



The following documentation is an electronically-submitted vendor response to an advertised solicitation from the *West Virginia Purchasing Bulletin* within the Vendor Self-Service portal at *wvOASIS.gov*. As part of the State of West Virginia's procurement process, and to maintain the transparency of the bid-opening process, this documentation submitted online is publicly posted by the West Virginia Purchasing Division at *WVPurchasing.gov* with any other vendor responses to this solicitation submitted to the Purchasing Division in hard copy format.

Header 3

List View

- General Information
- Contact
- Default Values
- Discount
- Document Information
- Clarification Request

Procurement Folder: 1087735

Procurement Type: Central Master Agreement

Vendor ID: 000000183941

Legal Name: CARGILL INC DEICING TECHNOLOGY BUSINESS UNIT

Alias/DBA:

Total Bid: \$0.00

Response Date: 09/14/2022

Response Time: 13:16

Responded By User ID: CargillDeicing

First Name: Customer

Last Name: Care

Email: salt_customer@careroads.a

Phone: 800-600-7258

SO Doc Code: CRFQ

SO Dept: 0803

SO Doc ID: DOT2300000020

Published Date: 8/29/22

Close Date: 9/14/22

Close Time: 13:30

Status: Closed

Solicitation Description: Roadway Salt - Sodium Chloride
6623C006

Total of Header Attachments: 3

Total of All Attachments: 3



Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

**State of West Virginia
 Solicitation Response**

Proc Folder: 1087735
Solicitation Description: Roadway Salt - Sodium Chloride 6623C006
Proc Type: Central Master Agreement

Solicitation Closes	Solicitation Response	Version
2022-09-14 13:30	SR 0803 ESR09142200000001356	1

VENDOR
 000000183941
 CARGILL INC DEICING TECHNOLOGY BUSINESS UNIT

Solicitation Number: CRFQ 0803 DOT2300000020
Total Bid: 0
Response Date: 2022-09-14
Response Time: 13:16:26
Comments:

FOR INFORMATION CONTACT THE BUYER
 John W Estep
 304-558-2566
 john.w.estep@wv.gov

Vendor Signature X **FEIN#** **DATE**

All offers subject to all terms and conditions contained in this solicitation

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Ln Total Or Contract Amount
1	Roadway Salt - Sodium Chloride	0.00000	TON	4371712.500000	0.00

Comm Code	Manufacturer	Specification	Model #
46161506			

Commodity Line Comments: Please see attachments

Extended Description:

Roadway Salt - Sodium Chloride for use in snow removal and ice control throughout the state of West Virginia.

VENDOR NOTE: Bid evaluation will be based on the bid prices submitted on the Pricing Pages Attachment A (ATT A) and Attachment B(ATT B). Vendor's entries of bid prices or other notations made in the wvOASIS commodity lines/descriptions will not be considered for bid evaluation or award.



Department of Administration
 Purchasing Division
 2019 Washington Street East
 Post Office Box 50130
 Charleston, WV 25305-0130

State of West Virginia
 Centralized Request for Quote
 Highways

Proc Folder: 1087735			Reason for Modification:
Doc Description: Roadway Salt - Sodium Chloride 6623C006			
Proc Type: Central Master Agreement			
Date Issued	Solicitation Closes	Solicitation No	Version
2022-08-29	2022-09-14 13:30	CRFQ 0803 DOT2300000020	1

BID RECEIVING LOCATION

BID CLERK
 DEPARTMENT OF ADMINISTRATION
 PURCHASING DIVISION
 2019 WASHINGTON ST E
 CHARLESTON WV 25305
 US

VENDOR

Vendor Customer Code: 000000183941

Vendor Name : Cargill, Incorporated-Salt, Road Safety

Address : 24950
Street : Country Club Blvd., Suite 450
City : North Olmsted
State : Ohio **Country :** United States **Zip :** 44070

Principal Contact : Customer Care

Vendor Contact Phone: 800-600-7258 **Extension:**

FOR INFORMATION CONTACT THE BUYER
 John W Estep
 304-558-2566
 john.w.estep@wv.gov

Vendor Signature X *Doranne Caver* **FEIN#** 41-0177680 **DATE** 9/14/2022

All offers subject to all terms and conditions contained in this solicitation

ADDITIONAL INFORMATION**REQUEST FOR QUOTATION:**

The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Division of Highways and the West Virginia Parkways Authority to establish an open-end contract for roadway salt, as needed and on a continuing basis, for use in snow removal and ice control throughout the state of West Virginia for delivery of materials by Vendor, FOB. to Agency storage locations per county as well as Agency pick up from Vendor storage sites. Per the Bid Requirements, Specifications, Terms and Conditions attached to this solicitation.

INVOICE TO		SHIP TO	
VARIOUS AGENCY LOCATIONS AS INDICATED BY ORDER		STATE OF WEST VIRGINIA VARIOUS LOCATIONS AS INDICATED BY ORDER	
No City US	WV	No City US	WV

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	Roadway Salt - Sodium Chloride	0.00000	TON		

Comm Code	Manufacturer	Specification	Model #
46161506			

Extended Description:

Roadway Salt - Sodium Chloride for use in snow removal and ice control throughout the state of West Virginia.

VENDOR NOTE: Bid evaluation will be based on the bid prices submitted on the Pricing Pages Attachment A (ATT A) and Attachment B(ATT B). Vendor's entries of bid prices or other notations made in the wvOASIS commodity lines/descriptions will not be considered for bid evaluation or award.

SCHEDULE OF EVENTS

<u>Line</u>	<u>Event</u>	<u>Event Date</u>
1	Tech Questions due by 10:00am	2022-09-06

	Document Phase	Document Description	Page
DOT2300000020	Final	Roadway Salt - Sodium Chloride 6623C006	3

ADDITIONAL TERMS AND CONDITIONS

See attached document(s) for additional Terms and Conditions

INSTRUCTIONS TO VENDORS SUBMITTING BIDS

1. REVIEW DOCUMENTS THOROUGHLY: The attached documents contain a solicitation for bids. Please read these instructions and all documents attached in their entirety. These instructions provide critical information about requirements that if overlooked could lead to disqualification of a Vendor's bid. All bids must be submitted in accordance with the provisions contained in these instructions and the Solicitation. Failure to do so may result in disqualification of Vendor's bid.

2. MANDATORY TERMS: The Solicitation may contain mandatory provisions identified by the use of the words "must," "will," and "shall." Failure to comply with a mandatory term in the Solicitation will result in bid disqualification.

3. PREBID MEETING: The item identified below shall apply to this Solicitation.

A pre-bid meeting will not be held prior to bid opening

A **MANDATORY PRE-BID** meeting will be held at the following place and time:

All Vendors submitting a bid must attend the mandatory pre-bid meeting. Failure to attend the mandatory pre-bid meeting shall result in disqualification of the Vendor's bid. No one individual is permitted to represent more than one vendor at the pre-bid meeting. Any individual that does attempt to represent two or more vendors will be required to select one vendor to which the individual's attendance will be attributed. The vendors not selected will be deemed to have not attended the pre-bid meeting unless another individual attended on their behalf.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. Any person attending the pre-bid meeting on behalf of a Vendor must list on the attendance sheet his or her name and the name of the Vendor he or she is representing.

Additionally, the person attending the pre-bid meeting should include the Vendor's E-Mail address, phone number, and Fax number on the attendance sheet. It is the Vendor's responsibility to locate the attendance sheet and provide the required information. Failure to complete the attendance sheet as required may result in disqualification of Vendor's bid.

All Vendors should arrive prior to the starting time for the pre-bid. Vendors who arrive after the starting time but prior to the end of the pre-bid will be permitted to sign in but are charged with knowing all matters discussed at the pre-bid.

Questions submitted at least five business days prior to a scheduled pre-bid will be discussed at the pre-bid meeting if possible. Any discussions or answers to questions at the pre-bid meeting are preliminary in nature and are non-binding. Official and binding answers to questions will be published in a written addendum to the Solicitation prior to bid opening.

4. VENDOR QUESTION DEADLINE: Vendors may submit questions relating to this Solicitation to the Purchasing Division. Questions must be submitted in writing. All questions must be submitted on or before the date listed below and to the address listed below to be considered. A written response will be published in a Solicitation addendum if a response is possible and appropriate. Non-written discussions, conversations, or questions and answers regarding this Solicitation are preliminary in nature and are nonbinding.

Submitted emails should have the solicitation number in the subject line.

Question Submission Deadline: September 6, 2022 by 10:00am

Submit Questions to: John Estep
2019 Washington Street, East
Charleston, WV 25305
Fax: (304) 558-3970
Email: john.w.estep@wv.gov

5. VERBAL COMMUNICATION: Any verbal communication between the Vendor and any State personnel is not binding, including verbal communication at the mandatory pre-bid conference. Only information issued in writing and added to the Solicitation by an official written addendum by the Purchasing Division is binding.

6. BID SUBMISSION: All bids must be submitted on or before the date and time of the bid opening listed in section 7 below. Vendors can submit bids electronically through *wvOASIS*, in paper form delivered to the Purchasing Division at the address listed below either in person or by courier, or in facsimile form by faxing to the Purchasing Division at the number listed below. Notwithstanding the foregoing, the Purchasing Division may prohibit the submission of bids electronically through *wvOASIS* at its sole discretion. Such a prohibition will be contained and communicated in the *wvOASIS* system resulting in the Vendor's inability to submit bids through *wvOASIS*. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via email. Bids submitted in paper or facsimile form must contain a signature. Bids submitted in *wvOASIS* are deemed to be electronically signed.

Any bid received by the Purchasing Division staff is considered to be in the possession of the Purchasing Division and will not be returned for any reason.

For Request for Proposal ("RFP") Responses Only: Submission of a response to a Request for Proposal is not permitted in *wvOASIS*. In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal prior to the bid opening date and time identified in Section 7 below, plus _____ convenience copies of each to the Purchasing Division at the address shown below. Additionally, the Vendor should clearly identify and segregate the cost proposal from the technical proposal in a separately sealed envelope.

Revised 07/01/2022

Bid Delivery Address and Fax Number:
Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130
Fax: 304-558-3970

A bid submitted in paper or facsimile form should contain the information listed below on the face of the submission envelope or fax cover sheet. Otherwise, the bid may be rejected by the Purchasing Division.

VENDOR NAME:	
BUYER:	JOHN ESTEP
SOLICITATION NO.:	CRFQ 0803 DOT2300000020
BID OPENING DATE:	September 14, 2022
BID OPENING TIME:	1:30 PM
FAX NUMBER:	304-558-3970

7. BID OPENING: Bids submitted in response to this Solicitation will be opened at the location identified below on the date and time listed below. Delivery of a bid after the bid opening date and time will result in bid disqualification. For purposes of this Solicitation, a bid is considered delivered when confirmation of delivery is provided by *wvOASIS* (in the case of electronic submission) or when the bid is time stamped by the official Purchasing Division time clock (in the case of hand delivery).

Bid Opening Date and Time: September 14, 2022 @ 1:30 PM

Bid Opening Location: Department of Administration, Purchasing Division
2019 Washington Street East
Charleston, WV 25305-0130

8. ADDENDUM ACKNOWLEDGEMENT: Changes or revisions to this Solicitation will be made by an official written addendum issued by the Purchasing Division. Vendor should acknowledge receipt of all addenda issued with this Solicitation by completing an Addendum Acknowledgment Form, a copy of which is included herewith. Failure to acknowledge addenda may result in bid disqualification. The addendum acknowledgement should be submitted with the bid to expedite document processing.

9. BID FORMATTING: Vendor should type or electronically enter the information onto its bid to prevent errors in the evaluation. Failure to type or electronically enter the information may result in bid disqualification.

10. ALTERNATE MODEL OR BRAND: Unless the box below is checked, any model, brand, or specification listed in this Solicitation establishes the acceptable level of quality only and is not intended to reflect a preference for, or in any way favor, a particular brand or vendor. Vendors may bid alternates to a listed model or brand provided that the alternate is at least equal to the model or brand and complies with the required specifications. The equality of any alternate being bid shall be determined by the State at its sole discretion. Any Vendor bidding an alternate model or brand should clearly identify the alternate items in its bid and should include manufacturer's specifications, industry literature, and/or any other relevant documentation demonstrating the equality of the alternate items. Failure to provide information for alternate items may be grounds for rejection of a Vendor's bid.

This Solicitation is based upon a standardized commodity established under W. Va. Code § 5A-3-61. Vendors are expected to bid the standardized commodity identified. Failure to bid the standardized commodity will result in your firm's bid being rejected.

11. EXCEPTIONS AND CLARIFICATIONS: The Solicitation contains the specifications that shall form the basis of a contractual agreement. Vendor shall clearly mark any exceptions, clarifications, or other proposed modifications in its bid. Exceptions to, clarifications of, or modifications of a requirement or term and condition of the Solicitation may result in bid disqualification.

12. COMMUNICATION LIMITATIONS: In accordance with West Virginia Code of State Rules §148-1-6.6, communication with the State of West Virginia or any of its employees regarding this Solicitation during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited without prior Purchasing Division approval. Purchasing Division approval for such communication is implied for all agency delegated and exempt purchases.

13. REGISTRATION: Prior to Contract award, the apparent successful Vendor must be properly registered with the West Virginia Purchasing Division and must have paid the \$125 fee, if applicable.

14. UNIT PRICE: Unit prices shall prevail in cases of a discrepancy in the Vendor's bid.

15. PREFERENCE: Vendor Preference may be requested in purchases of motor vehicles or construction and maintenance equipment and machinery used in highway and other infrastructure projects. Any request for preference must be submitted in writing with the bid, must specifically identify the preference requested with reference to the applicable subsection of West Virginia Code § 5A-3-37, and must include with the bid any information necessary to evaluate and confirm the applicability of the requested preference. A request form to help facilitate the request can be found at: www.state.wv.us/admin/purchase/vrc/Venpref.pdf.

15A. RECIPROCAL PREFERENCE: The State of West Virginia applies a reciprocal preference to all solicitations for commodities and printing in accordance with W. Va. Code § 5A-3-37(b). In effect, non-resident vendors receiving a preference in their home states, will see that same preference granted to West Virginia resident vendors bidding against them in West Virginia. Any request for reciprocal preference must include with the bid any information necessary to evaluate and confirm the applicability of the preference. A request form to help facilitate the request can be found at: www.state.wv.us/admin/purchase/vrc/Venpref.pdf.

16. SMALL, WOMEN-OWNED, OR MINORITY-OWNED BUSINESSES: For any solicitations publicly advertised for bid, in accordance with West Virginia Code §5A-3-37(a)(7) and W. Va. CSR § 148-22-9, any non-resident vendor certified as a small, women-owned, or minority-owned business under W. Va. CSR § 148-22-9 shall be provided the same preference made available to any resident vendor. Any non-resident small, women-owned, or minority-owned business must identify itself as such in writing, must submit that writing to the Purchasing Division with its bid, and must be properly certified under W. Va. CSR § 148-22-9 prior to contract award to receive the preferences made available to resident vendors. Preference for a non-resident small, women-owned, or minority owned business shall be applied in accordance with W. Va. CSR § 148-22-9.

17. WAIVER OF MINOR IRREGULARITIES: The Director reserves the right to waive minor irregularities in bids or specifications in accordance with West Virginia Code of State Rules § 148-1-4.6.

18. ELECTRONIC FILE ACCESS RESTRICTIONS: Vendor must ensure that its submission in wvOASIS can be accessed and viewed by the Purchasing Division staff immediately upon bid opening. The Purchasing Division will consider any file that cannot be immediately accessed and viewed at the time of the bid opening (such as, encrypted files, password protected files, or incompatible files) to be blank or incomplete as context requires and are therefore unacceptable. A vendor will not be permitted to unencrypt files, remove password protections, or resubmit documents after bid opening to make a file viewable if those documents are required with the bid. A Vendor may be required to provide document passwords or remove access restrictions to allow the Purchasing Division to print or electronically save documents provided that those documents are viewable by the Purchasing Division prior to obtaining the password or removing the access restriction.

19. NON-RESPONSIBLE: The Purchasing Division Director reserves the right to reject the bid of any vendor as Non-Responsible in accordance with W. Va. Code of State Rules § 148-1-5.3, when the Director determines that the vendor submitting the bid does not have the capability to fully perform or lacks the integrity and reliability to assure good-faith performance.”

20. ACCEPTANCE/REJECTION: The State may accept or reject any bid in whole, or in part in accordance with W. Va. Code of State Rules § 148-1-4.5. and § 148-1-6.4.b.”

21. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor’s entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

22. WITH THE BID REQUIREMENTS: In instances where these specifications require documentation or other information with the bid, and a vendor fails to provide it with the bid, the Director of the Purchasing Division reserves the right to request those items after bid opening and prior to contract award pursuant to the authority to waive minor irregularities in bids or specifications under W. Va. CSR § 148-1-4.6. This authority does not apply to instances where state law mandates receipt with the bid.

23. EMAIL NOTIFICATION OF AWARD: The Purchasing Division will attempt to provide bidders with e-mail notification of contract award when a solicitation that the bidder participated in has been awarded. For notification purposes, bidders must provide the Purchasing Division with a valid email address in the bid response. Bidders may also monitor *WV*OASIS or the Purchasing Division's website to determine when a contract has been awarded.

24. ISRAEL BOYCOTT CERTIFICATION: Vendor's act of submitting a bid in response to this solicitation shall be deemed a certification from bidder to the State that bidder is not currently engaged in, and will not for the duration of the contract, engage in a boycott of Israel. This certification is required by W. Va. Code § 5A-3-63.

GENERAL TERMS AND CONDITIONS:

- 1. CONTRACTUAL AGREEMENT:** Issuance of an Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance by the State of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid, or on the Contract if the Contract is not the result of a bid solicitation, signifies Vendor's agreement to be bound by and accept the terms and conditions contained in this Contract.
- 2. DEFINITIONS:** As used in this Solicitation/Contract, the following terms shall have the meanings attributed to them below. Additional definitions may be found in the specifications included with this Solicitation/Contract.
 - 2.1. "Agency" or "Agencies"** means the agency, board, commission, or other entity of the State of West Virginia that is identified on the first page of the Solicitation or any other public entity seeking to procure goods or services under this Contract.
 - 2.2. "Bid" or "Proposal"** means the vendors submitted response to this solicitation.
 - 2.3. "Contract"** means the binding agreement that is entered into between the State and the Vendor to provide the goods or services requested in the Solicitation.
 - 2.4. "Director"** means the Director of the West Virginia Department of Administration, Purchasing Division.
 - 2.5. "Purchasing Division"** means the West Virginia Department of Administration, Purchasing Division.
 - 2.6. "Award Document"** means the document signed by the Agency and the Purchasing Division, and approved as to form by the Attorney General, that identifies the Vendor as the contract holder.
 - 2.7. "Solicitation"** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
 - 2.8. "State"** means the State of West Virginia and/or any of its agencies, commissions, boards, etc. as context requires.
 - 2.9. "Vendor" or "Vendors"** means any entity submitting a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded the Contract as context requires.

