

**SPECIFICATIONS FOR  
CALCIUM CHLORIDE SOLUTION  
WINTER USE**

**Precipitation & Flocculation:**

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

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

**Specific Gravity**

Minimum Specific Gravity shall be 1.317

**Packaging and Packing:**

The product shall be packed in a manner which will ensure arrival at destination in a satisfactory condition.

The product shall be delivered in bulk in tank trucks. Delivery shall be in load lots of 500 gallons or more and shall be made within 24 hours of request for delivery. Each delivery truck shall be equipped with pumps and hand hoses for the unloading and spraying of liquid calcium chloride as required. An approved liquid meter or scale ticket will be used to accurately determine the amounts of calcium chloride delivered.

**Information to be Furnished with Bid:**

The bidder must submit with its bid detailed specifications, circulars and all necessary data on the commodity to be furnished. If the commodity offered differs from the provisions listed, such differences must be explained in detail. Failure to submit any of the above data may result in rejection of the bid. The State, however, reserves the right to request any additional information deemed necessary for the proper evaluation of the bids.

The bidder must indicate in the space provided the manufacturer's name, the address where the proposed time or items will be produced.

**Toxic Substance-Materials Safety Data Sheets:**

Each Contractor must submit at least two Material Safety Data Sheets.

**Calcium Chloride Solution (32%):**

The calcium chloride solution shall be provided by the manufacturer as a true solution and shall not be reconstituted from flake CaCl<sub>2</sub>. The calcium chloride shall meet the following material specification (see ASTM Designation D98; AASHTO-M144)

Calcium Chloride	32% +/- 1%
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, 19th Edition 1995  
Method 3120B/\*311

**Typical (In Lb. per Gallon)**

Calcium Chloride	4.500
Sodium Chloride	0.200
Magnesium Chloride	0.004
Calcium Sulfate	0.004
Water	<u>5.800</u>
	10.50

**Certification:**

With each shipment the Contractor shall provide certification that the product offered meets the above requirements and conforms to the manufacturer's specifications, standards and quality assurance practices and is the same as is offered for sale in the commercial marketplace.

**BID FORM**

**BID ITEM: CALCIUM CHLORIDE SOLUTION  
WINTER USE**

Price Per Gallon \$ \_\_\_\_\_

Bidder: \_\_\_\_\_ Phone: \_\_\_\_\_

Address: \_\_\_\_\_ Fax: \_\_\_\_\_

\_\_\_\_\_

Signature: \_\_\_\_\_

Printed Name & Title: \_\_\_\_\_

Date: \_\_\_\_\_

**REFERENCE LIST  
CALCIUM CHLORIDE SOLUTION  
WINTER USE**

Please list six similar projects that have been completed.

Owner:  
Address:  
City,State,Zip:  
Contact:  
Phone:  
Contract Amount:

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