

MODIFICATION

**State of Maine****Master Agreement****Effective Date:** 08/01/18**Expiration Date:** 07/31/20**Master Agreement Description:** ROCK SALT For Municipality Award**Buyer Information**

William Allen 207-624-7871 ext. NULL WJE.Allen@maine.gov

**Issuer Information**

Donny Crockett 207-624-7336 ext. Donny.Crockett@maine.gov

**Requestor Information**

Sharon Krechkin 207-624-3038 ext. sharon.krechkin@maine.gov

**Authorized Departments**

18P PURCHASING-BUR OF GENERAL SVCS

**Vendor Information****Vendor Line #:** 1**Vendor ID**

VS0000000083

**Vendor Name**

Eastern Salt company Inc.

**Alias/DBA****Vendor Address Information**

134 Middle Street

Suite 210

Lowell, MA 01852

US

**Vendor Contact Information**

Jason Archambault

978-251-8553 ext.

jarchambault@easternsalt.com

## Commodity Information

**Vendor Line #:** 1

**Vendor Name:** Eastern Salt company Inc.

**Commodity Line #:** 2

**Commodity Code:** 77545

**Commodity Description:** ROCK SALT FOR MUNICIPALITIES

**Commodity Specifications:** This line is for towns only for the 2018 bid award

**Commodity Extended Description:** As per the specifications attached and made part of this MA.

**Quantity**

1.00000

**UOM**

TON

**Unit Price**

\$0.00

**Delivery Days**

2

**Free on Board**

FOB Dest, Freight Prepaid

**Contract Amount**

\$0.00

**Service Start Date**

**Service End Date**

**Catalog Name**

**Discount**

0.0000 %

**Discount Start Date**

**Discount End Date**

**2019 MA 180713-007 Eastern Salt Co. Inc. Municipality Pricing**

Municipality	DOT Region	2019-2020 Tonnage	Price per Ton	Contact Name	Phone Number	TOWN ANSWER	EMAIL	NOTES
Newfield	1	600	<b>57.50</b>	Nichole Hubbard	793-4348	Yes	<a href="mailto:newfieldso@metrocast.net">newfieldso@metrocast.net</a>	9/4/2019
Raymond	1	1200	<b>57.18</b>	Nathan White	653-3641	Yes	<a href="mailto:nathan.white@raymondmaine.org">nathan.white@raymondmaine.org</a>	8/12/19 Email

## Appendix A

**STATE OF MAINE  
DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL SERVICES  
DIVISION OF PROCUREMENT SERVICES**

**BID COVER PAGE and DEBARMENT FORM**

Bidder's Organization Name: Eastern Salt Company Inc.		
Chief Executive - Name/Title: Shelagh E. Mahoney, president		
Tel: 978-251-8553	Fax: 978-251-8244	E-mail: kgirard@easternsalt.com
Headquarters Street Address: 134 Middle Street, Suite 210 Lowell MA 01852		
Headquarters City/State/Zip: Lowell MA 01852		
<i>(provide information requested below if different from above)</i>		
Lead Point of Contact for Bid - Name/Title: Jason Archambault		
Tel: 978-251-8553	Fax: 978-251-8244	E-mail: jarchambault@easternsalt.com
Street Address: 134 Middle St, Suite 210		
City/State/Zip: Lowell MA 01852		

By signing below Bidder affirms:

- Their bid complies with all requirements of this RFQ;
- This bid and the pricing structure contained herein will remain firm for a period of 180 days from the date and time of the bid opening;
- That no personnel currently employed by the Department or any other State agency participated, either directly or indirectly, in any activities relating to the preparation of the Bidder's proposal;
- That no attempt has been made or will be made by the Bidder to induce any other person or firm to submit or not to submit a proposal; and
- The undersigned is authorized to enter into contractual obligations on behalf of the above-named organization.

Name: Shelagh E. Mahoney	Title: President
<b>To have your bid accepted, this Appendix MUST have a wet signature or utilize Docu Sign or Adobe Sign.</b>	
Authorized Signature: 	Date: August 19, 2019

### Debarment, Performance, and Non-Collusion Certification

*By signing this document, I certify to the best of my knowledge and belief that the aforementioned organization, its principals, and any subcontractors named in this proposal:*

- a. Are not presently debarred, suspended, proposed for debarment, and declared ineligible or voluntarily excluded from bidding or working on contracts issued by any governmental agency.*
- b. Have not within three years of submitting the proposal for this contract been convicted of or had a civil judgment rendered against them for:*
  - i. fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a federal, state or local government transaction or contract.*
  - ii. violating Federal or State antitrust statutes or committing embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;*
  - iii. are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or Local) with commission of any of the offenses enumerated in paragraph (b) of this certification; and*
  - iv. have not within a three (3) year period preceding this proposal had one or more federal, state or local government transactions terminated for cause or default.*
- c. Have not entered into a prior understanding, agreement, or connection with any corporation, firm, or person submitting a response for the same materials, supplies, equipment, or services and this proposal is in all respects fair and without collusion or fraud. The above mentioned entities understand and agree that collusive bidding is a violation of state and federal law and can result in fines, prison sentences, and civil damage awards.*