3. CONTRACT TERM; RENEWAL; EXTENSION: The term of this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below:

Term Contract

Initial Contract Term: The Initial Contract Term will be for a period of one year upon approval. The Initial Contract Term becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as _____), and the Initial Contract Term ends on the effective end date also shown on the first page of this Contract.

Renewal Term: This Contract may be renewed upon the mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any request for renewal should be delivered to the Agency and then submitted to the Purchasing Division thirty (30) days prior to the expiration date of the initial contract term or appropriate renewal term. A Contract renewal shall be in accordance with the terms and conditions of the original contract. Unless otherwise specified below, renewal of this Contract is limited to THREE successive one (1) year periods or multiple renewal periods of less than one year, provided that the multiple renewal periods do not exceed the total number of months available in all renewal years combined. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Alternate Renewal Term – This contract may be renewed for _____ successive _____ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's office (Attorney General approval is as to form only)

Delivery Order Limitations: In the event that this contract permits delivery orders, a delivery order may only be issued during the time this Contract is in effect. Any delivery order issued within one year of the expiration of this Contract shall be effective for one year from the date the delivery order is issued. No delivery order may be extended beyond one year after this Contract has expired.

Fixed Period Contract: This Contract becomes effective upon Vendor's receipt of the notice to proceed and must be completed within _____ days.

Fixed Period Contract with Renewals: This Contract becomes effective upon Vendor's receipt of the notice to proceed and part of the Contract more fully described in the attached specifications must be completed within _____ days. Upon completion of the work covered by the preceding sentence, the vendor agrees that:

the contract will continue for _____ years;

the contract may be renewed for _____ successive _____ year periods or shorter periods provided that they do not exceed the total number of months contained in all available renewals. Automatic renewal of this Contract is prohibited. Renewals must be approved by the Vendor, Agency, Purchasing Division and Attorney General's Office (Attorney General approval is as to form only).

One-Time Purchase: The term of this Contract shall run from the issuance of the Award Document until all of the goods contracted for have been delivered, but in no event will this Contract extend for more than one fiscal year.

Construction/Project Oversight: This Contract becomes effective on the effective start date listed on the first page of this Contract, identified as the State of West Virginia contract cover page containing the signatures of the Purchasing Division, Attorney General, and Encumbrance clerk (or another page identified as _____), and continues until the project for which the vendor is providing oversight is complete.

Other: Contract Term specified in _____

4. AUTHORITY TO PROCEED: Vendor is authorized to begin performance of this contract on the date of encumbrance listed on the front page of the Award Document unless either the box for "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked in Section 3 above. If either "Fixed Period Contract" or "Fixed Period Contract with Renewals" has been checked, Vendor must not begin work until it receives a separate notice to proceed from the State. The notice to proceed will then be incorporated into the Contract via change order to memorialize the official date that work commenced.

5. QUANTITIES: The quantities required under this Contract shall be determined in accordance with the category that has been identified as applicable to this Contract below.

Open End Contract: Quantities listed in this Solicitation/Award Document are approximations only, based on estimates supplied by the Agency. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery during the term of the Contract, whether more or less than the quantities shown.

Service: The scope of the service to be provided will be more clearly defined in the specifications included herewith.

Combined Service and Goods: The scope of the service and deliverable goods to be provided will be more clearly defined in the specifications included herewith.

One-Time Purchase: This Contract is for the purchase of a set quantity of goods that are identified in the specifications included herewith. Once those items have been delivered, no additional goods may be procured under this Contract without an appropriate change order approved by the Vendor, Agency, Purchasing Division, and Attorney General's office.

6. EMERGENCY PURCHASES: The Purchasing Division Director may authorize the Agency to purchase goods or services in the open market that Vendor would otherwise provide under this Contract if those goods or services are for immediate or expedited delivery in an emergency. Emergencies shall include, but are not limited to, delays in transportation or an unanticipated increase in the volume of work. An emergency purchase in the open market, approved by the Purchasing Division Director, shall not constitute a breach of this Contract and shall not entitle the Vendor to any form of compensation or damages. This provision does not excuse the State from fulfilling its obligations under a One-Time Purchase contract.

7. REQUIRED DOCUMENTS: All of the items checked in this section must be provided to the Purchasing Division by the Vendor as specified:

BID BOND (Construction Only): Pursuant to the requirements contained in W. Va. Code § 5-22-1(c), All Vendors submitting a bid on a construction project shall furnish a valid bid bond in the amount of five percent (5%) of the total amount of the bid protecting the State of West Virginia. The bid bond must be submitted with the bid.

PERFORMANCE BOND: The apparent successful Vendor shall provide a performance bond in the amount of 100% of the contract. The performance bond must be received by the Purchasing Division prior to Contract award.

LABOR/MATERIAL PAYMENT BOND: The apparent successful Vendor shall provide a labor/material payment bond in the amount of 100% of the Contract value. The labor/material payment bond must be delivered to the Purchasing Division prior to Contract award.

In lieu of the Bid Bond, Performance Bond, and Labor/Material Payment Bond, the Vendor may provide certified checks, cashier's checks, or irrevocable letters of credit. Any certified check, cashier's check, or irrevocable letter of credit provided in lieu of a bond must be of the same amount and delivered on the same schedule as the bond it replaces. A letter of credit submitted in lieu of a performance and labor/material payment bond will only be allowed for projects under \$100,000. Personal or business checks are not acceptable. Notwithstanding the foregoing, West Virginia Code § 5-22-1 (d) mandates that a vendor provide a performance and labor/material payment bond for construction projects. Accordingly, substitutions for the performance and labor/material payment bonds for construction projects is not permitted.

MAINTENANCE BOND: The apparent successful Vendor shall provide a two (2) year maintenance bond covering the roofing system. The maintenance bond must be issued and delivered to the Purchasing Division prior to Contract award.

LICENSE(S) / CERTIFICATIONS / PERMITS: In addition to anything required under the Section of the General Terms and Conditions entitled Licensing, the apparent successful Vendor shall furnish proof of the following licenses, certifications, and/or permits upon request and in a form acceptable to the State. The request may be prior to or after contract award at the State's sole discretion.

The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications regardless of whether or not that requirement is listed above.

8. INSURANCE: The apparent successful Vendor shall furnish proof of the insurance identified by a checkmark below and must include the State as an additional insured on each policy prior to Contract award. The insurance coverages identified below must be maintained throughout the life of this contract. Thirty (30) days prior to the expiration of the insurance policies, Vendor shall provide the Agency with proof that the insurance mandated herein has been continued. Vendor must also provide Agency with immediate notice of any changes in its insurance policies, including but not limited to, policy cancelation, policy reduction, or change in insurers. The apparent successful Vendor shall also furnish proof of any additional insurance requirements contained in the specifications prior to Contract award regardless of whether that insurance requirement is listed in this section.

Vendor must maintain:

Commercial General Liability Insurance in at least an amount of: \$1,000,000.00 per occurrence.

Automobile Liability Insurance in at least an amount of: \$1,000,000.00 per occurrence.

Professional/Malpractice/Errors and Omission Insurance in at least an amount of: _____ per occurrence. Notwithstanding the forgoing, Vendor's are not required to list the State as an additional insured for this type of policy.

Commercial Crime and Third Party Fidelity Insurance in an amount of: _____ per occurrence.

Cyber Liability Insurance in an amount of: _____ per occurrence.

Builders Risk Insurance in an amount equal to 100% of the amount of the Contract.

Pollution Insurance in an amount of: _____ per occurrence.

Aircraft Liability in an amount of: _____ per occurrence.

State of West Virginia must be listed as additional insured on Insurance Certificate. Certificate holder should read as follows:

State of WV
1900 Kanawha Blvd. E., Bldg.5
Charleston, WV 25305

Notwithstanding anything contained in this section to the contrary, the Director of the Purchasing Division reserves the right to waive the requirement that the State be named as an additional insured on one or more of the Vendor's insurance policies if the Director finds that doing so is in the State's best interest.

Revised 07/01/2022

9. WORKERS' COMPENSATION INSURANCE: Vendor shall comply with laws relating to workers compensation, shall maintain workers' compensation insurance when required, and shall furnish proof of workers' compensation insurance upon request.

10. [Reserved]

11. LIQUIDATED DAMAGES: This clause shall in no way be considered exclusive and shall not limit the State or Agency's right to pursue any other available remedy. Vendor shall pay liquidated damages in the amount specified below or as described in the specifications:

_____ for _____.

Liquidated Damages Contained in the Specifications.

Liquidated Damages Are Not Included in this Contract.

12. ACCEPTANCE: Vendor's signature on its bid, or on the certification and signature page, constitutes an offer to the State that cannot be unilaterally withdrawn, signifies that the product or service proposed by vendor meets the mandatory requirements contained in the Solicitation for that product or service, unless otherwise indicated, and signifies acceptance of the terms and conditions contained in the Solicitation unless otherwise indicated.

13. PRICING: The pricing set forth herein is firm for the life of the Contract, unless specified elsewhere within this Solicitation/Contract by the State. A Vendor's inclusion of price adjustment provisions in its bid, without an express authorization from the State in the Solicitation to do so, may result in bid disqualification. Notwithstanding the foregoing, Vendor must extend any publicly advertised sale price to the State and invoice at the lower of the contract price or the publicly advertised sale price.

14. PAYMENT IN ARREARS: Payments for goods/services will be made in arrears only upon receipt of a proper invoice, detailing the goods/services provided or receipt of the goods/services, whichever is later. Notwithstanding the foregoing, payments for software maintenance, licenses, or subscriptions may be paid annually in advance.

15. PAYMENT METHODS: Vendor must accept payment by electronic funds transfer and P-Card. (The State of West Virginia's Purchasing Card program, administered under contract by a banking institution, processes payment for goods and services through state designated credit cards.)

16. TAXES: The Vendor shall pay any applicable sales, use, personal property or any other taxes arising out of this Contract and the transactions contemplated thereby. The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

17. ADDITIONAL FEES: Vendor is not permitted to charge additional fees or assess additional charges that were not either expressly provided for in the solicitation published by the State of West Virginia, included in the Contract, or included in the unit price or lump sum bid amount that Vendor is required by the solicitation to provide. Including such fees or charges as notes to the solicitation may result in rejection of vendor's bid. Requesting such fees or charges be paid after the contract has been awarded may result in cancellation of the contract.

18. FUNDING: This Contract shall continue for the term stated herein, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise made available, this Contract becomes void and of no effect beginning on July 1 of the fiscal year for which funding has not been appropriated or otherwise made available. If that occurs, the State may notify the Vendor that an alternative source of funding has been obtained and thereby avoid the automatic termination. Non-appropriation or non-funding shall not be considered an event of default.

19. CANCELLATION: The Purchasing Division Director reserves the right to cancel this Contract immediately upon written notice to the vendor if the materials or workmanship supplied do not conform to the specifications contained in the Contract. The Purchasing Division Director may also cancel any purchase or Contract upon 30 days written notice to the Vendor in accordance with West Virginia Code of State Rules § 148-1-5.2.b.

20. TIME: Time is of the essence regarding all matters of time and performance in this Contract.

21. APPLICABLE LAW: This Contract is governed by and interpreted under West Virginia law without giving effect to its choice of law principles. Any information provided in specification manuals, or any other source, verbal or written, which contradicts or violates the West Virginia Constitution, West Virginia Code, or West Virginia Code of State Rules is void and of no effect.

22. COMPLIANCE WITH LAWS: Vendor shall comply with all applicable federal, state, and local laws, regulations and ordinances. By submitting a bid, Vendor acknowledges that it has reviewed, understands, and will comply with all applicable laws, regulations, and ordinances.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to comply with all applicable laws, regulations, and ordinances. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

23. ARBITRATION: Any references made to arbitration contained in this Contract, Vendor's bid, or in any American Institute of Architects documents pertaining to this Contract are hereby deleted, void, and of no effect.

24. MODIFICATIONS: This writing is the parties' final expression of intent. Notwithstanding anything contained in this Contract to the contrary no modification of this Contract shall be binding without mutual written consent of the Agency, and the Vendor, with approval of the Purchasing Division and the Attorney General's office (Attorney General approval is as to form only). Any change to existing contracts that adds work or changes contract cost, and were not included in the original contract, must be approved by the Purchasing Division and the Attorney General's Office (as to form) prior to the implementation of the change or commencement of work affected by the change.

25. WAIVER: The failure of either party to insist upon a strict performance of any of the terms or provision of this Contract, or to exercise any option, right, or remedy herein contained, shall not be construed as a waiver or a relinquishment for the future of such term, provision, option, right, or remedy, but the same shall continue in full force and effect. Any waiver must be expressly stated in writing and signed by the waiving party.

26. SUBSEQUENT FORMS: The terms and conditions contained in this Contract shall supersede any and all subsequent terms and conditions which may appear on any form documents submitted by Vendor to the Agency or Purchasing Division such as price lists, order forms, invoices, sales agreements, or maintenance agreements, and includes internet websites or other electronic documents. Acceptance or use of Vendor's forms does not constitute acceptance of the terms and conditions contained thereon.

27. ASSIGNMENT: Neither this Contract nor any monies due, or to become due hereunder, may be assigned by the Vendor without the express written consent of the Agency, the Purchasing Division, the Attorney General's office (as to form only), and any other government agency or office that may be required to approve such assignments.

28. WARRANTY: The Vendor expressly warrants that the goods and/or services covered by this Contract will: (a) conform to the specifications, drawings, samples, or other description furnished or specified by the Agency; (b) be merchantable and fit for the purpose intended; and (c) be free from defect in material and workmanship.

29. STATE EMPLOYEES: State employees are not permitted to utilize this Contract for personal use and the Vendor is prohibited from permitting or facilitating the same.

30. PRIVACY, SECURITY, AND CONFIDENTIALITY: The Vendor agrees that it will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the Agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the Agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in <http://www.state.wv.us/admin/purchase/privacy/default.html>.

31. YOUR SUBMISSION IS A PUBLIC DOCUMENT: Vendor's entire response to the Solicitation and the resulting Contract are public documents. As public documents, they will be disclosed to the public following the bid/proposal opening or award of the contract, as required by the competitive bidding laws of West Virginia Code §§ 5A-3-1 et seq., 5-22-1 et seq., and 5G-1-1 et seq. and the Freedom of Information Act West Virginia Code §§ 29B-1-1 et seq.

DO NOT SUBMIT MATERIAL YOU CONSIDER TO BE CONFIDENTIAL, A TRADE SECRET, OR OTHERWISE NOT SUBJECT TO PUBLIC DISCLOSURE.

Submission of any bid, proposal, or other document to the Purchasing Division constitutes your explicit consent to the subsequent public disclosure of the bid, proposal, or document. The Purchasing Division will disclose any document labeled "confidential," "proprietary," "trade secret," "private," or labeled with any other claim against public disclosure of the documents, to include any "trade secrets" as defined by West Virginia Code § 47-22-1 et seq. All submissions are subject to public disclosure without notice.

32. LICENSING: In accordance with West Virginia Code of State Rules § 148-1-6.1.e, Vendor must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, West Virginia Insurance Commission, or any other state agency or political subdivision. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Upon request, the Vendor must provide all necessary releases to obtain information to enable the Purchasing Division Director or the Agency to verify that the Vendor is licensed and in good standing with the above entities.

SUBCONTRACTOR COMPLIANCE: Vendor shall notify all subcontractors providing commodities or services related to this Contract that as subcontractors, they too are required to be licensed, in good standing, and up-to-date on all state and local obligations as described in this section. Obligations related to political subdivisions may include, but are not limited to, business licensing, business and occupation taxes, inspection compliance, permitting, etc. Notification under this provision must occur prior to the performance of any work under the contract by the subcontractor.

33. ANTITRUST: In submitting a bid to, signing a contract with, or accepting a Award Document from any agency of the State of West Virginia, the Vendor agrees to convey, sell, assign, or transfer to the State of West Virginia all rights, title, and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to Vendor.

34. VENDOR CERTIFICATIONS: By signing its bid or entering into this Contract, Vendor certifies (1) that its bid or offer was made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, person or entity submitting a bid or offer for the same material, supplies, equipment or services; (2) that its bid or offer is in all respects fair and without collusion or fraud; (3) that this Contract is accepted or entered into without any prior understanding, agreement, or connection to any other entity that could be considered a violation of law; and (4) that it has reviewed this Solicitation in its entirety; understands the requirements, terms and conditions, and other information contained herein.

Vendor's signature on its bid or offer also affirms that neither it nor its representatives have any interest, nor shall acquire any interest, direct or indirect, which would compromise the performance of its services hereunder. Any such interests shall be promptly presented in detail to the Agency. The individual signing this bid or offer on behalf of Vendor certifies that he or she is authorized by the Vendor to execute this bid or offer or any documents related thereto on Vendor's behalf; that he or she is authorized to bind the Vendor in a contractual relationship; and that, to the best of his or her knowledge, the Vendor has properly registered with any State agency that may require registration.

35. VENDOR RELATIONSHIP: The relationship of the Vendor to the State shall be that of an independent contractor and no principal-agent relationship or employer-employee relationship is contemplated or created by this Contract. The Vendor as an independent contractor is solely liable for the acts and omissions of its employees and agents. Vendor shall be responsible for selecting, supervising, and compensating any and all individuals employed pursuant to the terms of this Solicitation and resulting contract. Neither the Vendor, nor any employees or subcontractors of the Vendor, shall be deemed to be employees of the State for any purpose whatsoever. Vendor shall be exclusively responsible for payment of employees and contractors for all wages and salaries, taxes, withholding payments, penalties, fees, fringe benefits, professional liability insurance premiums, contributions to insurance and pension, or other deferred compensation plans, including but not limited to, Workers' Compensation and Social Security obligations, licensing fees, etc. and the filing of all necessary documents, forms, and returns pertinent to all of the foregoing.

