished according to their needs at the prices and terms of the contract.

PROPOSAL FORM ITEM A-65-23
LIQUID CALCIUM CHLORIDE
Sheet 1 of 2

Deliver Proposals to: Montgomery County Purchasing Agent
P.O. 1500
Fonda, NY 12068-1500

Sir:

The undersigned has read and understands the information and instructions to bidders and the specifications for the furnishing of Item A-65-23 Liquid Calcium Chloride and proposes to furnish and deliver the items at the cost shown hereon.

This proposal is subject to acceptance within forty-five (45) days of the time set for the opening of bids.

FIRM NAME: _____

ADDRESS: _____

TELEPHONE: _____

SIGNATURE OF AUTHORIZED
REPRESENTATIVE: _____

NAME AND TITLE: _____

DATE: _____

BIDDERS FEDERAL ID NO.
OR SOCIAL SECURITY NO.: _____

IS FIRM INCORPORATED? _____

IS FIRM MINORITY OWNED? _____

(Minority ownership refers to ethnic origin NOT gender)

PROPOSAL FORM ITEM A-65-23
LIQUID CALCIUM CHLORIDE
Sheet 2 of 2

PROPOSAL OF: _____

35% LIQUID CALCIUM CHLORIDE/APPLIED	\$ _____	Per Gallon
35% LIQUID CALCIUM CHLORIDE/BULK	\$ _____	Per Gallon
32% CORROSION INHIBITED CALCIUM CHLORIDE/APPLIED	\$ _____	Per Gallon
32% CORROSION INHIBITED CALCIUM/BULK	\$ _____	Per Gallon