- **Failure to provide this certification may result in the disqualification of the Bidder's proposal, at the discretion of the Department.**

*To the best of my knowledge all information provided in the enclosed proposal, both programmatic and financial, is complete and accurate at the time of submission.*

Name: Shelagh E. Mahoney	Title: President
<b>To have your bid accepted, this Appendix MUST have a wet signature or utilize Docu Sign or Adobe Sign.</b>	
Authorized Signature: 	Date: August 19, 2019

## Appendix B

**STATE OF MAINE  
DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL SERVICES  
DIVISION OF PROCUREMENT SERVICES**

**DETAILED SPECIFICATIONS**

**RFQ # 17A 190807-033  
Rock Salt for Select State of Maine Municipalities**

The State reserves the right to not make an award to the low-cost bidder when the bidder has had documented poor performance and/or a contract terminated or not renewed within the last five years.

### **I. GENERAL REQUIREMENTS**

**VENDOR/CONTRACTOR QUALIFICATIONS:** Any vendor that has not been awarded a State of Maine Road Salt Master Agreement in the last 5 seasons will need to furnish the following to prove sufficient infrastructure is in place to meet the high demand during the resulting award period:

- Location of current salt stockpile for testing purposes, in New England preferably. (Shipped samples are not acceptable)
- Three references from current State or municipal customers
- Confirmation that the company has access to space within the state (e.g. confirmation of pier access and storage space from the Port Authority), or nearby location in an adjacent state or Canadian province, where sufficient quantities of salt can be received, managed and distributed out to the contract locations for this award period.
- Confirmation of available trucking over the contract period from a company that is located either in-state or reasonably local to the source material located in an adjacent state or province.

Any vendor that has not been awarded a State of Maine Road Salt Master Agreement in the last 5 seasons and does not, or cannot, furnish all of the above will be disqualified.

**BASIS OF AWARD:**

MaineDOT will have the option to make a best value determination for the award. Such determination will be made with consideration of the price difference between the lowest bidders and the past history that MaineDOT has had with each of the bidders regarding salt quality (as previously documented through MaineDOT's quality assurance testing) and reliability of past deliveries.

**MUNICIPALITIES/POLITICAL SUBDIVISIONS:** After notification of bid results, the Municipalities will have two weeks to individually accept or reject their low bid. If they choose to accept the bid, they are committing to buying at least 75% of that quantity and the prices received will also be held for up to 125%. If they reject the bid or no response is received, they will be out of the contract and will need to obtain salt through separate channels. Political sub-divisions and authorized non-profit organizations shall utilize their own individually established ordering procedures. Participating municipalities are 100% responsible for whatever they commit to and the State of Maine and/or MDOT will not pay for salt the municipalities do not pay for.

**AUDITS AND ACCOUNTING:**

The successful bidder shall allow representatives of the State of Maine to have complete access to all records for the purpose of determining compliance with the terms and conditions of this bid invitation and in determining the award and for monitoring any resulting contract.

At intervals during the contract term, and prior to the termination of the contract, the successful bidder may be required to provide a complete and accurate accounting of all products and quantities ordered by each agency and institution and by political sub-divisions and authorized non-profit organizations.

**INVOICING:**

Separate invoices are required for each order number. Invoices shall include the stockpile location the order is taken from. Each load is to be listed separately with the date delivered on the invoice. Partial orders will not be paid for unless the State has over-ordered for a particular location. Matching delivery slip numbers for each order should be included on the invoice. Invoices received with the delivery slip numbers will be processed prior to invoices without delivery slip numbers.

**ORDERING PROCEDURE:**

Municipalities, Political sub-divisions and authorized non-profit organizations shall utilize their own individually established ordering procedures.

**MEASUREMENTS:**

The term 'Ton' shall mean the short ton consisting of 2,000 pounds avoirdupois. Each truck used to haul salt shall bear a plainly legible identification mark, and a tare weight shall be taken prior to each load.

**WEIGH SLIPS:**

Each truck delivery shall be accompanied by a weigh slip, which shall be left with an employee who works at the delivery point of load. The employee will sign a copy of the weigh slip to acknowledge the receipt of the load.

Contractor shall provide numbered weigh slips, which show the following information:

- Name and address of the contractor
- Name and address of the owner of the scales
- Location of the scales
- Consignee and destination
- Date of delivery
- Order number
- Gross, tare and net weights
- Signature of weigher
- Current vehicle registration number and/or other legible identification mark and signature of vehicle operator
- Space for signature of the department employee accepting the shipment

The State of Maine/Municipalities/Political Subdivisions reserves the right to weigh any truck at a designated location before or after delivery to any particular storage site.