Vendor shall hold harmless the State, and shall provide the State and Agency with a defense against any and all claims including, but not limited to, the foregoing payments, withholdings, contributions, taxes, Social Security taxes, and employer income tax returns.

36. INDEMNIFICATION: The Vendor agrees to indemnify, defend, and hold harmless the State and the Agency, their officers, and employees from and against: (1) Any claims or losses for services rendered by any subcontractor, person, or firm performing or supplying services, materials, or supplies in connection with the performance of the Contract; (2) Any claims or losses resulting to any person or entity injured or damaged by the Vendor, its officers, employees, or subcontractors by the publication, translation, reproduction, delivery, performance, use, or disposition of any data used under the Contract in a manner not authorized by the Contract, or by Federal or State statutes or regulations; and (3) Any failure of the Vendor, its officers, employees, or subcontractors to observe State and Federal laws including, but not limited to, labor and wage and hour laws.

37. NO DEBT CERTIFICATION: In accordance with West Virginia Code §§ 5A-3-10a and 5-22-1(i), the State is prohibited from awarding a contract to any bidder that owes a debt to the State or a political subdivision of the State. By submitting a bid, or entering into a contract with the State, Vendor is affirming that (1) for construction contracts, the Vendor is not in default on any monetary obligation owed to the state or a political subdivision of the state, and (2) for all other contracts, neither the Vendor nor any related party owe a debt as defined above, and neither the Vendor nor any related party are in employer default as defined in the statute cited above unless the debt or employer default is permitted under the statute.

38. CONFLICT OF INTEREST: Vendor, its officers or members or employees, shall not presently have or acquire an interest, direct or indirect, which would conflict with or compromise the performance of its obligations hereunder. Vendor shall periodically inquire of its officers, members and employees to ensure that a conflict of interest does not arise. Any conflict of interest discovered shall be promptly presented in detail to the Agency.

39. REPORTS: Vendor shall provide the Agency and/or the Purchasing Division with the following reports identified by a checked box below:

Such reports as the Agency and/or the Purchasing Division may request. Requested reports may include, but are not limited to, quantities purchased, agencies utilizing the contract, total contract expenditures by agency, etc.

Quarterly reports detailing the total quantity of purchases in units and dollars, along with a listing of purchases by agency. Quarterly reports should be delivered to the Purchasing Division via email at purchasing.division@wv.gov.

40. BACKGROUND CHECK: In accordance with W. Va. Code § 15-2D-3, the State reserves the right to prohibit a service provider's employees from accessing sensitive or critical information or to be present at the Capitol complex based upon results addressed from a criminal background check. Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

41. PREFERENCE FOR USE OF DOMESTIC STEEL PRODUCTS: Except when authorized by the Director of the Purchasing Division pursuant to W. Va. Code § 5A-3-56, no contractor may use or supply steel products for a State Contract Project other than those steel products made in the United States. A contractor who uses steel products in violation of this section may be subject to civil penalties pursuant to W. Va. Code § 5A-3-56. As used in this section:

- a. "State Contract Project" means any erection or construction of, or any addition to, alteration of or other improvement to any building or structure, including, but not limited to, roads or highways, or the installation of any heating or cooling or ventilating plants or other equipment, or the supply of and materials for such projects, pursuant to a contract with the State of West Virginia for which bids were solicited on or after June 6, 2001.
- b. "Steel Products" means products rolled, formed, shaped, drawn, extruded, forged, cast, fabricated or otherwise similarly processed, or processed by a combination of two or more or such operations, from steel made by the open heath, basic oxygen, electric furnace, Bessemer or other steel making process.
- c. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
 1. The cost for each contract item used does not exceed one tenth of one percent (.1%) of the total contract cost or two thousand five hundred dollars (\$2,500.00), whichever is greater. For the purposes of this section, the cost is the value of the steel product as delivered to the project; or
 2. The Director of the Purchasing Division determines that specified steel materials are not produced in the United States in sufficient quantity or otherwise are not reasonably available to meet contract requirements.

42. PREFERENCE FOR USE OF DOMESTIC ALUMINUM, GLASS, AND STEEL: In Accordance with W. Va. Code § 5-19-1 et seq., and W. Va. CSR § 148-10-1 et seq., for every contract or subcontract, subject to the limitations contained herein, for the construction, reconstruction, alteration, repair, improvement or maintenance of public works or for the purchase of any item of machinery or equipment to be used at sites of public works, only domestic aluminum, glass or steel products shall be supplied unless the spending officer determines, in writing, after the receipt of offers or bids, (1) that the cost of domestic aluminum, glass or steel products is unreasonable or inconsistent with the public interest of the State of West Virginia, (2) that domestic aluminum, glass or steel products are not produced in sufficient quantities to meet the contract requirements, or (3) the available domestic aluminum, glass, or steel do not meet the contract specifications. This provision only applies to public works contracts awarded in an amount more than fifty thousand dollars (\$50,000) or public works contracts that require more than ten thousand pounds of steel products.

The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a "substantial labor surplus area", as defined by the United States Department of Labor, the cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than thirty percent (30%) of the bid or offered price for foreign made aluminum, glass, or steel

Revised 07/01/2022

products. This preference shall be applied to an item of machinery or equipment, as indicated above, when the item is a single unit of equipment or machinery manufactured primarily of aluminum, glass or steel, is part of a public works contract and has the sole purpose or of being a permanent part of a single public works project. This provision does not apply to equipment or machinery purchased by a spending unit for use by that spending unit and not as part of a single public works project.

All bids and offers including domestic aluminum, glass or steel products that exceed bid or offer prices including foreign aluminum, glass or steel products after application of the preferences provided in this provision may be reduced to a price equal to or lower than the lowest bid or offer price for foreign aluminum, glass or steel products plus the applicable preference. If the reduced bid or offer prices are made in writing and supersede the prior bid or offer prices, all bids or offers, including the reduced bid or offer prices, will be reevaluated in accordance with this rule.

43. INTERESTED PARTY SUPPLEMENTAL DISCLOSURE: W. Va. Code § 6D-1-2 requires that for contracts with an actual or estimated value of at least \$1 million, the Vendor must submit to the Agency a disclosure of interested parties prior to beginning work under this Contract. Additionally, the Vendor must submit a supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-work interested party disclosure, within 30 days following the completion or termination of the contract. A copy of that form is included with this solicitation or can be obtained from the WV Ethics Commission. This requirement does not apply to publicly traded companies listed on a national or international stock exchange. A more detailed definition of interested parties can be obtained from the form referenced above.

44. PROHIBITION AGAINST USED OR REFURBISHED: Unless expressly permitted in the solicitation published by the State, Vendor must provide new, unused commodities, and is prohibited from supplying used or refurbished commodities, in fulfilling its responsibilities under this Contract.

45. VOID CONTRACT CLAUSES – This Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law.

46. ISRAEL BOYCOTT: Bidder understands and agrees that, pursuant to W. Va. Code § 5A-3-63, it is prohibited from engaging in a boycott of Israel during the term of this contract.

DESIGNATED CONTACT: Vendor appoints the individual identified in this Section as the Contract Administrator and the initial point of contact for matters relating to this Contract.

(Name, Title) Deseree Caver Customer Care Representative
(Printed Name and Title) Deseree Caver
(Address) 24950 Country Club Blvd., Suite 450
(Phone Number) / (Fax Number) 800-600-7258
(email address) salt_customercareroadsafety@cargill.com

CERTIFICATION AND SIGNATURE: By signing below, or submitting documentation through wvOASIS, I certify that: I have reviewed this Solicitation/Contract in its entirety; that I understand the requirements, terms and conditions, and other information contained herein; that this bid, offer or proposal constitutes an offer to the State that cannot be unilaterally withdrawn; that the product or service proposed meets the mandatory requirements contained in the Solicitation/Contract for that product or service, unless otherwise stated herein; that the Vendor accepts the terms and conditions contained in the Solicitation, unless otherwise stated herein; that I am submitting this bid, offer or proposal for review and consideration; that I am authorized by the vendor to execute and submit this bid, offer, or proposal, or any documents related thereto on vendor's behalf; that I am authorized to bind the vendor in a contractual relationship; and that to the best of my knowledge, the vendor has properly registered with any State agency that may require registration.

By signing below, I further certify that I understand this Contract is subject to the provisions of West Virginia Code § 5A-3-62, which automatically voids certain contract clauses that violate State law; and that pursuant to W. Va. Code 5A-3-63, the entity entering into this contract is prohibited from engaging in a boycott against Israel.

Cargill, Incorporated-Salt Road Safety
(Company)
Deseree Caver Customer Care Representative
(Authorized Signature) (Representative Name, Title)
Deseree Caver/Customer Care Representative
(Printed Name and Title of Authorized Representative) (Date)
800-600-7258
(Phone Number) (Fax Number)
salt_customercareroadsafety@cargill.com
(Email Address)

REQUEST FOR QUOTATION
Roadway Salt – Sodium Chloride

SPECIFICATIONS

- 1. PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Division of Highways and the West Virginia Parkways Authority to establish an open-end contract for roadway salt, as needed and on a continuing basis, for use in snow removal and ice control throughout the state of West Virginia for delivery of materials by Vendor, FOB. to Agency storage locations per county as well as Agency pick up from Vendor storage sites. All responsible Vendors will be awarded a contract based on low-bid unit price per location.

- 2. DEFINITIONS:** The terms listed below shall have the following meanings assigned to them throughout and for the purpose of this Solicitation. Additional definitions can be found in Section 2 of the General Terms and Conditions.
 - 2.1 “ADO” or Agency “Delivery Order”** - A written order entered by WVDOH personnel in the wvOASIS financial system against a master agreement, authorizing quantities of commodities and/or services to be delivered in accordance with all terms, conditions, and prices stipulated in the original contract.

 - 2.2 “AASHTO”** – The American Association of State Highway and Transportation Officials is a standard body which publishes specifications, tests protocols, and guidelines that are used in highway design and construction throughout the United States. Reference: www.transportation.org

 - 2.3 “ASTM International” and “ASTM”** – the international standards organization that develops and publishes voluntary consensus technical standards for a wide range of materials, products, systems, and services, formerly known as the American Society for Testing and Materials. Reference: www.astm.org

 - 2.4 “Above the Guaranteed Delivery Total”** – salt ordered in excess of 120% of the Vendor’s guaranteed delivery total awarded.

 - 2.5 “Attachment A,” “Pricing Pages by Delivery,” and “ATT A”** – interchangeable terms referring to the schedule of prices attached hereto as **Attachment A (“ATT A”)** upon which Vendor should list its pricing for the delivery of Contract Items.

 - 2.6 “Attachment B,” “Pricing Pages by Agency Pick Up” and “ATT B”** – interchangeable terms referring to the schedule of prices attached hereto as **Attachment B (ATT B)** upon which Vendor should list its storage site locations and pricing for WVDOH Agency pick up of roadway salt from Vendor storage site locations.

 - 2.7 “Contract Item(s)”** – the list of items available for Vendor to provide pricing as identified in Section 3 of this Solicitation and referenced throughout.

REQUEST FOR QUOTATION
Roadway Salt – Sodium Chloride

- 2.8 **“Contractor” or “Vendor”** – interchangeable terms referring to any person or entity that submits a bid in response to the Solicitation, the entity that has been selected as the lowest responsible bidder, or the entity that has been awarded contract items through this contract.
- 2.9 **“Emergency Requests”**- requests for Contract Items to be fulfilled without delay, owing to circumstances for which the WVDOH could not have reasonably expected and has been designated as such by a representative of the WVDOH.
- 2.10 **“FOB” or “Free on Board”** – indicates that the price for goods includes delivery at the Vendor’s expense to a specified point, and that the Vendor retains liability for loss or damage until the goods are delivered.
- 2.11 **“Free-flowing”** – easy continuous natural progression movement without stoppage.
- 2.12 **“Guaranteed Acceptance Total”** - the Agency guarantees to accept 80% of the Vendor’s collective awarded salt-tonnage total (all WV counties) if delivered within the guaranteed delivery period.
- 2.13 **“Guaranteed Delivery Period”** - the timeframe or date that salt delivery is due, as specified herein and/or on the ordering Agency’s Delivery Order during SRIC season, non-SRIC season, and/or identified emergencies.
- 2.14 **“Guaranteed Delivery Total”** - the Vendor guarantees delivery of 120% of its collective awarded salt-tonnage (all WV counties) total, if delivered within the guaranteed delivery period.
- 2.15 **“Liquidated Damages”** - monetary compensation due from the Vendor in the event the Vendor’s performance falls short of contractual stipulation or breaches the contract. Delays in the delivery of goods and/or services or quality failures or corrections by the Vendor may result in the Agency assessing charges for such deficiencies per these contract Specifications, the Standard Specs Section 108.7, as amended, and calculated from the table posted in Section 7.9.1 of these Specifications.
- 2.16 **“MSDS” and “Material Safety Data Sheets”** – detailed informational documents provided by manufacturers outlining the physical and chemical properties of a product, potential physical and health hazards, and procedures for safe handling.
- 2.17 **“MP”** - refers to a Materials Procedure per the Materials Control, Soils, and Testing Division of the West Virginia Division of Highways. Reference: <https://transportation.wv.gov/highways/mcst/Pages/WVDOH-Materials-Procedures.aspx>

REQUEST FOR QUOTATION
Roadway Salt – Sodium Chloride

- 2.18 “OSHA” - Occupational Safety and Health Administration. Reference: www.osha.gov.
- 2.19 “Solicitation” – The official notice of an opportunity to supply the State with goods or services.
- 2.20 “Sodium Chloride,” “Rock Salt,” and “Roadway Salt” – the natural mined mineral used for de-icing roadways.
- 2.21 “SRIC” – Snow Removal and Ice Control.
- 2.22 “Standard Specs” – used throughout this solicitation means the West Virginia Department of Transportation, Division of Highways Standard Specifications, Roads and Bridges, most recent edition, as modified or amended by all subsequent Supplemental Specifications.
- 2.23 “USFWS” - The United States Fish and Wildlife Services: www.fws.gov/.
- 2.24 “WVDOH” or “Agency”– the West Virginia Division of Highways.
- 2.25 “WV Parkways Authority,” “Parkways,” and “Agency” – the West Virginia Parkways Authority.

3. GENERAL REQUIREMENTS:

- 3.1 **Standard Specifications Roads and Bridges:** The following Standard Specs Sections shall apply, as applicable, to the administration of this contract: 101, 102, 103, 104, 105, 106, 107, 108, 109, and 110, as amended.

Materials, equipment, and performance of this contract shall conform, but not be limited to, the requirements of Sections 204, 636, and 715.2, as amended.

A hard copy of the current Standard Specs may be purchased by using the **Attachment C (ATT C) Standard Specifications Order Form**. The completed form should be submitted by email to DOTSpecifications@wv.gov or mailed to:

West Virginia Division of Highways
Technical Support Division
1334 Smith Street
Charleston, West Virginia 25301

A free electronic copy of the Standard Specs may be obtained by sourcing:
<http://transportation.wv.gov/highways/contractadmin/specifications/Pages/default.aspx>

REQUEST FOR QUOTATION
Roadway Salt – Sodium Chloride

3.2 Documentation to be Included with the Bid: Vendors should carefully read the entire solicitation invitation. The Vendor should include as part of their bid response:

- Certification and Signature Page (within General Terms and Conditions)
- Addendum Acknowledgement Form
- Valid West Virginia Contractor's License, if applicable.
- Contract Manager Page (Section 9.4 of these Specifications)
- Valid Certificate of Insurance; and
- Any other required forms or supporting information as described herein.

Omitting any required forms, attachments, or documentation as described throughout this contract could deem a bid non-responsive and result in the disqualification of the Vendor's bid response.

3.3 Contract Items and Mandatory Requirements: Vendor shall provide Agency with the Contract Items specified herein on an open-end and continuing basis, F.O.B. destination. Contract Items must meet or exceed the mandatory requirements as shown below.

3.3.1 Sodium Chloride: Shall conform to the requirements of the most current version of ASTM D632 and ASTM E534, as amended. Vendor shall provide MSDS information to the WV Purchasing Division prior to award of a contract.

3.3.2 Anti-Clumping Material: If an anti-clumping agent will potentially be applied to salt for either delivery or pick up, the Vendor shall provide the MSDS information prior to award of a contract.

3.4 Sampling and Testing: Prior to award of this contract, the Vendor shall provide its proposed source of supply to the WVDOH, along with the supplier's certification of quality and gradation. Acceptance shall be based on suppliers' certification of quality and gradation. This information shall be directed to:

WVDOH Materials Control, Soils and Testing Division
190 Dry Branch Road
Charleston, WV 25306
Phone: 304-558-3175

The WVDOH may conduct sampling and testing at any time throughout the term of this contract to verify material quality and/or gradation.

3.4.1 Moisture Content: All material shall be covered in transit. Moisture content shall not exceed 2.0% by weight for stockpile delivery. Laboratory testing for moisture shall be administered in accordance with ASTM E534,

REQUEST FOR QUOTATION
Roadway Salt – Sodium Chloride

as amended, at any time during the delivery. Upon visual inspection by the Agency/WVDOH District Manager or designee, any supplied sodium chloride that does not appear to meet ASTM E534 (such as material being saturated/free flowing with water) will be sampled and tested by the WVDOH. Three samples, one each from the top, middle and bottom of the load, will be pulled by Agency personnel, witnessed, and signed off on by the delivery driver. The supplier will be notified of sampling within 48 hours and will be notified of test results within seven (7) business days of completion testing. Upon testing and with each delivery, the supplier shall be responsible for the weight of water in excess of 2.0%, by deducting the excess amount from the price. Price adjustment shall be calculated as follows:

*EXAMPLE: For a delivery of 75 tons at \$45.00/ton, if the moisture content is found to be 3.5% (1.5% greater than 2.0%), the formula shall be:

- 75 tons multiplied by \$45.00 to equal \$3,375.00 price.
- \$3,375.00 multiplied by .0150 to equal \$50.63, total price adjustment.
- \$3,375.00 minus \$50.63 to equal \$3,324.37, total adjusted price.

3.4.2 Unacceptable Material: Per visual observation, if salt is deemed unsatisfactory or not compliant with ASTM E534, at the discretion of the Agency/WVDOH District Manager or designee, the Agency reserves the right to accept or reject delivery and exercise the price adjustment formula.

If the supplier disputes the test results, they must file a complaint with the Agency/WVDOH Operations Division Director for review and final decision within seven (7) business days of notification of the test results to the supplier.

3.4.2.1 Delivery of salt deemed by the Agency as unacceptable such as large unusable chunks, loads mixed with foreign material (i.e., dark colored contaminants, charcoal, cinders, or debris) will be rejected immediately. Salt that does not meet the above specified conditions at the time of the delivery will not be accepted by the Agency. Any rejected deliveries will be removed by the Vendor at no cost to the Agency.

3.4.3 Emergency Requests: Emergency requests, as ordered by a WVDOH District Engineer or their designee, shall be initiated within forty-eight (48) hours from when the Delivery Order is received by Vendor. The determination of an emergency request will be in accordance with Section 2.9 of this Solicitation and shall be prominently noted on Delivery Order.

REQUEST FOR QUOTATION
Roadway Salt – Sodium Chloride

4. **PANDEMIC-RESPONSE SAFETY PROTOCOLS:** In addition to the Vendor's established safety protocols and the WVDOH's established safety protocols outlined in the Standard Specs, as amended, the Vendor and the Vendor's staff shall adhere to all WVDOH's pandemic-response protocols while present at the WVDOH jobsite. Vendors may obtain the WVDOH's pandemic-response protocols by contacting the WVDOH District Engineer or their designee.
5. **CONTRACT AWARD:** The Contract is intended to provide Agencies with a purchase price per ton on Roadway Salt. A Contract shall be awarded to all qualified Vendors who provide Contract Items that meet the required specifications of this Contract.
- 5.1 **Pricing Pages (ATT A and ATT B):** Vendor shall complete the Pricing Pages by placing a bid for any or all locations. Vendor shall NOT add, delete, or modify spreadsheet column and row headers, descriptions, units of measure, or estimated quantities on Pricing Pages by Delivery, ATT A, and Pricing Pages by Pick Up, ATT B. Making any such changes to the format or failure to complete ATT A and ATT B in their entirety may result in the disqualification of Vendor's bid. Vendor should type or electronically enter the information into the Pricing Pages spreadsheet to prevent errors in the evaluation. In most cases, the Vendor can request an electronic copy of the Pricing Pages spreadsheet for bid purposes by sending an email request to the following: John.W.Estep@wv.gov.
- 5.1.1 **Pricing Pages by Delivery (ATT A):** Vendor shall provide its pricing for the delivery of roadway salt, FOB, to Agency storage locations as listed on the ATT A spreadsheet.
- 5.1.2 **Pricing Pages by Agency Pick Up (ATT B):** Vendor shall complete ATT B by providing its pricing for the pick up of roadway salt by an Agency from a Vendor's storage location, as listed on ATT B. Vendor pricing shall include loading of WVDOH Agency vehicles by Vendor.
- 5.1.3 Vendor entries of bid prices or other notations made in wvOASIS Commodity Line Descriptions will not be considered for bid evaluation or award. Submitting Pricing Pages other than those provided with this solicitation, as described in Section 5.1, shall result in the disqualification of all Contract Items bid on the erroneous Pricing Pages.
- 5.2 **Contract Award Transition:** Upon award of this contract, the WVDOH Operations Division will announce the effective date of use of this contract to the Districts and the Vendors, whether it is by the effective date, the completed and encumbered date, or an established date by the WVDOH. Upon the announced effective date of use, any Delivery Order issued prior to the award of the contract shall remain in effect and should not be cancelled until that Delivery Order is filled; however, after ten (10) working days of the Districts and Vendors notice, any

REQUEST FOR QUOTATION
Roadway Salt – Sodium Chloride

Delivery Order that has not been completely filled by the Vendors shall NOT be completed, and a cancellation notice will be sent to that Vendor from the issuing District for cancellation of the balance of that Delivery Order only. No Delivery Orders from prior contracts should be held open by the Districts or Vendors longer than ten (10) working days after the effective date of use is announced for the new contract.

- 5.3 **Cooperative Contracting:** The purchase prices on all Contract Items in this contract, available for the WVDOH and the West Virginia Parkways Authority, shall be adoptable for other public agencies upon their request. Agencies under the authority of the West Virginia Purchasing Division must receive prior approval by the Purchasing Director.

6. ORDERING AND PAYMENT:

- 6.1 **Ordering:** Vendor shall accept orders through wvOASIS, regular mail, facsimile, email, or any other written forms of communication. Vendor shall maintain and keep current its phone numbers, fax number, email address, locations, and ordering/billing/ payment addresses with WVDOH and in wvOASIS. Vendor may, but is not required to, accept online orders through a secure internet ordering portal/website. If Vendor has the ability to accept online orders, it must include in its response a brief description of how Agencies may utilize the online ordering system. Vendor shall ensure that its online ordering system is properly secured prior to processing Agency orders online.
- 6.2 **Delivery Order:** WVDOH will initiate a Delivery Order by identifying locations of need. The Delivery Order will be generated by a WVDOH Engineer or their designee and should be completed on a WV-39 Blanket Release Order and an ADO entered into wvOASIS. The order should detail the amount of Roadway Salt needed, the location of need, and a due date for delivery, which shall become the agreed upon delivery date. Emergencies shall be prominently noted on the Delivery Order. Once complete, the Delivery Orders shall be sent to Vendor via fax, email, or postal mail. Any verbal communications to initiate or make modifications to Delivery Order under this contract are not acceptable as a Delivery Order.
- 6.3 **Payment:** Upon completion of the work indicated on the Delivery Order, Vendor shall accept payment in accordance with the payment procedures of the State of West Virginia. The State of West Virginia currently utilizes a Purchasing Card program, administered under contract by a banking institution, as well as Electronic Funds Transfer as methods to process payment for goods and services. The Vendor shall accept the State of West Virginia's Purchasing Card and Electronic Funds Transfer for payment of orders under this Contract. Electronic Funds Transfer for payment is available through the WV State Auditor's Office. The Vendor may visit

REQUEST FOR QUOTATION
Roadway Salt – Sodium Chloride

the WV State Auditor's website (wvsao.gov) for all necessary forms and instructions. Payment method may be dictated at WVDOH's discretion.

7. PROJECT ACCEPTANCE, DELIVERY AND RETURN:

- 7.1 Project Acceptance and Written Verification of Receipt:** Upon receipt of a WVDOH Delivery Order, the Vendor shall advise the WVDOH in writing within five (5) calendar days of their acceptance or refusal of the Delivery Order. As verification of receipt, Vendor must provide written acknowledgement of any Delivery Orders and any Revisions/Modifications thereto sent by WVDOH. Failure to provide the WVDOH with written acknowledgement of any Delivery Orders/Revisions within five (5) days of the Order being sent shall be considered refusal of the Delivery Order. In the event of refusal, the WVDOH at its own discretion shall cancel the Delivery Order and may seek to obtain the goods or services from the next low bid Vendor or proceed with an Emergency Purchase from the open market.

Upon Vendor's acceptance, WVDOH should submit an ADO in wvOASIS and provide the Vendor with the ADO number for their reference.

- 7.2 Delivery:** Vendor shall deliver all orders in accordance with the above schedule and shall not hold orders until a minimum delivery quantity is met. Vendor is not authorized to deliver, nor is the Agency authorized to receive materials prior to the issuance of a Delivery Order. As directed on its Delivery Order, Vendor shall commence and fulfill orders to the Agency location(s) in increments and within the time frame specified on its Delivery Order.

In the event that the Agency sends Vendor a "bulk seasonal order" whereby the Agency is anticipating multiple, successive deliveries, the Vendor shall commence deliveries spread out over the date-span specified by the Agency and make successive deliveries until the Order is filled. Vendor shall communicate in writing to the ordering Agency, any issues or potential disruption in delivery(s). The Agency shall have the option of accepting or refusing any alternative delivery schedule proposed by the Vendor. Any delayed or failed delivery portion shall be subject to failed delivery damages, as defined in Section 7.9

- 7.2.1 Guaranteed Delivery:** It shall be further noted that the Vendor is not responsible for and shall not be penalized for delays in its delivery when caused by factors or events outside Vendor's control, including but not limited to acts or omissions of the Agency or third parties, acts of civil or military authority, civil disturbance, war, terrorism, pandemics, explosions, fire, floods, tornadoes, or other natural disasters or acts of God.

REQUEST FOR QUOTATION
Roadway Salt – Sodium Chloride

7.2.1.1 Delivery Order Schedule: For Delivery Orders issued to the awarded Vendor from the contract's effective date, delivery shall commence immediately and be due within ten (10) calendar days of the Delivery Order date, unless otherwise directed by the Agency. The first day will be considered 12:01 AM, the morning (business day) following the Delivery Order date. An initial delivery must be made by the established initial delivery date and the remainder of the order filled with successive loads as specified by the Agency on the Delivery Order.

7.2.1.2 Emergency Delivery Orders Schedule: Per Section 2.9, emergency situations stemming from inclement weather requiring the immediate delivery of salt, upon the Vendor's receipt of the Agency's Delivery Order denoting "Emergency," the Order shall be treated as a priority and fulfilled by the Vendor without delay and as indicated by the Agency on the Delivery Order. Emergency Deliveries declared as such the Agency District Engineer/designee, shall be paid at a rate of 105% of the Vendor's awarded price

7.3 Agency Acceptance Guarantee and Vendor Delivery Guarantee: The Agency guarantees acceptance of 80% of estimated quantity awarded statewide to the Vendor. The Vendor shall guarantee delivery of up to 120% of the statewide estimated quantity awarded. All Agency Delivery Orders shall be issued, and all Vendor deliveries shall be completed prior to the contract's expiration and as identified on the Agency's Delivery Orders. To clarify, the "guarantee" shall apply to statewide (all counties) total tonnage awarded to the Vendor, and *not* the individual totals per District, County, and/or Agency Delivery/Storage Location Site.

***EXAMPLE:** If statewide total (of all counties in all Districts, all Agencies) awarded to the Vendor is 43,000 tons, the guaranteed Total shall be calculated as follows:

- 43,000 multiplied by 80% = Agency's Guaranteed Acceptance of 34,400 tons
- 43,000 multiplied by 120% = Vendor's Guaranteed Delivery of 51,600 tons

7.4 Orders Beyond 120% of Vendor's Statewide Guaranteed Delivery: Contingent upon weather conditions, the Agency reserves the right to purchase additional quantities of salt above 120% of the Vendor's awarded statewide guaranteed delivery total.

7.4.1 Pricing for Orders Beyond 120%: In the event that the Agency wishes to purchase Salt in excess of the 120% of the Vendor's statewide guaranteed delivery total, the Agency shall pay the Vendor at a rate of 110% of the Vendor's bid price for purchases and the Vendor shall guarantee completed

REQUEST FOR QUOTATION
Roadway Salt – Sodium Chloride

delivery of such orders no later than 10 calendar days of the Delivery Order date, unless otherwise specified by the Agency on its Delivery Order.

- 7.5 **Shipment Adjustments:** The Agency cannot determine nor predict the amount of snow and/or ice in one area compared to another area. As dictated by weather conditions and/or the needs of the Agency, the Agency reserves the right to direct the Vendor to alter the shipment totals between storage locations despite how they were estimated and awarded to the Vendor.
- 7.6 **Vendor's to Report Agency Orders** At the point that the Vendor determines that it has received orders amounting to 80% of the estimated statewide totals, the Vendor shall notify the WVDOH Operations Division via email at DOHOperationsProcurement@wv.gov and provide reports to the Agency with the Vendor's quantities ordered and delivered statewide, broken down by ordering location (Section 9.3 also applies).
- 7.7 **Vendor Shall Not Place Shipments On Hold:** In the event that total ordered from a particular District, location, or Agency exceeds 120% of the estimated total for a given District or any singular location, the Vendor shall not place any Delivery Orders on hold nor suspend any shipments if the entire total ordered has not reached 120% of the Vendors statewide awarded total, as per Section 7.4.
- 7.8 **Original Delivery Tickets** for each delivered load to the Agency delivery/ storage location sites shall be provided with each delivery, and must be signed and retained by an Agency representative at the delivery/storage location site.
- 7.9 **Failed Delivery and Risk of Loss:** The Agency placing the order under this Contract must be notified in writing if orders will be delayed for any reason. Any delay in delivery that could cause harm to an Agency will be grounds for cancellation of the delayed order, and/or obtaining the items ordered from a third party. The Agency placing the Delivery Order under this Contract must be notified in writing by the Vendor no later than 36 hours prior to the date from the Agency's Delivery Order. Any failure to notify, acknowledge receipt of WVDOH's written Delivery Orders/ Revisions resulting in delivery delay, or failure to start or complete the project per the WVDOH scheduled due dates may be determined by the WVDOH at its sole discretion as harmful to the Agency and as such, shall result in WVDOH's cancellation of the Delivery Order and application of Liquidated Damages.

Any Agency seeking to obtain items from a third party under this provision must first obtain approval of the Purchasing Division.

- 7.9.1 **Liquidated Damages:** If the vendor's delivery of goods/services or corrections thereto exceeds the Delivery Order completion due date or timeframe, the Vendor shall agree that no extension of contract time will be

**REQUEST FOR QUOTATION
Roadway Salt – Sodium Chloride**

granted unless Liquidated Damages are applied by the WVDOH in the form of an off-set reduction to the total amount of the Vendor's final invoice. The WVDOH shall calculate Liquidated Damages per project beginning on day one (1) after the WVDOH's specified Delivery Order due date and in accordance with this Section, the Contract's Terms and Conditions, Standard Specs Section 108.7, and the following Standard Specs Section Table 108.7.1 - Schedule of Liquidated Damages, as amended:

**Table 108.7.1
Schedule of Liquidated Damages**

Original Contract Amount		Daily Charges Per Calendar Day
For More Than	To and Including	
\$0	\$500,000	\$300
\$500,000	\$2,000,000	\$600
\$2,000,000	\$10,000,000	\$1,500
\$10,000,000	\$25,000,000	\$3,000
\$25,000,000		\$4,000

7.10 Return of Unacceptable Items: The decision of the WVDOH District Engineer or their designee regarding materials, workmanship, quality etc., shall be final per the Standard Specs Section 105.1, as amended. If the Agency deems the Contract Items to be unacceptable, the Contract Items shall be returned to Vendor at Vendor's expense and with no restocking charge. Vendor shall either make arrangements for the return within five (5) days of being notified that Items are unacceptable, or permit the Agency to arrange for the return and reimburse Agency for delivery expenses. All returns of unacceptable items shall be F.O.B. the Agency's location. The returned product shall either be replaced, or the Agency shall receive a full credit or refund for the purchase price, at the Agency's discretion.

7.11 Return Due to Agency Error: Items ordered in error by the Agency will be returned for credit within 30 days of receipt, F.O.B. Vendor's location. Vendor shall not charge a restocking fee if returned products are in a resalable condition. Items shall be deemed to be in a resalable condition if they are unused and in the original packaging. Any restocking fee for items not in a resalable condition shall be the lower of the Vendor's customary restocking fee or 5% of the total invoiced value of the returned items.

REQUEST FOR QUOTATION
Roadway Salt – Sodium Chloride

8. VENDOR DEFAULT:

- 8.1 The following shall be considered a vendor default under this Contract.
 - 8.1.1 Failure to provide Contract Items in accordance with the requirements contained herein.
 - 8.1.2 Failure to comply with other specifications and requirements contained herein.
 - 8.1.3 Failure to comply with any laws, rules, and ordinances applicable to the Contract Services provided under this Contract.
 - 8.1.4 Failure to remedy deficient performance upon request.
- 8.2 The following remedies shall be available to Agency upon default.
 - 8.2.1 Immediate cancellation of the Contract.
 - 8.2.2 Immediate cancellation of one or more release orders issued under this Contract.
 - 8.2.3 Any other remedies available in law or equity.

9. MISCELLANEOUS:

- 9.1 **No Substitutions:** Vendor shall supply only Contract Items submitted in response to the Solicitation unless a contract modification is approved in accordance with the provisions contained in this Contract.
- 9.2 **Vendor Supply:** Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, Vendor certifies that it can supply the Contract Items contained in its bid response.
- 9.3 **Reports:** Vendor shall provide the Agency with quarterly reports, annual summaries, and/or monthly reports as requested by the Agency and/or the West Virginia Purchasing Division showing quantities, total dollar value of the Contract Items purchased, ordered, shipped & invoiced with dates in spreadsheet format as defined by the Agency. Failure to supply such reports may be grounds for cancellation of this Contract.

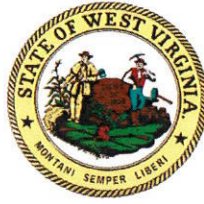
REQUEST FOR QUOTATION
Roadway Salt – Sodium Chloride

- 9.4 **Contract Manager:** During its performance of this Contract, Vendor must designate and maintain a primary Contract Manager responsible for overseeing Vendor's responsibilities under this Contract. The Contract Manager must be available during normal business hours to address any customer service or other issues related to this Contract. Vendor should list its Contract Manager and his or her contact information below.

Contract Manager: Deseree Caver
Telephone Number: 800-600-7258
Fax Number: N/A
Email Address: salt_customer_careroadsafety@cargill.com

Vendor shall inform the Agency in writing of any changes to the information provided above within ten (10) calendar days of such changes. Failure to comply may be grounds for cancellation of this contract.

West Virginia Ethics Commission



Disclosure of Interested Parties to Contracts

Pursuant to *W. Va. Code* § 6D-1-2, a state agency may not enter into a contract, or a series of related contracts, that has/have an actual or estimated value of \$1 million or more until the business entity submits to the contracting state agency a Disclosure of Interested Parties to the applicable contract. In addition, the business entity awarded a contract is obligated to submit a supplemental Disclosure of Interested Parties reflecting any new or differing interested parties to the contract within 30 days following the completion or termination of the applicable contract.

For purposes of complying with these requirements, the following definitions apply:

"Business entity" means any entity recognized by law through which business is conducted, including a sole proprietorship, partnership or corporation, but does not include publicly traded companies listed on a national or international stock exchange.

"Interested party" or *"Interested parties"* means:

- (1) A business entity performing work or service pursuant to, or in furtherance of, the applicable contract, including specifically sub-contractors;
- (2) the person(s) who have an ownership interest equal to or greater than 25% in the business entity performing work or service pursuant to, or in furtherance of, the applicable contract. (This subdivision does not apply to a publicly traded company); and
- (3) the person or business entity, if any, that served as a compensated broker or intermediary to actively facilitate the applicable contract or negotiated the terms of the applicable contract with the state agency. (This subdivision does not apply to persons or business entities performing legal services related to the negotiation or drafting of the applicable contract.)