**STORAGE REQUIREMENTS**

All salt distribution piles shall be covered to prevent the salt from becoming excessively damp. Salt distribution piles shall be covered, or stored within a building, within five (5) days of being established.

**DELIVERY REQUIREMENTS:**

The sodium chloride shall arrive at the delivery location in a free flowing and useable condition. All truck deliveries shall be dumped at a specific location, either inside or immediately outside a storage building, as directed by the on-site personnel.

Deliveries of trucked salt shall be protected in transit by tight, waterproof coverings to avoid spillage and to prevent additional accumulation of moisture during transit to ensure the least possible moisture content upon delivery. Torn, ripped or permeable load covers or excess water running out of the delivery truck are unacceptable conditions and are likely to result in rejection of the load (ref. "Delivery Rejection" section below).

The State of Maine requires that all deliveries of salt be made in complete compliance with existing state, national, provincial laws or regulations. **Violation of any laws or regulations, including but not limited to weight limitations, shall be considered as grounds for disqualification of the supplier, hauler or both.**

**DELIVERY:**

Orders for salt shall be delivered within **five (5) working days** of order notification to the contractor. Contractor will make every effort to have delivery vehicle arrival times spread out so as not to exceed the capacity of the equipment used to pile the salt at the delivery location. Should several vehicles arrive at the delivery point at the same time, some vehicles may be delayed before being allowed to dump their load.

**NOTICE OF DELIVERY:**

The contractor must provide a minimum twenty-four (24) hour notice to any Municipality/Political Subdivision office prior to any delivery. Notice must include scheduled delivery date, estimated time and quantity of salt to be delivered

**FAILURE TO DELIVER:**

If a contractor fails to furnish salt in accordance with all requirements, including delivery through the end of the contract period, the State and or Municipalities/Political Subdivisions may re-purchase the same item from another source, without competitive bidding, and the original contractor may be liable to the state for any excess cost. Experience from past winters has shown that, during periods of heavy storm activity, the ability to provide a trucking capacity of at least twelve (12) 30-ton deliveries, per day, per region, will be necessary at times. Contractors that are unable to reliably provide salt deliveries may become ineligible to receive future contract awards.

**INSPECTIONS:**

The State of Maine shall be provided free entry and access at the Contractor's storage areas for sampling. It is anticipated that determination for initial compliance will be made from samples obtained from the supplier's storage areas or from rail cars if no storage areas are provided within the state. Shipments to the delivery locations may be randomly sampled for compliance. Said samples shall be representative of all salt delivered to a location on that day. Penalties, if any, will be assessed against the accumulated and mixed samples of each day's delivery to each location. Details of penalties and percentages are outlined in Section III, *Penalties and Price Adjustments*. Laboratory results will be provided to the Contractor when penalties are assessed.

Contractor is strongly encouraged to sample and test their product prior to shipping product to the buyer so that any necessary corrective action may be taken to assure conformity to specifications.

**DELIVERY REJECTION:**

The State of Maine/Municipalities/Political Subdivisions reserves the right to reject or refuse any salt or deliveries which do not conform to these specifications for screen size, chemical quality or moisture content, or which are not delivered in good condition. Shipments that are rejected will be returned to the Contractor at no cost to the state. Contractor shall promptly replace all deliveries of salt that are rejected.

## II. SPECIFICATIONS FOR MINED ROCK SALT

### CHEMICAL COMPOSITION:

The sodium chloride shall conform to a chemical composition of a minimum of 95%. Variations of less than 95% but above 93% will result in acceptance at reduced payment as provided in Section III, *Penalties and Price Adjustments*.

### GRADING:

Rock salt shall conform to the following particle size distribution specifications as determined by laboratory sieves:

- Passing a 1/2" sieve (12.50mm) 100%
- Passing a 3/8" sieve (9.50mm) 95% - 100%
- Passing a No. 4 sieve (4.75mm) 20% - 80%
- Passing a No 8 sieve (2.36mm) 10% - 50%
- Passing a No 30 sieve (0.60mm) 0% - 10%

Because of restrictions used to calibrate salt on Department sanders, the 1/2" gradation requirement is critical. The contractor will be required to re-screen the sodium chloride for continued oversize deliveries.

### MOISTURE:

Salt shall be in a free-flowing condition when received at the delivery location with a moisture content not to exceed 1%.

### ANTI-CAKING ADDITIVE:

Salt shall be loose and free of lumps and shall contain not less than 20ppm of pure anti-caking agent. All bidders are required to identify type of anti-cake additive used in their product. Bidders are required to submit the appropriate Material Safety Data Sheets (MSDS) and Product Information/Data Sheets to the State of Maine at the time of bid response.

Please State Anti-Cake Additive : YPS

## III. PENALTIES AND PRICE ADJUSTMENTS

### CHLORIDES:

Penalties will be assessed against the accumulated and mixed samples of each day's deliveries to each location for salt that does not meet the chemical composition of total chlorides as specified in Table 1.

TABLE 1 – Percent Sodium Chloride

Percent (%) of Sodium Chloride	Percent (%) of Payment of Unit Bid Price
95.0 % - 100%	100%
94.0 % – 94.9 %	96%
93.0 % - 93.9 %	92%
Below 93.0 %	Not Acceptable

**MOISTURE:**

Delivered rock salt shall not normally exceed one percent (1.0 %). Salt which exceeds the moisture content as specified will be subject to penalties according to Table 2.

TABLE 2 – Moisture Content for Rock Salt

Moisture Content	Percent (%) of Payment of Unit Bid Price
0 – 1.0 %	100%
1.1 – 2.0 %	98%
Above 2.0 %	Normally rejected. If accepted, see ** below

\*\* Rock salt with a moisture content in excess of 2% will normally be rejected. If the state elects to accept salt with a moisture content exceeding 2%, the price reduction shall be calculated as follows:

Percentage (%) of payment of unit bid price = 100 – 3.5 (moisture content in % - 1)

*Example:*      *Rock salt with a moisture content of 3.0 %*  
                          *% of Payment of unit bid price = 100 – 3.5 (3.0-1.0)*  
                          *% of Payment of unit bid price = 93.0 %*

**GRADATION:**

A penalty will be assessed for gradations that exceed the maximums specified in Section II, *Grading*. The bid price of the salt will be reduced by one (1) percent for each percent by which gradation exceeds the maximums allowed.

**CONTAMINATION:**

Each load of salt having contaminants in it (e.g. trash, pavement chunks, tarps, etc...) shall be subject to rejection at no cost to MaineDOT. If MaineDOT elects to keep the delivery, a penalty of 5% will be applied to each load, in addition to any other applicable penalties that may be in effect.

**ASSESSMENT OF PENALTIES:**

Random sampling and testing of rock salt shall be obtained and tested by Maine Department of Transportation personnel. Failing test reports will be used to calculate reduced payments when penalties and price adjustments are to be applied. The reduction in payment shall continue until such time as a new passing test is obtained. When onsite inspections and tests indicate that the salt being supplied is an inferior product, the Contractor will be notified that the salt is unacceptable. If acceptable rock salt is not provided within five (5) working days (or as otherwise authorized by the MaineDOT/ Municipalities/Political Subdivisions), then the MaineDOT/Municipalities/Political Subdivisions may pursue such actions as described in Section I, *Failure to Deliver*.

**EXCESSIVE PENALTIES:**

Contractors that are unable to reliably provide salt meeting the specifications set forth in Section II, without penalties, may become ineligible to receive future contract awards.

## IV. SAMPLING AND TESTING

### **SAMPLING:**

Each sample submitted for testing shall consist of a minimum of three increments selected at random from the material. Each increment shall be at least a pound in weight and not include the top inch of stored material. Every attempt shall be made to insure a composite sample representative of the pile. Samples for chemical composition, gradation and anti-caking may also be obtained at the time of delivery to the purchaser's delivery destination.

### **METHOD OF TESTING:**

1. Chemical composition testing for sodium chloride shall conform to the rapid method of testing given in Appendix A1 of AASHTO M-143-86. A second method of rapid analysis could be the use of Gran's plot titration method developed by Orion Research Incorporated. In case that the coarse salt sample is used 100.00 g sample is taken and dissolved in a 2-liter volumetric flask quantitatively. An aliquot of 5.00 ml or 2.00 ml of this solution is then pipetted out to the titrated according to either of these two methods.

If controversy occurs, analysis shall be made in accordance with the method specified for "Salt" in the current "Official Methods of Analysis for the Association of Official Agricultural Chemists".

2. Particle size analysis shall consist of using sieves with square openings mounted on substantial frames or interlocked in a manner as to prevent loss of material during sieving. Woven wire cloth shall conform to AASHTO M92. Gradation analysis shall be made on oven dried material and the sample shall weigh after drying at least 500 grams. In no case shall the fraction retained on any sieve at the completion of the sieving operation weigh more than four grams per square inch of sieving surface (this is 200 grams for 8 inch diameter round sieves).

If sieving is completed by hand, the procedure will include shaking with lateral and vertical motion with occasional jarring action so as to keep the material moving continuously over the surfaces of the sieves for a time of not less than three minutes. The balance or scale shall be sensitive to within 0.2% of the weight of the sample to be tested.