"State agency" means a board, commission, office, department or other agency in the executive, judicial or legislative branch of state government, including publicly funded institutions of higher education: Provided, that for purposes of *W. Va. Code* § 6D-1-2, the West Virginia Investment Management Board shall not be deemed a state agency nor subject to the requirements of that provision.

The contracting business entity must complete this form and submit it to the contracting state agency prior to contract award and to complete another form within 30 days of contract completion or termination.

This form was created by the State of West Virginia Ethics Commission, 210 Brooks Street, Suite 300, Charleston, WV 25301-1804. Telephone: (304)558-0664; fax: (304)558-2169; e-mail: ethics@wv.gov; website: www.ethics.wv.gov.

West Virginia Ethics Commission
Disclosure of Interested Parties to Contracts

(Required by W. Va. Code § 6D-1-2)

Name of Contracting Business Entity: Cargill, Inc.-Salt-Road Safety Address: 24950 Country Club Blvd., suite 450
North Olmsted, OH 44070

Name of Authorized Agent: Deseree Caver Address: 24950 Country Club Blvd., Suite 450

Contract Number: CRFQ 0803 DOT2300000020 Contract Description: Sodium Chloride-Roadway Salt

Governmental agency awarding contract: State of West Virginia Department of Administration

Check here if this is a Supplemental Disclosure

List the Names of Interested Parties to the contract which are known or reasonably anticipated by the contracting business entity for each category below (attach additional pages if necessary):

1. Subcontractors or other entities performing work or service under the Contract

Check here if none, otherwise list entity/individual names below.

2. Any person or entity who owns 25% or more of contracting entity (not applicable to publicly traded entities)

Check here if none, otherwise list entity/individual names below.

3. Any person or entity that facilitated, or negotiated the terms of, the applicable contract (excluding legal services related to the negotiation or drafting of the applicable contract)

Check here if none, otherwise list entity/individual names below.

Signature: Deseree Caver

Date Signed: September 14, 2022

Notary Verification

State of Ohio, County of Lorain

I, Deseree Caver, the authorized agent of the contracting business entity listed above, being duly sworn, acknowledge that the Disclosure herein is being made under oath and under the penalty of perjury.

Taken, sworn to and subscribed before me this 14th day of September, 2022.

Matilda
Notary Public's Signature

To be completed by State Agency:

Date Received by State Agency: _____

Date submitted to Ethics Commission: _____

Governmental agency submitting Disclosure: _____



CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)
05/12/2022

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER Brown & Brown Inc. 80 South 8th Street Suite 700 Minneapolis, MN 55402	1-612-333-3323	CONTACT NAME: Dawn Heinemann or Molyka Mao PHONE (A/C, No, Ext): 612-333-3323 E-MAIL ADDRESS: dawn.heinemann@bbrown.com	FAX (A/C, No): 612-373-7270
INSURED Cargill Incorporated, Its Subsidiaries, and Businesses *(see attached for additional named insureds) PO Box 5612, MS12 Minneapolis, MN 55440-5612	INSURER(S) AFFORDING COVERAGE		NAIC #
		INSURER A: OLD REPUBLIC INS CO	24147
		INSURER B:	
		INSURER C:	
		INSURER D:	
		INSURER E:	
		INSURER F:	

COVERAGES **CERTIFICATE NUMBER:** 65465004 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS
A	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PROJECT <input type="checkbox"/> LOC OTHER:	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	MWZY31361922	06/01/22	06/01/23	EACH OCCURRENCE \$ 15,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 1,000,000 MED EXP (Any one person) \$ 10,000 PERSONAL & ADV INJURY \$ 15,000,000 GENERAL AGGREGATE \$ 50,000,000 PRODUCTS - COMP/OP AGG \$ 50,000,000 \$
A	<input checked="" type="checkbox"/> AUTOMOBILE LIABILITY <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> NON-OWNED AUTOS ONLY <input checked="" type="checkbox"/> Cargo Legal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	MWTB31362122	06/01/22	06/01/23	COMBINED SINGLE LIMIT (Ea accident) \$ 15,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ PIP \$ Included
	<input type="checkbox"/> UMBRELLA LIAB <input type="checkbox"/> OCCUR <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> CLAIMS-MADE DED RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	<input type="checkbox"/>	<input checked="" type="checkbox"/>	MWC31362022	06/01/22	06/01/23	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTHER E.L. EACH ACCIDENT \$ 15,000,000 E.L. DISEASE - EA EMPLOYEE \$ 15,000,000 E.L. DISEASE - POLICY LIMIT \$ 15,000,000
A	EXCESS WORKER'S COMP.			MWXS31361822 (OH, USLH)	06/01/22	06/01/23	STATUTORY EXCESS 1,000,000 SIR

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

**SEE ATTACHED FOR ADDITIONAL INSURED/PRIMARY/NONCONTRIBUTORY/WAIVER OF SUBROGATION.

CERTIFICATE HOLDER

CANCELLATION

State of West Virginia 1900 Kanawha Blvd E, Building 5 Charleston, WV 25305 USA	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS. AUTHORIZED REPRESENTATIVE
--	---

SUPPLEMENT TO CERTIFICATE OF INSURANCE

DATE
05/12/2022

NAME OF INSURED: Cargill Incorporated, Its Subsidiaries, and Businesses
*(see attached for additional named insureds)

**Entities identified in the contract with the Named Insured are included as Additional Insureds on the Insured's General Liability and Automobile Liability policies, and coverage will be on a primary basis, where these are requirements in the written contract with the insured, subject to the policy terms and conditions. Waiver of Subrogation applies as respects Insured's General Liability, Automobile Liability and/or Workers' Compensation policy, where required by the written contract with the insured, subject to the policy terms and conditions.

A partial listing of U.S. Subsidiaries and Businesses includes (but is not limited to):

Cargill AgHorizons
Cargill Animal Nutrition (Cargill Feed & Nutrition, Cargill Premix & Nutrition and Cargill Aqua Nutrition)
Cargill BioIndustrials
Cargill Case Ready
Cargill Cocoa and Chocolate Inc.
Cargill Corn Milling North America
Cargill Dry Corn Ingredients, Inc.
Cargill Financial Services Corporation
Cargill Food Distribution
Cargill Global Edible Oils Solutions
Cargill Grain and Oilseed Supply Chain North America
Cargill, Incorporated - Salt, Road Safety
Cargill, Incorporated dba Truvia Company LLC
Cargill Kitchen Solutions, Inc.
Cargill Meat Logistics Solutions, Inc.
Cargill Meat Solutions Corporation
Cargill Beef
Cargill Salt
Cargill Specialty Seeds & Oils
Cargill Texturizing Solutions
Cargill Turkey & Cooked Meats
Cargill Turkey Production, LLC
Cargill Value Added Protein
D V Technologies, LLC
Diamond V Mills, LLC
Eddyville Chlor-Alkali LLC
Embria Health Sciences, L.L.C.
EWOS U.S.A., Inc.
G & M Stevedoring Co., Inc.
Provimi North America, Inc.
Pro Pet
Toshoku America, Inc.

POWER OF ATTORNEY
Cargill, Incorporated – Salt, Road Safety

KNOW ALL MEN BY THESE PRESENTS, That Cargill, Incorporated, a Corporation duly organized and existing under the laws of the State of Delaware (the "Corporation"), and having its home office in the City of Minneapolis, Minnesota, has made, constituted and appointed, and does by these presents, constitute and appoint:

Jim Anderson
Rhiannah Antrum
Jill Baker
Jessica Bouman
Shelly Brown
Heather Campbell
Deseree Caver
Sara Cope
Jean R. Davis
Adam Donegan
Katelyn Duché
Robert Florio
Chris Gampfer
Nadine Gilbert
Tatyana Huhn
Brittney Ingold

Kaitlyn L. Jackson
Cindy Jasso
Tom Juhasz
Aaron Keeney
Mary Kleiner
Keith Klug
Amanda Knaus
Denise A. Koch
Eric Koester
Brittany Kwasny
Sarah Liederbach
Alison Marincek
Raven Mitchell
Chris Morr
Cara Morrison
Nora Mouqqadim

Angele Peterson
John Petryszyn
Kristen Rekstad
Dana Richardson
Sean M. Riley
Katelyn Rumpf
Christine M. Rupert
Anna Sarley
Catherine Staker
Malinda Urian
Beth Vanderbrink
George Varga
Briana Winter
Judi Winter
Chet Womack

each its true and lawful Attorneys-in-Fact, with full power and authority hereby conferred in its name, place and stead, to execute, seal, acknowledge and deliver bids, bid bonds, contracts, performance bonds, and such other documents as may be necessary or required in connection with the bid, sale or delivery of mineral rock salt, solar salt, salt chemical mixtures, evaporated salt, and/or road deicing salt, to any state, county, city, municipality, or corporate body with which the Corporation may do business and to bind the Corporation thereby as fully and to the same extent as if such documents were signed by an officer of the Salt group, sealed with the Corporate Seal of the Corporation and duly attested by its Assistant Corporate Secretary, hereby ratifying and confirming all the said Attorney(s)-in-Fact may do in the premises.

IN WITNESS WHEREOF, Cargill, Incorporated has caused these presents to be signed by its Vice President, Cargill Salt, and its Assistant Corporate Secretary, and its Corporate Seal to be hereunto affixed this 2nd day of June, 2022.

Cargill, Incorporated

DocuSigned by:
Christine Rupert
By: Christine Rupert, Vice President, Cargill Salt
2CA11F3A20564B8...



DocuSigned by:
Matthew R. Wright
Attest: Matthew R. Wright, Assistant Corporate Secretary
9C1B5207F4864E1...



STATE OF OHIO

COUNTY OF

) ss

On, _____, before me, a Notary Public in and for said County and State, residing therein, duly commissioned and sworn, personally appeared _____ known to me to Attorney-in-Fact of CARGILL, INCORPORATED, the Corporation described in and that executed the within and fore-going instrument, and known to me to be the person who executed the said instrument in behalf of the said corporation; and he duly acknowledged to me that such corporation executed the same.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my official seal, the day and year stated in the certificate above.

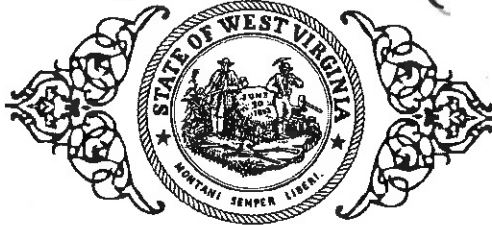
Malinda Urian

Notary Public



MALINDA SUE URIAN
NOTARY PUBLIC
STATE OF OHIO
Comm. Expires
May 29, 2024

State of West Virginia



Certificate

I, Mac Warner, Secretary of State of the State of West Virginia, hereby certify that

CARGILL, INCORPORATED

a corporation formed under the laws of Delaware filed an application to be registered as a foreign corporation authorizing it to transact business in West Virginia. The application was found to conform to law and a "Certificate of Authority" was issued by the West Virginia Secretary of State on September 30, 1966.

I further certify that the corporation has not been revoked by the State of West Virginia nor has a Certificate of Withdrawal been issued to the corporation by the West Virginia Secretary of State.

Accordingly, I hereby issue this Certificate of Authorization

CERTIFICATE OF AUTHORIZATION

Validation ID:4WV7Y_FBDJM



*Given under my hand and the
Great Seal of the State of
West Virginia on this day of
September 14, 2022*

Mac Warner

Secretary of State

Bulk Ice Control Salt



Product Description and Application

Bulk Ice Control Salt

This product is a coarse screened, sodium chloride salt obtained from underground bedded salt deposits extracted by physical mining. This salt is intended for use only as a chemical deicer on highways and roadways.

This salt complies with ASTM D 632, Type 1, Grade 1, Standard Specification for Sodium Chloride. This salt may contain Yellow Prussiate of Soda, which is added to improve caking resistance.

This product is not approved for human or animal consumption and is intended for use only in chemical or industrial applications.

Methods of Analysis

Methods of analysis and product performance evaluation based on ASTM E 534, ASTM D 632 and Cargill internal methods.

Producing Locations

This product is mined at Cargill Salt locations, Avery Island, LA; Cleveland, OH; Lansing, NY. Product of the USA.



Why Cargill?

- Salt products are an integral part of Cargill – one of the world's largest food ingredient providers and a recognized leader in the food processing industry.
- Our products go well beyond standard and high purity salt: Our Alberger® brand, Microsized®, Premier™, CMF®, sea salts, and our sodium reduction solutions such as Potassium Pro® and FlakeSelect®, make up the most extensive product line in the industry.
- We offer full EDI capabilities for customers who need to exchange information via Electronic Data Interchange and the only online ordering portal in the industry, www.cargillsaltstore.com.
- Cargill's nationwide distribution capabilities, combined with the best logistics and customer service specialists in the business, ensure that you get the right salt at the right time.

www.cargillsaltstore.com

Customer Service: (800) 600-SALT (7258)

Physical Information

Chemical Analysis

PHYSICAL	TYPICAL
Sodium Chloride (dry) CAS No. 7647-14-5 %	98.0
Water Insolubles %	2.0 max.
Surface Moisture %	1.0 max
Yellow Prussiate of Soda* CAS No. 13601-19-9 ppm	50

*Optional anti-caking agent

Sieve Analysis

PERCENT PARTICLE SIZE DISTRIBUTION (SCREENS)	OPENING INCHES	OPENING MICRONS	TYPICAL % PASSING
Sieve - USS 1/2 Mesh Retained	0.500	12500	100
Sieve - USS 3/8 Mesh Retained	0.375	9500	98
Sieve - USS 4 Mesh Retained	0.187	4750	75
Sieve - USS 8 Mesh Retained	0.0937	2360	42
Sieve - USS 30 Mesh Retained	0.0232	600	10

Bulk Density

PARAMETER	TYPICAL
Pounds per Cubic Foot	75
Grams per Liter	1200

Product Configuration

PRODUCT NAME	SAP DESCRIPTION	SAP NUMBER
Bulk Ice Control Salt		
Bulk	DEICER SALT ICE CNTRL BLK DR	100011135

CONTACT

Cargill Salt
P.O. Box 5621
Minneapolis, MN 55440
Phone: 888-385-SALT (7258)
www.cargillsalt.com

All specifications are approximate. Please contact your broker or Cargill representative for exact specifications.

© 2019 Cargill, Incorporated. All rights reserved.
SALT-3892 (10/19)

www.cargillsalt.com
www.cargilldeicing.com





SAFETY DATA SHEET

1. Identification

Product Identifier Bulk Ice Control Salt with YPS
Other means of identification
SDS number NB2
Synonyms Bulk Rock Salt with YPS * Ice Control Salt. * Halite * Sodium Chloride (Salt).
Recommended use Salt is intended for several industrial applications including deicing.
Recommended restrictions None known.

Manufacturer/Importer/Supplier/Distributor Information

Manufacturer

Company name Cargill Incorporated
Address Minneapolis, MN 55440
Telephone 1-888-385-7258
Website www.cargillsalt.com
Emergency telephone number CHEMTREC (800) 424-9300

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) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Chemical name	CAS number	%
Sodium Chloride	7647-14-5	95.8-99.8
Sodium Ferrocyanide Decahydrate	13601-19-9	0.0050-0.0100

GRAS Substance (Generally Recognized As Safe).

4. First-aid measures

Inhalation If dust from the material is inhaled, remove the affected person immediately 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.

Bulk Ice Control Salt with YPS

922082 Version #: 02 Revision date: 18-February-2018 Issue date: 12-August-2014

SDS US

1 / 6

Ingestion	Give one or two glasses of water if patient is alert and able to swallow. 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	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO ₂).
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed such as: Carbon oxides (CO _x). Hydrogen Chloride (HCl). Hydrogen cyanide. Metal oxides.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Use water spray to cool unopened containers.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.
General fire hazards	This product is not flammable or combustible.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Keep unnecessary personnel away. Avoid inhalation of dust from the spilled material. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. For personal protection, see section 8 of the SDS.
Methods and materials for containment and cleaning up	If sweeping of a contaminated area is necessary use a dust suppressant agent which does not react with the product. Collect dust using a vacuum cleaner equipped with HEPA filter. Minimize dust generation and accumulation. Avoid release to the environment. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.
Environmental precautions	Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling	Provide appropriate exhaust ventilation at places where dust is formed. Minimize dust generation and accumulation. Avoid breathing dust. Avoid contact with eyes. Avoid contact with water and moisture. Keep away from strong acids. Practice good housekeeping.
Conditions for safe storage, including any incompatibilities	Store in original tightly closed container. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS). Becomes hygroscopic at 70-75% relative humidity. Avoid humid or wet conditions as product will cake and become hard.

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	Ventilation should be sufficient to effectively remove and prevent buildup of any dusts or fumes that may be generated during handling or thermal processing.
Individual protection measures, such as personal protective equipment	
Eyeface protection	Unvented, tight fitting goggles should be worn in dusty areas.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves.
Skin protection	
Other	Wear suitable protective clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits.
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	White crystalline solid
Physical state	Solid.
Form	Crystalline solid.
Color	White to opaque
Odor	Halogen odor when heated
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	1473.8 °F (801 °C)
Initial boiling point and boiling range	2669 °F (1465 °C) (760 mmHg)
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	2.4 mm Hg (1376.6 °F (747 °C))
Vapor density	Not available.
Relative density	2.16 (H ₂ O = 1)
Solubility(ies)	
Solubility (water)	26.4 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	Not available.
Other information	
Bulk density	35 - 83 lb/ft ³
Molecular formula	NaCl
Molecular weight	58.44
pH in aqueous solution	6 - 9

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	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Contact with incompatible materials. Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air).
Incompatible materials	Avoid contact with strong acids. Becomes corrosive to metals when wet.
Hazardous decomposition products	May evolve chlorine gas when in contact with strong acids.

11. Toxicological information

Information on likely routes of exposure

Inhalation	Inhalation of dusts may cause respiratory irritation.
Skin contact	Prolonged or repeated skin contact may cause irritation.
Eye contact	Dust in the eyes will cause irritation.
Ingestion	Expected to be a low ingestion hazard.