3. Moisture content shall be determined by a method of weighing before and after oven drying at  $110^{\circ} + 5^{\circ} \text{C}$  ( $230^{\circ} + 9^{\circ} \text{F}$ ) for a minimum of four hours.

4. The test for anti-caking material shall be made following the attached method for colorimetric determination of YPS or YPP treated salt. For an anti-caking material other than YPS or YPP the successful bidder shall indicate the chemical nature of the material and shall furnish a laboratory procedure for determining the amount of anti-caking material to the Maine Department of Transportation, Testing Engineer, P.O. Box 1208, Bangor, Maine 04401 within 30 days of the award of the bid by the Bureau of Purchases.

### **METHOD FOR THE COLORIMETRIC DETERMINATION - YPS TREATED ROCK SALT**

#### Scope of Method

This colorimetric procedure is applicable in determination range 0-100 ppm of Sodium Ferro cyanide  $\text{Na}_4\text{Fe}(\text{CN})_6 \cdot 10 \text{H}_2\text{O}$  (YPS) utilizing a colorimeter such as the Coleman Jr. II spectrophotometer.

#### Reagents

1. Sodium Ferro cyanide  $\text{Na}_4\text{Fe}(\text{CN})_6 \cdot 10 \text{H}_2\text{O}$
2. Ferrous Sulfate  $\text{FeSO}_4 \cdot 7 \text{H}_2\text{O}$
3. Sulfuric Acid, concentrated
4. Sodium Chloride, reagent grade

## 5. Sodium Hydroxide, reagent grade

### Reagent Solutions

#### A. Sodium Ferro cyanide Solutions

1. 0.1% solution - weigh exactly 1.000 gram of Sodium Ferro cyanide, dissolve in distilled water and dilute to 1 liter.
2. 0.05% (500 ppm) solution - take 50 ml aliquot of the above 0.1% solution and dilute to 100 ml.

#### B. Ferrous Sulfate (5% solution)

Dissolve 5 grams  $\text{FeSO}_4 \cdot 7 \text{H}_2\text{O}$  in approximately 50 ml of water, add 2 ml concentrated Sulfuric Acid and dilute to 100 ml.

#### C. Sodium Hydroxide Solution (2%)

Dissolve 20 grams of NaOH in 1 liter of water.

#### D. Sulfuric Acid, 1:5

Add 20 ml of conc.  $\text{H}_2\text{SO}_4$  slowly into 100 ml of water, mix well and let cool.

Note: Solutions A and B should be prepared fresh daily or as required.

### Preparation of Standards

Six 25 gram samples of reagent grade NaCl are weighed (to 0.01 g) and placed in 250 ml beakers. To each of the samples add 0, 1, 2, 3, 4 and 5 ml of 0.05% sodium Ferro cyanide solution, respectively, (0 ml being a blank) mix well. Prepare standard solution by adding NaOH and  $\text{H}_2\text{SO}_4$  as described in the sample preparation except NO filtration is needed. To all six flasks add 5 ml of the Ferrous Sulfate solution, bring to 100 ml mark with water, cover flasks with stoppers and mix well. Maximum intensity of color develops in 15 minutes. The standards now indicate 0-100 ppm of Sodium Ferro cyanide in increments of 20 ppm with respect to the original salt sample.

### Determination of Sodium Ferro cyanide in Rock Salt

The bulk sample is split down to representative sample of about 300 grams. This portion is then pulverized such that it will all pass a 70 mesh sieve and is mixed thoroughly to ensure good homogeneity. A 25 gram portion of this material is mixed with 5 ml 2% NaOH, stirred and let set for 10 min., 60 ml of water is then added into this solution and the pH is adjusted to 2 with  $\text{H}_2\text{SO}_4$  (1:5). The solution is filtered through a #1 Whatman filter paper into a 100 ml volumetric flask. Five ml of Ferrous Sulfate solution is added, the volume brought to mark, the flask stoppered, the contents well mixed and allowed to stand 15 minutes. The absorbance of each of the standard solutions is determined against the blank solution at 775 nm. A calibration curve of absorbance vs. ppm is constructed. The absorbance of the samples is then determined and the concentration is read off the calibration curve.

## Appendix C

STATE OF MAINE  
DEPARTMENT OF ADMINISTRATIVE AND FINANCIAL SERVICES  
DIVISION OF PROCUREMENT SERVICES

COST RESPONSE

**RFQ # 17A 190807-033**  
**Rock Salt for Select State of Maine Municipalities**

All responses to this RFQ will require a cost quotation response, in a format selected by the State of Maine. That format is described below.

Prices are to be net including transportation charges fully pre-paid by the contractor FOB destination and are to remain firm for the duration of the contract.

All bids must include **RFQ 17A 190807-033 Muni Rock Salt Bid Price EXCEL Sheet**.  
Bid sheets must be in EXCEL format and cannot contain formulas or information linked to other pages.