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. The following effects were observed after ingesting an excessive quantity: nausea and vomiting, diarrhea, cramps, restlessness, irritability, dehydration, water retention, nose bleed, gastrointestinal tract damage, fever, sweating, sunken eyes, high blood pressure, muscle weakness, dry mouth and nose, shock, cerebral edema (fluid on brain), pulmonary edema (fluid in lungs), blood cell shrinkage, and brain damage (due to dehydration of brain cells). Death is generally due to cardiovascular collapse or CNS damage.

Information on toxicological effects

Acute toxicity In some cases of confirmed hypertension, ingestion may result in elevated blood pressure.

Components

Sodium Chloride (CAS 7647-14-5)

Species

Test Results

Acute

Oral

LD50

Rat

3000 mg/kg

Skin corrosion/irritation

Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye irritation

Dust in the eyes will cause irritation.

Respiratory or skin sensitization

Respiratory sensitization Not available.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicity

No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity

This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not regulated.

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

Due to the physical form of the product it is not an aspiration hazard.

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

No data is available on the degradability of this product.

Bioaccumulative potential

No data available.

Mobility in soil

No data available.

Other adverse effects

None known.

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.

Bulk Ice Control Salt with YPS

922082 Version #: 02 Revision date: 18-February-2018 Issue date: 12-August-2014

SDS US

4 / 6

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 retain product residue, follow label warnings even after container is emptied.

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 applicable.

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. All components are on the U.S. EPA TSCA Inventory List.

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 regulated.

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 2016 (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 Chemical Substances (AICS)	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
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates this product complies 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	12-August-2014
Revision date	18-February-2018
Version #	02
HMIS® ratings	Health: 1 Flammability: 0 Physical hazard: 0 Personal protection: A

Disclaimer

All statements, technical information and recommendations contained herein are, the best of our knowledge, reliable and accurate; however no warranty, either expressed or implied is made with respect thereto, nor will any liability be assumed for damages resultant from the use of the material described.

It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations. It is also the responsibility of the user to maintain a safe workplace. The user should consider the health hazards and safety information provided herein as a guide and should take the necessary steps to instruct employees and to develop work practice procedures to ensure a safe work environment.

This information is not intended as a license to operate under, or a recommendation to practice or infringe upon any patent of this Company or others covering any process, composition of matter or use.

www.cargillsaltstore.com

Orders

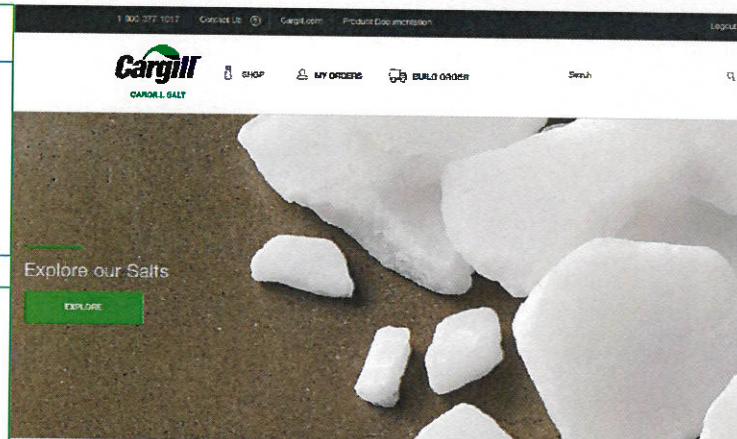
- Place orders online 24/7
- No need to wait for an email to be read, or waiting for a call to be answered..
- Email confirmation sent with every order.
- View order status and history for orders placed in the past 365 days

Other Benefits

- View and download invoices from orders placed in the past 365 days.
- View list of Bills of Lading by ship date from orders placed in the past 365 days.
- Reporting Functions: The my account balance screen gives the ability to view ordered and shipped to date on the current contract.

Contact Us

- Customer care is still available M-F 7a-5p [eastern] via 800-600-7258 and salt_customercaresafety@cargill.com



For more information on how to get access to the cargillsaltstore.com, please reach out to your Sales Representative!



Standard Specification for Sodium Chloride¹

This standard is issued under the fixed designation D 632; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers sodium chloride intended for use as a deicer and for road construction or maintenance purposes.

1.2 The values stated as SI units are to be regarded as the standard.

1.3 For purposes of determining conformance to this specification, values for chemical analysis shall be rounded to the nearest 0.1 %, and values for grading shall be rounded to the nearest 1 %, in accordance with the rounding method in Practice E 29.

1.4 The text of this specification references notes and footnotes that provide explanatory material. These notes and footnotes shall not be considered as requirements of the specification.

1.5 The following precautionary caveat pertains only to the test method in Annex A1, of this specification: *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 *ASTM Standards:*

C 136 Test Method for Sieve Analysis of Fine and Coarse Aggregates²

C 670 Practice for Preparing Precision and Bias Statements for Test Methods for Construction Materials²

D 1193 Specification for Reagent Water³

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications⁴

E 287 Specification for Laboratory Glass Graduated Burets⁵

E 288 Specification for Laboratory Glass Volumetric Flasks⁵

¹ This specification is under the jurisdiction of ASTM Committee D04 on Road and Paving Materials and is the direct responsibility of Subcommittee D04.31 on Calcium and Sodium Chlorides and Other Deicing Materials.

Current edition approved June 10, 2001. Published August 2001. Originally published as D 632 – 41. Last previous edition D 632 – 00.

² *Annual Book of ASTM Standards*, Vol 04.02.

³ *Annual Book of ASTM Standards*, Vol 11.01.

⁴ *Annual Book of ASTM Standards*, Vol 14.02.

⁵ *Annual Book of ASTM Standards*, Vol 14.04.

E 534 Test Methods for Chemical Analysis of Sodium Chloride⁶

3. Classification

3.1 This specification covers sodium chloride obtained from natural deposits (rock salt) or produced by man (evaporated, solar, other) and recognizes two types and two grades as follows:

3.1.1 *Type I*—Used primarily as a pavement deicer or in aggregate stabilization.

3.1.1.1 *Grade 1*—Standard grading (Note 1).

3.1.1.2 *Grade 2*—Special grading (Note 1).

3.1.2 *Type II*—Used in aggregate stabilization or for purposes other than deicing.

NOTE 1—Grade 1 provides a particle grading for general application, and has been found by latest research to be most effective for ice control and skid resistance under most conditions. Grade 2 is the grading typical of salt produced in the Western United States and is available in states of the Rocky Mountains Region and west, which may be preferred by purchasers in that area.

4. Chemical Requirements

4.1 The sodium chloride shall conform to the following requirement for chemical composition, except for the tolerance stated in 6.1 and 6.2:

Sodium chloride (NaCl), min, %	95.0
--------------------------------	------

5. Physical Requirements

5.1 *Grading:*

5.1.1 *Type I*—The grading of Type I sodium chloride, when tested by means of laboratory sieves conforming to Specification E 11, shall conform to the following requirements for particle size distribution, except for the tolerance stated in 6.1 and 6.1.1:

Sieve Size	Mass % Passing	
	Grade 1	Grade 2
19.0 mm (¾ in.)	...	100
12.5 mm (½ in.)	100	...
9.5 mm (¾ in.)	95 to 100	...
4.75 mm (No. 4)	20 to 90	20 to 100
2.36 mm (No. 8)	10 to 60	10 to 60
600 µm (No. 30)	0 to 15	0 to 15

5.1.2 *Type II*—The grading of Type II sodium chloride shall conform to the grading requirements imposed or permitted by the purchaser under conditions of the intended use.

⁶ *Annual Book of ASTM Standards*, Vol 15.05.

6. Permissible Variations

6.1 In the case of sodium chloride sampled after delivery to the purchaser, tolerances from the foregoing specified values shall be allowed as follows:

6.1.1 *Grading*—5 percentage points on the maximum value for the range for each sieve size, except the 12.5 mm (½ in.) and 9.5 mm (¾ in.) for Grade 1 and 19.0 mm (¾ in.) for Grade 2.

6.1.2 *Chemical Composition*—0.5 percentage point.

7. Condition

7.1 The sodium chloride shall arrive at the purchaser's delivery point in a free-flowing and usable condition.

8. Sampling

8.1 Not less than three sample increments shall be selected at random from the lot (Note 2). Each increment shall be obtained by scraping aside the top layer of material to a depth of at least 25 mm (1 in.) and taking a 500-g (approximately 1-lb) quantity of sodium chloride to a depth of at least 150 mm (6 in.). Sampling shall be done by means of a sampling thief or other method that will ensure a representative cross section of the material. The sample increments shall be thoroughly mixed to constitute a composite sample representative of the lot.

NOTE 2—A lot may be an amount agreed upon between purchaser and supplier at the time of purchase.

9. Test Methods

9.1 *Chemical Analysis*—Test for compliance with the requirements for chemical composition in accordance with the following methods:

9.1.1 *Routine Control*—Use of the "Rapid Method" in Annex A1 is permitted for routine control and approval.

9.1.2 *Referee Testing*—In case of controversy, determine the chemical composition of the sample, using the current version of Test Method E 534.

9.2 Grading shall be determined by Test Method C 136.

10. Inspection

10.1 The purchaser or his representative shall be provided free entry and necessary facilities at the production plant or storage area if he elects to sample sodium chloride at the source.

11. Rejection and Rehearing

11.1 The sodium chloride shall be subject to rejection if it fails to conform to any of the requirements of this specification.

11.2 In the case of failure to meet the requirements on the basis of an initial sample of a lot represented, two additional samples shall be taken from the lot and tested. If both additional samples meet the requirements, the lot shall be accepted.

12. Packaging and Marking

12.1 The sodium chloride shall be delivered in bags or other containers acceptable to the purchaser, or in bulk lots. The name of the producer and the net weight shall be legibly marked on each bag or container, or in the case of bulk lots, on the shipping or delivery report.

13. Keywords

13.1 salt; snow and ice removal; sodium chloride; stabilization; winter maintenance

ANNEX

(Mandatory Information)

A1. RAPID METHOD OF ANALYSIS FOR SODIUM CHLORIDE

A1.1 Scope

A1.1.1 This annex covers a rapid method for chemical analysis of sodium chloride.

A1.2 Significance and Use

A1.2.1 The procedure for chemical analysis in this annex determines the total amount of chlorides present in the sample and expresses that value as sodium chloride.

A1.2.2 This rapid method of analysis does not distinguish between sodium chloride and other evaporite chloride compounds with ice-melting capabilities. Typical rock salt and solar salt sometimes contains small amounts of CaCl_2 , MgCl_2 , and KCl , depending on the source of the material. When this rapid method is used on continuing shipments from a known source, it will provide a fast, essentially accurate determination of the sodium chloride content of the material furnished. Thus, the need for testing by the referee method, Test Method E 534, is reduced.

A1.3 Apparatus

A1.3.1 *Glassware*—Standard weighing bottles, volumetric flasks (conforming to Specification E 288, Class B, or better), and burets (conforming to Specification E 287, Class B, or better).

A1.3.2 *Balance*, having a capacity of at least 20 g, accurate and readable to 0.01 g.

A1.4 Reagents

A1.4.1 *Purity of Reagents*—Reagent grade chemicals shall be used in all tests. Unless otherwise indicated, it is intended that all reagents conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society

where such specifications are available.⁷ Other grades may be used, provided it is first ascertained that the reagent is of sufficiently high purity to permit its use without lessening the accuracy of the determination.

A1.4.2 *Purity of Water*—Unless otherwise indicated, references to water shall be understood to mean reagent water as defined by Types I-IV of Specification D 1193.

A1.4.3 *Calcium Carbonate (CaCO₃)*—low chloride, powder.

A1.4.4 *Nitric Acid (HNO₃)*, dilute (HNO₃:H₂O, 1:4 by volume).

A1.4.5 *Potassium Chromate (K₂CrO₄) Solution*—(50 g K₂CrO₄/L).

A1.4.6 *Silver Nitrate Solution*—0.05 N AgNO₃.

A1.4.7 *Sodium Chloride (NaCl)*

A1.5 Procedure

A1.5.1 Thoroughly mix the composite sample obtained under 8.1, and reduce by quartering or by means of a sample splitter to approximately 500 g. Pulverize the reduced sample to pass a 300- μ m (No. 50) sieve.

A1.5.2 *Standardization*—Standardize the silver nitrate (AgNO₃) solution daily, using 10 g of reagent grade sodium chloride (NaCl) following the applicable procedure in A1.5.3.

A1.5.3 From the pulverized sodium chloride, obtain a test sample with a mass of 10.00 \pm 0.01 g and place in a beaker with 250-mL distilled water. Add 10 mL of the diluted nitric acid solution (HNO₃, 1 + 4 by volume) and stir for 20 min at room temperature to put the salt in solution. Transfer the solution, including any insoluble material, to a 2-L volumetric flask, dilute to the mark with distilled water, and mix. With a pipet, draw off 25 mL of the solution and place in a white porcelain casserole. Add 0.5 g of calcium carbonate (CaCO₃) to neutralize the excess HNO₃, and adjust the pH to approximately 7. Add 3 mL of the potassium chromate (K₂CrO₄) solution as an indicator and titrate dropwise with the silver nitrate (AgNO₃) solution until a faint but distinct change in color occurs—a persistent yellowish brown endpoint (see Note A1.1), comparable to standardization. Estimate the titer from the buret to the second decimal place.

NOTE A1.1—The stirred sample solution, after addition of potassium chromate (K₂CrO₄) and calcium carbonate (CaCO₃), is a creamy lemon-yellow color. Addition of the silver nitrate (AgNO₃) solution produces silver chloride, which begins to agglomerate as the titration progresses, and the lemon-yellow color will begin to have whitish, opaque swirls of silver chloride. As the titration proceeds, the red color formed by addition of each drop begins to disappear more slowly. Continue the addition dropwise until a faint but distinct change in color occurs and the yellow-brown to faint reddish-brown color persists. The first stable presence of red silver chromate is the endpoint. If the endpoint is overstepped, a deep reddish-brown color occurs

A1.6 *Calculate*—Calculate the total chlorides expressed as percent NaCl as follows:

$$P = [(A/B) \times (C/D)] \times 100 \quad (A1.1)$$

where:

A = reagent grade NaCl used, g,

B = 0.05 N AgNO₃ solution required to titrate the reagent grade NaCl, mL,

C = 0.05 N AgNO₃ solution required to titrate the sample being tested, mL,

D = test sampling mass, g, and

P = total chlorides, expressed as sodium chloride, in the sample being tested, %.

A1.6.1 If moisture is apparent in the sample, dry a duplicate 10-g sample of the pulverized salt at 105°C and correct the mass of the sample accordingly.

A1.7 Precision and Bias

A1.7.1 *Precision*⁸—An interlaboratory study was conducted and an analysis was made that included three materials ranging from approximately 92 to 99 % NaCl. Ten laboratories were included in the study.

A1.7.2 *Single-Operator Precision* (NaCl composition 95.0 % and greater)—The single-operator standard deviation of a single test result for average NaCl composition 95.0 % and greater has been found to be 0.248.⁹ Therefore, results of two properly conducted tests by the same operator on the same material with the same equipment and under the same conditions should not differ by more than 0.70 %.⁹

A1.7.3 *Multilaboratory Precision* (NaCl composition 95.0 % and greater)—The multilaboratory standard deviation of a single test result for average NaCl composition greater than 95.0 % has been found to be 0.633 %.⁹ Therefore, results of two properly conducted tests in different laboratories on the same material should not differ by more than 1.79 %.⁹

A1.7.4 *Single Operator Precision* (NaCl composition less than 95.0 % and greater than 90.0 %)—The single-operator coefficient of variation of a single test result for average NaCl composition less than 95.0 % and greater than 90.0 % has been found to be 0.427 %.⁹ Therefore, results of two properly conducted tests by the same operator on the same material with the same equipment and under the same conditions should not differ by more than 1.21 %.⁹

A1.7.5 *Multilaboratory Precision* (NaCl composition less than 95.0 % and greater than 90.0 %)—The multilaboratory standard deviation of a single test result for average NaCl composition less than 95.0 % and greater than 90.0 % has been found to be 0.711 %.⁹ Therefore, results of two properly conducted tests in different laboratories on the same material should not differ by more than 2.00 %.⁹

A1.7.6 *Bias*—No justifiable statement can be made on the bias of this test method because the data are not available.

⁷ *Reagent Chemicals, American Chemical Society Specifications*, American Chemical Society, Washington, DC. For suggestions on the testing of reagents not listed by the American Chemical Society, see *Analar Standards for Laboratory Chemicals*, BDH Ltd., Poole, Dorset, U.K., and the *United States Pharmacopeia and National Formulary*, U.S. Pharmacopeial Convention, Inc., (USPC), Rockville, MD.

⁸ Supporting data have been filed at ASTM Headquarters. Request RR:D04-1016.

⁹ These numbers represent, respectively, the (1s %) and (d2s %) limits, as described in Practice C 670.

 **D 632**

The American Society for Testing and Materials takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.

This standard is copyrighted by ASTM, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or service@astm.org (e-mail); or through the ASTM website (www.astm.org).



Designation: E534 – 13

Standard Test Methods for Chemical Analysis of Sodium Chloride¹

This standard is issued under the fixed designation E534; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reapproval.

1. Scope*

1.1 These test methods cover the chemical analyses usually required for sodium chloride.

1.2 The analytical procedures appear in the following sections:

	Section
Sample Preparation	5 to 9
Moisture	10 to 16
Water Insolubles	17 to 24
Calcium and Magnesium	25 to 31
Sulfate	32 to 38
Reporting of Analyses	39 to 41

1.3 The values stated in SI units are to be regarded as standard. No other units of measurement are included in this standard.

1.4 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

1.5 Review the current material safety data sheets (MSDS) for detailed information concerning toxicity, first-aid procedures, handling, and safety precautions.

2. Referenced Documents

2.1 ASTM Standards:²

D1193 Specification for Reagent Water

E180 Practice for Determining the Precision of ASTM Methods for Analysis and Testing of Industrial and Specialty Chemicals (Withdrawn 2009)³

E200 Practice for Preparation, Standardization, and Storage of Standard and Reagent Solutions for Chemical Analysis

3. Significance and Use

3.1 Sodium chloride occurs in nature. It is a necessary article of diet as well as the source for production of many sodium compounds and chlorine. The methods listed in 1.2 provide procedures for analyzing sodium chloride to determine if it is suitable for its intended use.