# Eastern Salt Company, Inc.

## Safety Data Sheet

### Section 1. Identification

<b>Common Product Names:</b>	Road Salt, De-Icing Salt, Sodium Chloride, Salt
<b>Recommended Use:</b>	Lowering the freezing point of snow and ice in order to remove it from roads and highways
<b>Recommended Restrictions:</b>	None known. Use prudently in fresh water ecologies.
<b>Manufacturer:</b>	Eastern Salt Company, Inc. 134 Middle Street, Suite 210 Lowell, MA 01852, USA Ph.: 978-251-8553
<b>Emergency:</b>	CHEMTREC (800) 424-9300

### Section 2. Hazards Identification

<b>Physical Hazards:</b>	Not classified
<b>Health Hazards:</b>	Not classified
<b>Environmental Hazards:</b>	Use prudently in fresh water areas
<b>OSHA Defined Hazards:</b>	Not classified
<b>Label Elements</b>	
<b>Hazard Symbol:</b>	None
<b>Signal Word:</b>	None
<b>Hazard Statement:</b>	The product does not meet the criteria for classification
<b>Precautionary Statement</b>	
<b>Prevention:</b>	Observe good industrial hygiene practices
<b>Response:</b>	Wash hands after handling
<b>Storage:</b>	Soluble in water. Store away from oxidizing agents
<b>Disposal:</b>	Dispose of waste and residues in accordance with local authority requirements

**Hazards Not Otherwise Classified (HNOC)** None known.

**Supplemental Information:** Not applicable

### Section 3. Composition/Information on Ingredients

**Visual Appearance:** White solid of small, pebble-sized crystals

**Ingredients** Sodium Chloride (NaCl) concentrated from 95.99 to 99.99. Trace amounts of calcium, magnesium, potassium. CAS No. 7647-14-5.

Sodium Ferrocyanide Decahydrate (CAS No. 13601-19-9) concentrated from 50 ppm to 100 ppm is added at the mine or the load port as an anti-caking additive to keep road salt free flowing through spreaders. Also known as Yellow Prussiate of Soda or YPS. Approved by FDA as a food additive.

### Section 4. First Aid Measures

**Eye contact:** Immediately flush eyes with plenty of water. Lift upper and lower eyelids occasionally. Get medical attention if irritation persists.

**Skin contact:** Flush skin with soap and water. Remove clothing and shoes as needed. Get medical attention if irritation persists.

**Ingestion:** If large amounts are swallowed, give water to drink and seek medical attention. Milk has also been reported as treatment. Do not induce vomiting.

**Inhalation:** Provide fresh air immediately. Get medical attention if any breathing difficulty occurs.

**Notes to Physician:** Symptoms may be delayed.

**General Information:** Ensure that medical personnel are aware of the materials involved, and take precautions to protect themselves.

## Section 5. Fire-Fighting Measures

<b>Suitable Extinguishing Media:</b>	Salt and salt mixtures are not combustible.
<b>Unsuitable Extinguishing Media:</b>	Not applicable
<b>Specific Hazards Arising From the Chemical:</b>	During fire, gases hazardous to health may form
<b>Special Protective Equipment And Precautions for Firefighters:</b>	Firefighters should wear full protective clothing Use self-contained breathing apparatus as situation dictates
<b>Fire-fighting Equipment/Instructions:</b>	Salt is not combustible and is not the material of concern for firefighting equipment or methods.
<b>Specific Methods:</b>	In a fire, equipment and methods should be consistent with the combustible material.
<b>General Fire Hazards:</b>	Not flammable or combustible.
<b>Hazardous combustion products:</b>	If exposed to fire, chlorine, hydrogen chloride, Oxides of sodium could be produced
<b>Explosion Data:</b>	None expected. Data not available.

## Section 6. Accidental Release Measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Avoid inhalation of dust from spilled material. Use approved respirator if there is dust at levels exceeding exposure limits. Wear appropriate protective clothing and gear before touching damaged containers or spilled material.
<b>Methods and materials for Containment and cleanup:</b>	Vacuum or sweep material into a suitable disposal container. If needed, use a non-reactive dust suppressant. Cleanup spills immediately observing proper procedures with respect to protective equipment or clothing if needed.
<b>Environmental precautions:</b>	Avoid direct discharge to water supply areas, unpaved areas, or sanitary sewer systems.

## Section 7. Handling and Storage

**Precautions for safe handling:**

Use with adequate ventilation in enclosed spaces. Minimize dust generation and accumulation of dust caused by repeated handling. Road salt is hygroscopic (absorbs water from the atmosphere) and can cake and become hard. Avoid contact with strong acids. Avoid contact with the eyes, skins, and clothing. Do not ingest or inhale.