4. Reagents

4.1 *Purity of Reagents*—Unless otherwise indicated, it is intended that all reagents should conform to the specifications of the Committee on Analytical Reagents of the American Chemical Society, where such specifications are available.⁴

4.2 *Purity of Water*—Unless otherwise indicated, references to water shall be understood to mean Type II or III reagent water conforming to Specification D1193.

SAMPLE PREPARATION

5. Scope

5.1 This test method covers preparation of a sample that will be as representative as possible of the entire bulk quantity. The results of any analysis pertain only to the sample used.

6. Apparatus

6.1 *Coarse Grinder.*

6.2 *High-Speed Blender.*

6.3 *Oven.*

6.4 *Riffle Sampler.*

6.5 *Scale.*

7. Reagents

7.1 *Hydrochloric Acid, Standard (1 meq/mL HCl)*—Prepare and standardize in accordance with Practice E200.

⁴ *Reagent Chemicals, American Chemical Society Specifications*, American Chemical Society, Washington, DC. For suggestions on the testing of reagents not listed by the American Chemical Society, see *Analar Standards for Laboratory Chemicals*, BDH Ltd., Poole, Dorset, U.K., and the *United States Pharmacopeia and National Formulary*, U.S. Pharmacopeial Convention, Inc. (USPC), Rockville, MD.

*A Summary of Changes section appears at the end of this standard

Copyright © ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959. United States

Copyright ASTM International
Provided by IHS under license with ASTM
No reproduction or networking permitted without license from IHS

Licensee=West Virginia DOT WAN locations/5965992002, User=Allison, Vincent
Not for Resale, 05/11/2017 13:09:12 MDT

TABLE 1 Precision for Moisture Method

Level, %	Standard Deviation, %	Repeatability		Laboratory Precision			Reproducibility		
		Degrees of Freedom	95 % Limit, %	Standard Deviation, %	Degrees of Freedom	95 % Limit, %	Standard Deviation, %	Degrees of Freedom	95 % Limit, %
0.003 to 0.004	0.0014	36	0.004	0.00223	18	0.006	0.00322	8	0.009
0.025 to 0.035	0.0071	60	0.02	0.00428	30	0.01	0.0138	9	0.04

8. Rock and Solar Salt Stock Solutions

- 8.1 Mix and split sample to 500 g, using the riffle sampler.
- 8.2 If sample appears wet, dry at 110°C for 2 h.
- 8.3 Grind the sample to -8 mesh in the coarse grinder.
- 8.4 Mix ground sample well and weigh out a 25.0-g representative portion for rock salt or 50.0 g for solar salt.
- 8.5 Place 200 mL of water in the high-speed blender and start at low speed.
- 8.6 Slowly add the salt sample to the high-speed blender and blend for 5 min.
- 8.7 Test for water insolubles as described in Sections 17-24.
- 8.8 Save filtrate from water insolubles test and dilute in a volumetric flask to 1 L with water as a stock solution for subsequent analyses.

9. Evaporated and Purified Salt Stock Solutions

- 9.1 Mix and split the sample to 100 g for evaporated salt, or 200 g for purified evaporated salt.
- 9.2 Transfer to a 1-L volumetric flask.
- 9.3 Add 800 mL of water and allow the salt to dissolve.
- 9.4 Add 2 mL of concentrated HCl to dissolve any water insoluble calcium salts, particularly calcium carbonate.
- 9.5 Dilute to volume with water and use as a stock solution for subsequent analyses.

MOISTURE

10. Scope

10.1 This test method determines free moisture in the salt over a concentration range from 0.00 to 0.04 %. It does not determine occluded moisture trapped within the salt crystals. The procedure is based on weight loss after a sample is heated to volatilize moisture.

11. Apparatus

- 11.1 Analytical Balance.
- 11.2 Desiccator.
- 11.3 Oven.

12. Procedure, Rock and Solar Salt

- 12.1 Weigh 100 g of salt to the nearest 0.05 g into a previously dried and tared moisture dish.
- 12.2 Dry at 110°C for 2 h.
- 12.3 Cool in a desiccator and weigh.

13. Procedure, Evaporated and Purified Evaporated Salt

- 13.1 Weigh 20 g of salt to the nearest 0.001 g into a previously dried and weighed glass weighing bottle and cover.
- 13.2 Dry at 110°C for 2 h.
- 13.3 Cool in a desiccator, replace cover, and weigh.

14. Calculation

- 14.1 Calculate the percentage of moisture as follows:

$$\text{moisture, mass (m/m) \%} = \frac{A}{B} \times 100 \quad (1)$$

where:

- A = loss of mass on drying, g, and
 B = mass of sample, g.

15. Report

- 15.1 Report the moisture content to the nearest 0.001 %.

16. Precision and Bias

16.1 The following criteria should be used in judging the acceptability of results (Note 1):

16.1.1 *Repeatability (Single Analyst)*—The standard deviation for a single determination has been estimated to be the percent absolute values shown in Table 1 at the indicated degrees of freedom. The 95 % limit for the difference between two such runs is the percent absolute values in Table 1.

16.1.2 *Laboratory precision (Within-Laboratory, Between-Days Variability)*—The standard deviation of results (each the average of duplicates), obtained by the same analyst on different days, has been estimated to be the percent absolute values shown in Table 1 at the indicated degrees of freedom. The 95 % limit for the difference between two such averages is the percent absolute values in Table 1.

16.1.3 *Reproducibility (Multilaboratory)*—The standard deviation of results (each the average of duplicates), obtained by analysts in different laboratories, has been estimated to be the percent absolute values shown in Table 1. The 95 % limit for the difference between two such averages is the percent absolute values in Table 1.

NOTE 1—The preceding precision statements are based on an interlaboratory study performed around 1975 on five samples of sodium chloride containing covering the ranges of moisture in Table 1. One analyst in each of ten laboratories performed duplicate determinations and repeated them on a second day.⁵ Practice E180 was used in developing these precision estimates.

⁵ Supporting data have been filed at ASTM International Headquarters and may be obtained by requesting Research Report RR:E15-1052.

TABLE 2 Precision for Water Insolubles Method

Level, %	Coefficient of Variation, % relative	Repeatability		Reproducibility		
		Degrees of Freedom	95 % Limit, % relative	Coefficient of Variation, % Relative	Degrees of Freedom	95 % Limit, % relative
0.002 to 0.005	22.0	20				
0.01 to 0.04	21.9	18	62	91.7	9	257
0.15 to 0.35	22.0	20	61	42.2	8	118
			62	20.5	9	57

16.2 *Bias*—The bias of this test method has not been determined due to the unavailability of suitable reference materials.

WATER INSOLUBLES

17. Scope

17.1 This gravimetric method determines only the amount of insolubles present in sodium chloride which will not dissolve in water.

18. Apparatus

18.1 *Analytical Balance.*

18.2 *Desiccator.*

18.3 *Magnetic Stirrer with Stirring Bar.*

18.4 *Parabella Filter Funnel Assembly*,⁶1000-mL, or its equivalent with 0.3- μ m glass fiber filter disk.

19. Reagents

19.1 *Silver Nitrate, Standard Solution, 0.1 meq/mL AgNO₃*—Prepare and standardize in accordance with Practice E200.

20. Procedure, Rock and Solar Salts

20.1 Transfer a sample prepared in accordance with 8.1 to 8.6 to a 1-L Erlenmeyer flask, washing out the blender with 100 mL of water. Add 300 mL of water to give a total of 600 mL of water added.

20.2 Stir on a magnetic stirrer for 1 h. Adjust the stirrer speed to give maximum agitation without danger of losing any sample due to splashing. Place a beaker or watch glass over top of the flask while stirring.

20.3 Filter the solution by vacuum through a previously dried (110°C for 1 h) and accurately weighed filter disk using the Parabella funnel. Transfer all insolubles to the paper and wash free of chlorides with water until the filtrate shows no turbidity when tested with 0.1 meq/mL AgNO₃ solution.

20.4 Dilute filtrate and washings to 1 L with water in volumetric flask.

20.5 Dry the filter disk at 110°C for 1 h.

20.6 Cool in a desiccator and weigh the disk on an analytical balance.

20.7 Save the filtrate for subsequent analyses.

21. Procedure, Evaporated and Purified Evaporated Salts

21.1 Place a well mixed sample in a 2-L beaker. Use 100-g sample for evaporated or 200 g for purified evaporated salt.

21.2 Add 750 mL of water.

21.3 Mix with a mechanical stirrer until solution is complete.

21.4 Filter the solution by vacuum through a previously dried (110°C for 1 h) and accurately weighed filter disk using the Parabella funnel. Transfer all insolubles to the paper and wash free of chlorides with water until the filtrate shows no turbidity when tested with 0.1 meq/mL AgNO₃ solution.

21.5 Dry the filter disk at 110°C for 1 h.

21.6 Cool in a desiccator and weigh on an analytical balance.

21.7 Dilute the filtration and washings to 1 L with water in a volumetric flask and reserve for subsequent analyses.

22. Calculation

22.1 Calculate the percentage of water insolubles as follows:

$$\text{insolubles, \% mass (m/m)} = \frac{A}{B} \times 100 \quad (2)$$

where:

A = increase in mass of filter disk, g, and
B = sample mass, g.

23. Report

23.1 Report the percentage of water insolubles to the nearest percentage shown as follows:

Range, %	Report to, %
0.002 to 0.005	0.001
0.01 to 0.04	0.01
0.15 to 0.35	0.01

24. Precision and Bias

24.1 The following criteria should be used in judging the acceptability of results (Note 2):

24.1.1 *Repeatability (Single Analyst)*—The coefficient of variation for a single determination has been estimated to be the percent relative values shown in Table 2 at the indicated degrees of freedom. The 95 % limit for the difference between two such runs is percent relative values shown in Table 2.

24.1.2 *Laboratory Precision (Within-Laboratory, Between-Days Variability)*—The coefficient of variation of results (each the average of duplicates), obtained by the same analyst on different days, has been estimated to be 23.5 % relative at 57

⁶ Fisher Scientific No. 9-730-200 has been found satisfactory.

df. The 95 % limit for the difference between two such averages is 66 % relative.

24.1.3 *Reproducibility (Multilaboratory)*—The coefficient of variation of results (each the average of duplicates), obtained by analysts in different laboratories, has been estimated to be percent relative values shown in Table 2 at the indicated degrees of freedom. The 95 % limit for the difference between two such averages is percent relative values shown in Table 2.

NOTE 2—The preceding precision statements are based on an interlaboratory study performed around 1975 on six samples of sodium chloride covering the ranges of water insolubles in Table 2. One analyst in each of ten laboratories performed duplicate determinations and repeated them on a second day.⁵ Practice E180 was used in developing these precision estimates.

24.2 *Bias*—The bias of this test method has not been determined due to the unavailability of suitable reference materials.

CALCIUM AND MAGNESIUM

25. Scope

25.1 This test method covers the EDTA titrimetric determination of calcium and magnesium and the EDTA titrimetric determination of calcium. The magnesium content is determined by difference.

26. Apparatus

26.1 *Magnetic Stirrer with Stirring Bar.*

27. Reagents

27.1 *Eriochrome Black T Indicator Solution, Hydroxy Naphthol Blue, or its equivalent.*

27.2 *Murexide (Ammonium Purpurate) Indicator Solution, or its equivalent.*

27.3 *EDTA Standard Solution (1 mL = 0.400 mg calcium)*—Dissolve 4.0 g of disodium dihydrogen ethylene diaminetetraacetate (EDTA) in 1 L of water. Standardize this solution against a standard calcium solution prepared by dissolving 1.000 g of CaCO₃ and 2 mL of HCl in water and diluting to 1 L with water in a volumetric flask. Obtain an exact factor for the EDTA solution. This factor is equal to the milligrams of calcium equivalent to 1.00 mL of EDTA solution. See Practice E200.

$$\text{factor} = \frac{W}{V} \quad (3)$$

where:

W = calcium in aliquot, mg, and

V = EDTA solution required for titration, mL.

27.4 *Ammonium Chloride-Ammonium Hydroxide Solution*—Add 67.5 g of ammonium chloride (NH₄Cl) to 570 mL of ammonium hydroxide (NH₄OH) contained in a 1-L volumetric flask. Reserve this solution for use as described in 27.6 and 27.7.

27.5 *Potassium Cyanide Solution (50 g/L)*—Dissolve 50 g of potassium cyanide (KCN) in water and dilute to 1 L with water. Store in a borosilicate glass bottle. (**Warning**—Potassium cyanide is extremely poisonous.)

TABLE 3 Stock Solutions (Calcium and Magnesium)

Stock Solution	Aliquot, mL
Kansas rock salt	10
Northern rock salt	25
Southern rock salt	50
Evaporated salt	50
Purified salt	200
Solar salt	100

27.6 *Magnesium Sulfate Solution (2.5 g/L)*—Dissolve 2.5 g of MgSO₄·7H₂O in water and dilute to volume with water in a 1-L volumetric flask. Determine the volume of EDTA solution equivalent to 50 mL of MgSO₄ solution as follows: Pipet 50 mL of MgSO₄ solution into a 400-mL beaker. Add 200 mL of water and 2 mL of NH₄Cl:NH₄OH solution (27.4). Add 1 mL of KCN solution and a sufficient amount of Eriochrome Black T Indicator solution or its equivalent. Titrate the solution with EDTA solution while stirring with a magnetic stirrer to the true blue end point. This gives the volume of EDTA solution equivalent to 50.0 mL of MgSO₄ solution.

27.7 *Buffer Solution*—Pipet 50 mL of MgSO₄ solution into the volumetric flask containing the remaining NH₄Cl-NH₄OH solution (27.4). Add the exact volume of EDTA solution equivalent to 50 mL of the MgSO₄ solution. Dilute to 1 L with water. Store the solution in a polyethylene bottle.

27.8 *Potassium Hydroxide Solution (600 g/L)*—Dissolve 150 g of potassium hydroxide (KOH) in 250 mL of water. Cool and store in a polyethylene bottle.

28. Procedure

28.1 Using Table 3 as a guide, pipet two aliquots of stock solution into 400-mL beakers to give a titer between 2 and 10 mL of standard EDTA solution. One aliquot is used to determine total calcium and magnesium and the other for calcium.

28.2 Dilute to 200 mL with water, if necessary, and place on magnetic stirrer.

28.3 *Total Calcium and Magnesium:*

28.3.1 Add 5 mL of buffer solution, 1 mL of KCN solution, and a sufficient amount of Eriochrome Black T Indicator Solution or its equivalent.

28.3.2 Titrate with standard EDTA solution to a true blue color.

28.3.3 Record the millilitres used as Titration 1 (*T*₁).

28.4 *Calcium Only:*

28.4.1 Add 2 mL of KOH solution, 1 mL of KCN solution to the other aliquot in 28.1 and 28.2, and stir for about 2 min to precipitate magnesium.

28.4.2 Add a sufficient amount of murexide solution or an equivalent calcium indicator solution.

28.4.3 Titrate with standard EDTA solution to a true blue color.

28.4.4 Record the millilitres used as Titration 2 (*T*₂).

TABLE 4 Precision for Magnesium Method

Range, %	Repeatability			Laboratory Precision			Reproducibility		
	Standard Deviation, %	Degrees of Freedom	95 % Limit, %	Standard Deviation, %	Degrees of Freedom	95 % Limit, %	Standard Deviation, %	Degrees of Freedom	95 % Limit, %
0.001 to 0.003	0.00071	56	0.002	0.00066	28	0.002	0.00147	8	0.004
0.02 to 0.025	0.0035	52	0.010	0.033	26	0.092	0.0042	8	0.012

29. Calculation

29.1 Calculate the mass percent of calcium as follows:

$$\text{Ca, \% mass (m/m)} = \frac{(T_2) (\text{factor}) (0.1)}{S} \quad (4)$$

where:

T_2 = EDTA used to titrate calcium only, mL.

S = mass of salt in aliquot, g.

29.1.1 See 27.3 for factor.

29.2 Calculate the mass percent of magnesium as follows:

$$\text{Mg, \% mass (m/m)} = \frac{(T_1 - T_2) (\text{factor}) (0.6064) (0.1)}{S} \quad (5)$$

where:

T_1 = EDTA used to titrate total calcium and magnesium,

S = mass of salt in aliquot, g.

30. Report

30.1 Report the percentage of calcium to the nearest 0.001 %. Report the percentage of magnesium to the nearest 0.001 %.

31. Precision and Bias

31.1 The following criteria should be used in judging the acceptability of calcium results (Note 3):

31.1.1 *Repeatability (Single Analyst)*—The coefficient of variation for a single determination has been estimated to be 3.56 % relative at 100 df. The 95 % limit for the difference between two such runs is 10 % relative.

31.1.2 *Laboratory Precision (Within-Laboratory, Between-Days Variability)*—The coefficient of variation of results (each the average of duplicates), obtained by the same analyst on different days, has been estimated to be 6.34 % relative at 40 df. The 95 % limit for the difference between two such averages is 18 % relative.

31.1.3 *Reproducibility (Multilaboratory)*—The coefficient of variation of results (each the average of duplicates), obtained by analysts in different laboratories, has been estimated to be 9.82 % relative at 7 df. The 95 % limit for the difference between two such averages is 28 % relative.

Note 3—The preceding precision statements are based on an interlaboratory study performed around 1975 on five samples of sodium chloride covering the range from 0.036 to 0.909 % calcium. One analyst in each of eight laboratories performed duplicate determinations and repeated them on a second day.⁵ Practice E180 was used in developing these precision estimates.

31.1.4 *Bias*—The bias of this test method has not been determined due to the unavailability of suitable reference materials.

31.2 The following criteria should be used in judging the acceptability of magnesium results (Note 4):

31.2.1 *Repeatability (Single Analyst)*—The standard deviation for a single determination has been estimated to be percent absolute values shown in Table 4 at the indicated degrees of freedom. The 95 % limit for the difference between two such runs is the percent absolute values shown in Table 4.

31.2.2 *Laboratory Precision (Within-Laboratory, Between-Days Variability)*—The standard deviation of results (each the average of duplicates), obtained by the same analyst on different days, has been estimated to be the percent absolute values shown in Table 4 at the indicated degrees of freedom. The 95 % limit for the difference between two such averages is the percent absolute values shown in Table 4.

31.2.3 *Reproducibility (Multilaboratory)*—The standard deviation of results (each the average of duplicates), obtained by analysts in different laboratories, has been estimated to be the percent absolute values shown in Table 4 at the indicated degrees of freedom. The 95 % limit for the difference between two such averages is the percent absolute values shown in Table 4.