**Conditions for safe storage:**

Store in cool, dry, ventilated area when available. Store on impermeable surface and avoid leaching or loss to unpaved ground. Take precautions to avoid direct runoff to water supply areas or sanitary sewer systems. Becomes hygroscopic at 70-75% humidity.

## Section 8. Exposure Controls/Personal Protection

**Occupational Exposure Limits:**

No exposure limits noted for ingredients.

**Biological Limit Values:**

No biological exposure limits noted for the ingredients.

**Appropriate Engineering Controls:**

Use sufficient ventilation to prevent the buildup of dust or fumes from handling or thermal processes.

OSHA Permissible Exposure Limits (PEL): None established for sodium chloride, which is a soluble substance. General limit for Particulates Not Otherwise Regulated (PNOR): 5 mg/m<sup>3</sup> Respirable Dust 8-Hour: 15 mg/ m<sup>3</sup>

American Conference of Government Industrial Hygienists (ACGIH) Threshold Limit Values (TLV): None established for sodium chloride, which is a soluble substance. General limit for Particulates (insoluble) Not Otherwise Classified (PNOC): 10 mg/ m<sup>3</sup> Inhalable Particulate 8-Hours TLV: 3 mg/ m<sup>3</sup>

**Individual Protection Measures  
Such as Personal Protective Equipment:**

**Eye/face protection:**

Safety glasses or tight-fitting goggles if dusty

<b>Skin protection:</b>	
<b>Hand Protection:</b>	Wear appropriate chemical-resistant gloves
<b>Other:</b>	Wear suitable protective clothing
<b>Respiratory protection:</b>	No personal respiratory equipment normally required
<b>Thermal Hazards:</b>	Wear appropriate thermal protective clothing when necessary
<b>General Hygiene Considerations:</b>	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.

**Section 9. Physical and Chemical Properties**

<b>Appearance:</b>	Crystalline, white, or with light color from trace geological materials, or colorless
<b>Physical State:</b>	Solid. Small-pebble size.
<b>Form:</b>	Solid. Small-pebble size.
<b>Color:</b>	Varies from white whitish with very light hues from trace geological materials, or colorless
<b>Odor:</b>	Odorless
<b>Odor Threshold:</b>	Not applicable
<b>pH:</b>	6.7 to 10.0
<b>Melting point/Freezing point:</b>	1,474° F. (801° C.)
<b>Initial boiling point and range:</b>	2,575° F.
<b>Flash point:</b>	Not applicable
<b>Evaporation rate:</b>	No information found.
<b>Flammability (solid, gas):</b>	No information found
<b>Upper/lower flammability or explosive limits:</b>	
<b>Flammability – lower (%):</b>	No information found

<b>Flammability – higher (%):</b>	No information found
<b>Explosive – lower (%):</b>	No information found
<b>Explosive – higher (%):</b>	No information found
<b>Vapor pressure:</b>	1.0 @ 865° C. (1,589° F.)
<b>Vapor density:</b>	No information found.
<b>Relative density:</b>	2.16 (H <sub>2</sub> O = 1.0)
<b>Solubility (water):</b>	26.4%
<b>Partition coefficient (n-octanol/water):</b>	No information found
<b>Auto-ignition temperature:</b>	No information found
<b>Decomposition temperature:</b>	No information found
<b>Viscosity:</b>	No information found
<b>Bulk density:</b>	70 – 83 lbs/ft <sup>3</sup>
<b>Molecular formula:</b>	NaCl
<b>Molecular weight:</b>	58.44
<b>pH in aqueous solution:</b>	6 - 9

**Section 10. Stability and Reactivity**

<b>Reactivity:</b>	Stable and non-reactive under normal conditions of use, storage, and transport
<b>Chemical Stability:</b>	Stable under ordinary conditions. Hygroscopic (absorbs water)
<b>Possibility of Hazardous Reactions:</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to Avoid:</b>	Contact with incompatible materials (i.e. strong oxidizing agents)
<b>Incompatible Materials:</b>	Avoid contact with strong acids. Reacts with most non-noble metals such as iron and steel, building materials, bromine, trifluoride, lithium, especially when wet. Potentially explosive reaction with

dichloromaleic anhydride and urea. Electrolysis of mixtures with nitrogen compounds may form explosive nitrogen trichloride.

**Hazardous Decomposition Products:**

When heated above 1,474° F. may evolve chlorine gas or fumes of sodium oxide. May evolve chlorine gas when in contact with strong acids.

**Section 11. Toxicological Information**

**Information on likely routes of exposure:**

- Ingestion:** Expected to be a low ingestion hazard
- Inhalation:** No adverse effects due to inhalation are expected. Inhalation of dusts may cause respiratory irritation.
- Skin contact:** Prolonged or repeated skin contact may cause irritation
- Eye contact:** Direct contact with eyes may cause temporary irritation

**Symptoms related to the physical, chemical, and toxicological characteristics:**

Eye and skin contact: Exposure may cause temporary irritation, redness, or discomfort. For ingestion, consuming less than a few grams would not be harmful. Effects after ingesting an excessive quantity: nausea and vomiting, diarrhea, cramps, restlessness and other symptoms may be observed.

**Information on toxicological effects**

- Acute toxicity** Oral LD50 in mice: 4,000 mg/kg; Oral LD50 in rats: 3,000 mg/kg; Other LD50 mice: 2,602 mg/kg
- Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation
- Exposure minutes:** Not available
- Erythema value:** Not available
- Oedema value:** Not available
- Serious eye damage/eye irritation:** Direct contact with eyes may cause temporary irritation
- Corneal opacity value:** Not available

<b>Iris lesion value:</b>	Not available
<b>Conjunctival reddening value:</b>	Not available
<b>Recover days:</b>	Not available
<b>Respiratory or skin sensitization</b>	
<b>Respiratory sensitization:</b>	Not available
<b>Skin sensitization:</b>	This product is not expected to cause skin sensitization
<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic
<b>Mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA
<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developments effects
<b>Teratogenicity</b>	Not classified
<b>Specific target organ toxicity Single exposure</b>	Not classified
<b>Specific target organ toxicity Repeated exposure</b>	Not classified
<b>Aspiration hazard</b>	Not classified
<b>Chronic effects</b>	Not classified
<b>Name of toxicologically Synergistic Products</b>	Not available

**Section 12. Ecological Information**

<b>Environmental Fate:</b>	Road salt can move through the environment in the salt form or as dissociated ions. Road salt goes into solution in water. In aquatic systems, chloride ions separate from corresponding cations (sodium, potassium calcium, etc.). The chloride ions can
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pass through soil and water. In soil, the positively charged chloride ions tend to bond with negatively charged soil surfaces. Sodium cations have low reactivity in water. With respect to the anti-caking additive, the ferrocyanide is a complex anion with a very strong bond between the central iron atom and the octahedral configuration of cyanide ligands. Dissociated anions react readily with iron to form ferric ferrocyanide, a very stable, relatively immobile compound. The anion is subject to decomposition if it is in solution and subject to very bright, direct light, but released cyanide recombines rapidly with numerous transition metals to form more stable, less toxic materials.

**Ecotoxicity:**

Care should be taken to reduce release of road salts in freshwater areas. Dispersal and calibration restrictions on spreaders should be followed. EC50 for crustacean (water flea [Daphnia magna]) is 340.7 – 469.2 mg/l, 48 hours. LC50 for fish (rainbow trout, Donaldson trout [Oncorhynchus mykiss]) is 4,747 – 7,824 mg/l, 96 hours

**Persistence and degradability:**

No data available

**Bioaccumulative potential:**

No data available

**Mobility in soil:**

No data available

**Mobility in general:**

No data available

**Other adverse effects:**

No other environmental adverse effects anticipated

### Section 13. Disposal Considerations

**Disposal Instructions:**

Collect and reclaim or dispose in sealed containers in accordance with applicable regulations

**Local disposal regulations:**

Dispose in accordance with 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 of in accordance with local regulations. Empty containers or liners may retain some product

residues. This material and its container must be disposed of in a safe manner (see Disposal Instructions)

**Contaminated packaging:**

Empty containers should be taken to an approved waste-handling site for recycling or disposal. Since emptied containers may contain product residue, follow label warnings even after container is emptied.

**Section 14. Transport Information**

**U.S. Department of Transportation (DOT):** Not regulated as dangerous goods

**Transportation of Dangerous Goods (TDG – Canada):** Not regulated as dangerous goods.

**Section 15. Regulatory Information**

**U.S. Federal Regulations**

All Components are on the US EPA TSCA Inventory List. 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

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not Listed

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not Listed

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard Categories:**

Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely Hazardous Substance** Not Listed

**SARA 311/312 Hazardous Chemical** No

**SARA 313 (TRI Reporting)** Not regulated

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAP)** Not regulated

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)** Not regulated

**Safe Drinking Water Act (SWDA)** Not regulated

**Food and Drug Administration** Not regulated

**US State Regulations**

**Massachusetts Right to Know (RTK) Substance List** Not regulated

**Pennsylvania RTK Hazardous Substance** Not regulated

**Rhode Island RTK** Not regulated

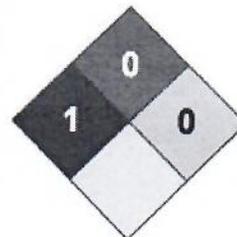
**New Jersey RTK** Not regulated

**Section 16. Other Information**

**HMIS® ratings:**

LEGEND	
Severe	4
Serious	3
Moderate	2
Slight	1
Minimal	0

HEALTH	/ 1
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	X



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