Note 4—The preceding precision statements are based on an interlaboratory study performed around 1975 on six samples of sodium chloride covering the ranges of magnesium given in Table 4. One analyst in each of ten laboratories performed duplicate determinations and repeated them on a second day.⁵ Practice E180 was used in developing these precision estimates.

31.2.4 *Bias*—The bias of this test method has not been determined due to the unavailability of suitable reference materials.

SULFATE

32. Scope

32.1 This test method covers the gravimetric determination of the sulfate content of sodium chloride.

33. Apparatus

33.1 *Gooch Asbestos Slurry.*

33.2 *Gooch Filtering Crucible and Holder.*

33.3 *Muffle Furnace.*

33.4 *Oven.*

TABLE 5 Stock Solutions (Sulfate)

Stock Solution	Aliquot, mL
Rock salt	40
Evaporated salt	100
Purified evaporated salt	200
Solar salt	100

34. Reagents

34.1 *Barium Chloride Solution* (120 g BaCl₂ · 2H₂O/L)—Dissolve 120 g of barium chloride dihydrate in about 750 mL of water, filter, and dilute to 1 L.⁷

34.2 *Hydrochloric Acid Standard Solution* (1 meq/mL HCl)—Prepare and standardize in accordance with Practice E200.

34.3 *Methyl Orange Indicator Solution* (1 g/L)—Dissolve 0.1 g of methyl orange in 100 mL of water and filter if necessary.⁷

35. Procedure

35.1 Using Table 5 as a guide, pipet the recommended aliquot of stock solution into a 400-mL beaker.

35.2 Dilute to 200 mL, add a few drops of methyl orange indicator solution and acidify with 1 mL of HCl (1 + 1) if necessary.

35.3 Heat solution gently to boiling and add 10 mL of BaCl₂ solution dropwise while stirring.

35.4 Digest on a hot plate below the boiling point for 30 min.

35.5 Cool overnight.

35.6 Filter through a tared Gooch crucible previously prepared with an asbestos mat and ignited in a muffle furnace at 800°C for 30 min. Transfer all the precipitate to the crucible with a rubber policeman. Wash with portions of hot water until washings are free of chlorides.

35.7 Dry the crucible at 110°C for 15 min, then ignite in a muffle furnace at 800°C for 30 min.

35.8 Cool in a desiccator and reweigh.

36. Calculation

36.1 Calculate percentage of sulfate as follows:

$$\text{sulfate, \% mass (m/m)} = \frac{A}{B} \times 0.4115 \times 100 \quad (6)$$

where:

A = mass of precipitate, g, and

B = mass of salt in aliquot, g.

37. Report

37.1 Report the percentage of sulfate to the nearest 0.001 %.

38. Precision and Bias

38.1 The following criteria should be used in judging the acceptability of results (Note 5):

38.1.1 *Repeatability (Single Analyst)*—The coefficient of variation for a single determination has been estimated to be 7.14 % relative at 120 df. The 95 % limit for the difference between two such runs is 20 % relative.

38.1.2 *Laboratory Precision (Within-Laboratory, Between-Days Variability)*—The coefficient of variation of results (each the average of duplicates), obtained by the same analyst on different days, has been estimated to be 8.03 % relative at 60 df. The 95 % limit for the difference between two such averages is 22 % relative.

38.1.3 *Reproducibility (Multilaboratory)*—The coefficient of variation of results (each the average of duplicates), obtained by the same analyst in different laboratories, has been estimated to be 8.01 % relative at 9 df. The 95 % limit for the difference between two such averages is 22 % relative.

NOTE 5—The preceding precision statements are based on an interlaboratory study performed around 1975 on six samples of sodium chloride covering the range from 0.016 to 2.030 % sulfate. One analyst in each of ten laboratories performed duplicate determinations and repeated them on a second day. Practice E180 was used in developing these precision estimates.

38.1.4 *Bias*—The bias of this test method has not been determined due to the unavailability of suitable reference materials.

REPORTING OF ANALYSES

39. Scope

39.1 Analyses should be reported on a dry basis. If analyses are on an as received sample, correction should be made by converting to a dry basis. Sodium chloride purity is determined by subtracting the total percentage of impurities from 100. Moisture should be reported as a separate value.

40. Procedure

40.1 Convert sulfate to calcium sulfate and the unused calcium to calcium chloride unless the sulfate in sample exceeds the quantity necessary to combine with the calcium. In this case, convert the calcium to calcium sulfate and the unused sulfate first to magnesium sulfate, and the remaining sulfate, if any, to sodium sulfate. Convert the unused magnesium to magnesium chloride.

40.2 Report rock and solar salt impurities to the second decimal place and salt purity, by difference, to the first decimal place.

40.3 Report evaporated salt impurities to the third decimal place and salt purity, by difference, to the second decimal place.

40.4 Report purified salt impurities to the fourth decimal place and salt purity, by difference, to the third decimal place.

41. Conversion Factors

$$\begin{aligned} \text{BaSO}_4 &\times 0.4116 = \text{SO}_4 \\ \text{BaSO}_4 &\times 0.5832 = \text{CaSO}_4 \\ \text{BaSO}_4 &\times 0.6086 = \text{Na}_2\text{SO}_4 \end{aligned}$$

⁷ This reagent is also described in Practice E200.

Ca	×	3.3967	=	CaSO ₄
Ca	×	0.6064	=	Mg
CaSO ₄	×	0.2944	=	Ca
CaSO ₄	×	0.8153	=	CaCl ₂
CaSO ₄	×	0.8842	=	MgSO ₄
CaSO ₄	×	1.0434	=	Na ₂ SO ₄
Mg	×	3.9173	=	MgCl ₂
MgCl ₂	×	1.4296	=	CaSO ₄
MgCl ₂	×	1.2641	=	MgSO ₄

MgSO ₄	×	1.4299	=	CaSO ₄
MgSO ₄	×	1.1311	=	MgCl ₂
MgSO ₄	×	1.1800	=	Na ₂ SO ₄
SO ₄	×	1.4173	=	CaSO ₄

42. Keywords

42.1 calcium; evaporated salt; magnesium; moisture; purified salt; rock salt; sodium chloride; sulfate; water insolubles

SUMMARY OF CHANGES

Subcommittee E15.02 has identified the location of selected changes to this standard since the last issue (E534-08) that may impact the use of this standard.

(1) Deleted “in almost unlimited quantities” from 3.1.

(2) Added “or watch glass” to 20.2.

ASTM International takes no position respecting the validity of any patent rights asserted in connection with any item mentioned in this standard. Users of this standard are expressly advised that determination of the validity of any such patent rights, and the risk of infringement of such rights, are entirely their own responsibility.

This standard is subject to revision at any time by the responsible technical committee and must be reviewed every five years and if not revised, either reapproved or withdrawn. Your comments are invited either for revision of this standard or for additional standards and should be addressed to ASTM International Headquarters. Your comments will receive careful consideration at a meeting of the responsible technical committee, which you may attend. If you feel that your comments have not received a fair hearing you should make your views known to the ASTM Committee on Standards, at the address shown below.

This standard is copyrighted by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959, United States. Individual reprints (single or multiple copies) of this standard may be obtained by contacting ASTM at the above address or at 610-832-9585 (phone), 610-832-9555 (fax), or service@astm.org (e-mail); or through the ASTM website (www.astm.org). Permission rights to photocopy the standard may also be secured from the ASTM website (www.astm.org/COPYRIGHT).

ROADWAY SALT - SODIUM CHLORIDE
Attachment B - Pricing Pages by Pick-up

Vendor shall complete ATT B by identifying its storage site locations (physical 911 address) and provide a price per ton for roadway salt to be available for pick-up by WVDOH Agencies. Vendor pricing shall include cost of Vendor loading Agency trucks.

Vendor Storage Site Locations	Pick-up Cost per Ton
BALTIMORE 2149 South Clinton St Baltimore, MD 21224	<u>\$95.00</u>

ROADWAY SALT - SODIUM CHLORIDE
Attachment A - Pricing Pages by Delivery

Vendor shall complete ATT A by providing a unit price per ton for any or all Counties listed.

The Extended Price amount for each County will autofill upon Vendor entry of its Price Per Ton. The price that populates in the Extended Price cells will be a result of the County's estimated tonnage multiplied by the Vendor's Price Per Ton bid entry.

Vendor Name Cargill, Incorporated-Salt, Road Safety

DISTRICT 1				
County	Delivery Site Location	Estimated Tonnage	Price per Ton	Extended Price
Boone	Clinton @ WV85	1,000.00		
	Rock Creek	2,500.00		
	Seth	750.00		
Boone County Estimated Total		4,250	NO BID	#VALUE!
Clay	Widen Road & CR 11	2,000.00		
	Maysel	100.00		
Clay County Estimated Total		2,100	NO BID	#VALUE!
Kanawha	Chelyan	1,500.00		
	Elkview	2,200.00		
	North Charleston	2,200.00		
	St. Albans	2,500.00		
	I-64 @ Rt. 119 and Penn. Avenue	1,200.00		
	I-77 @ Sissonville	1,100.00		
	I-79 @ Amma	1,100.00		
Corridor G @ Alum Creek	1,500.00			
Kanawha County Estimated Total		13,300	NO BID	#VALUE!
Mason	Glenwood	500.00		
	Pt. Pleasant @ Fairground Rd.	5,000.00		
	Pt. Pleasant @ Jackson Ave.	-		
Mason County Estimated Total		5,500	NO BID	#VALUE!
Putnam	Red House	500.00		
	Hurricane @ Rt. 34	2,500.00		
	I-64 @ Scary Creek	1,000.00		
Putnam County Estimated Total		4,000	NO BID	#VALUE!
DISTRICT 1 ESTIMATED TOTAL		29,150		

ROADWAY SALT - SODIUM CHLORIDE
Attachment A - Pricing Pages by Delivery

Vendor shall complete ATT A by providing a unit price per ton for any or all Counties listed.

The Extended Price amount for each County will autofill upon Vendor entry of its Price Per Ton. The price that populates in the Extended Price cells will be a result of the County's estimated tonnage multiplied by the Vendor's Price Per Ton bid entry.

Vendor Name Cargill, Incorporated-Salt, Road Safety

DISTRICT 2				
County	Delivery Site Location	Estimated Tonnage	Price per Ton	Extended Price
Cabell	Barboursville / Cabell Co. HQ	3,250		
	Huntington I-64 Section 1	2,450		
	Huntington 31st Bridge	200		
	Huntington 17th St. Bridge	-		
Cabell County Estimated Total		5,900	NO BID	#VALUE!
Lincoln	West Hamlin	2,000		
	Yawkey	1,200		
	Harts	1,100		
Lincoln County Estimated Total		4,300	NO BID	#VALUE!
Logan	Corridor G @ Chapmanville	1,700		
	Wilkinson Substation	2,500		
	Man Substation	50		
	Hickory Lane	-		
Logan County Estimated Total		4,250	NO BID	#VALUE!
Mingo	Corridor G @ Miller's Creek, Bldg #03011	2,050		
	Mingo Cty @ Miller's Creek, Bldg #03025	2,100		
	Gilbert Substation	1,150		
	Mingo 119 South	-		
Mingo County Estimated Total		5,300	NO BID	#VALUE!
Wayne	Pritchard Substation	3,531		
	Wayne County Headquarters	2,700		
	Crum Substation	1,500		
	Heartland Intermodal Gateway	-		
Wayne County Estimated Total		7,731	NO BID	#VALUE!
DISTRICT 2 ESTIMATED TOTAL		27,481		

ROADWAY SALT - SODIUM CHLORIDE

Attachment A - Pricing Pages by Delivery

Vendor shall complete ATT A by providing a unit price per ton for any or all Counties listed.

The Extended Price amount for each County will autofill upon Vendor entry of its Price Per Ton. The price that populates in the Extended Price cells will be a result of the County's estimated tonnage multiplied by the Vendor's Price Per Ton bid entry.

Vendor Name Cargill, Incorporated-Salt, Road Safety

DISTRICT 3				
County	Delivery Site Location	Estimated Tonnage	Price per Ton	Extended Price
Calhoun	Millstone	5500		
Calhoun County Estimated Total		5500	NO BID	#VALUE!
Jackson	Ripley / Jackson Co. HQ	2000		
	I-77 @ Medina	1300		
Jackson County Estimated Total		3300	NO BID	#VALUE!
Pleasants	Belmont	1800		
Pleasants County Estimated Total		1800	NO BID	#VALUE!
Ritchie	APD Pennsboro	1900		
	Ellenboro / Harrisville Substation	2500		
	Corridor D @ Nutter Farm	400		
	Smithville Substation	450		
Ritchie County Estimated Total		5250	NO BID	#VALUE!
Roane	Lefthand @ WV 36	400		
	Ambler Ridge Substation @ US 119	100		
	Roane County HQ	1600		
Roane County Estimated Total		2100	NO BID	#VALUE!
Wirt	Harrisville Substation	900		
Wirt County Estimated Total		900	NO BID	#VALUE!
Wood	Parkersburg @ Rt. 95S	5600		
	I-77 @ Parkersburg	4500		
	Corridor D @ Riverhill	2100		
Wood County Estimated Total		12200	NO BID	#VALUE!
DISTRICT 3 ESTIMATED TOTAL		31,050		

**ROADWAY SALT - SODIUM CHLORIDE
Attachment A - Pricing Pages by Delivery**

Vendor shall complete ATT A by providing a unit price per ton for any or all Counties listed.

The Extended Price amount for each County will autofill upon Vendor entry of its Price Per Ton. The price that populates in the Extended Price cells will be a result of the County's estimated tonnage multiplied by the Vendor's Price Per Ton bid entry.

Vendor Name Cargill, Incorporated-Salt, Road Safety

DISTRICT 4				
County	Delivery Site Location	Estimated Tonnage	Price per Ton	Extended Price
Doddridge	Greenwood	200		
	West Union	800		
Doddridge County Estimated Total		1,000	NO BID	#VALUE!
Harrison	Harrison Co. HQ	3500		
	Saltwell	500		
	Lost Creek Substation	1000		
	Tunnel Hill Substation	1500		
Harrison County Estimated Total		6,500	NO BID	#VALUE!
Marion	Marion Co. HQ	1000		
	Mannington Substation	500		
Marion County Estimated Total		1,500	\$ 107.50	\$ 161,250.00
Monongalia	Goshen Rd. Substation	2000		
	Monongalia Co. HQ	3000		
	Pentress Substation	500		
Monongalia County Estimated Total		5,500	NO BID	#VALUE!
Preston	Bruceton Mills Substation	2500		
	Preston Co. HQ	1000		
	Terra Alta Substation	1000		
	Fellowsville Substation	1000		
	Aurora Substation	1000		
	Cooper's Rock Substation	1500		
Preston County Estimated Total		8,000	NO BID	#VALUE!
Taylor	Taylor Co. HQ	1,000		
Taylor County Estimated Total		1,000	\$ 101.24	\$ 101,240.00
DISTRICT 4 ESTIMATED TOTAL		23,500		

**ROADWAY SALT - SODIUM CHLORIDE
Attachment A - Pricing Pages by Delivery**

Vendor shall complete ATT A by providing a unit price per ton for any or all Counties listed.

The Extended Price amount for each County will autofill upon Vendor entry of its Price Per Ton. The price that populates in the Extended Price cells will be a result of the County's estimated tonnage multiplied by the Vendor's Price Per Ton bid entry.

Vendor Name Cargill, Incorporated-Salt, Road Safety

DISTRICT 5				
County	Delivery Site Location	Estimated Tonnage	Price per Ton	Extended Price
Berkeley	Martinsburg Headquarters - 0571 Storage Bldg	1,000		
	Tabler Station - 0502 Storage Bldg	1,000		
	Berkeley County Headquarters	700		
Berkeley County Estimated Total		2,700	\$ 97.21	\$ 262,467.00
Grant	Grant Co. HQ	800		
	Mt. Storm Substation	1,000		
	Corridor H @ Knobley Road	1,600		
Grant County Estimated Total		3,400	\$ 102.67	\$ 349,078.00
Hampshire	Hampshire Co. HQ	800		
	Capon Bridge Substation	400		
	Slanesville	300		
Hampshire County Estimated Total		1,500	\$ 101.43	\$ 152,145.00
Hardy	Hardy Co. HQ	800		
	Baker Substation	800		
Hardy County Estimated Total		1,600	\$ 107.30	\$ 171,680.00
Jefferson	Jefferson County Headquarters - 0519 Storage Bldg	1,500		
	9/340 Expressway Headquarters - 0564 Storage Bldg	1,500		
Jefferson County Estimated Total		3,000	\$ 94.66	\$ 283,980.00
Mineral	Mineral Co. HQ	700		
	Skyline Substation	600		
	Short Gap Substation	300		
	District 5 HQ	100		
Mineral County Estimated Total		1,700	NO BID	#VALUE!
Morgan	Morgan Co. HQ	800		
	Largent Substation	300		
Morgan County Estimated Total		1,100	\$ 99.52	\$ 109,472.00
DISTRICT 5 ESTIMATED TOTAL		15,000		

ROADWAY SALT - SODIUM CHLORIDE
Attachment A - Pricing Pages by Delivery

Vendor shall complete ATT A by providing a unit price per ton for any or all Counties listed.
The Extended Price amount for each County will autofill upon Vendor entry of its Price Per Ton. The price that populates in the Extended Price cells will be a result of the County's estimated tonnage multiplied by the Vendor's Price Per Ton bid entry.

Vendor Name _____ Cargill, Incorporated-Salt, Road Safety _____

DISTRICT 6				
County	Delivery Site Location	Estimated Tonnage	Price per Ton	Extended Price
Brooke	Brooke County HQ	1800		
	US 22 Substation	1800		
Brooke County Estimated Total		3,600	NO BID	#VALUE!
Hancock	Hancock County HQ	2800		
Hancock County Estimated Total		2,800	NO BID	#VALUE!
Marshall	Marshall Co. HQ	2900		
	Lynn Camp Substation	700		
	Cameron Substation	1550		
	Sand Hill Substation	650		
Marshall County Estimated Total		5,800	NO BID	#VALUE!
Ohio	Ohio Co. HQ	4000		
	I-70 Interstate HQ	3600		
Ohio County Estimated Total		7,600	NO BID	#VALUE!
Tyler	Tyler Co. HQ	1100		
	Centerville Substation	800		
Tyler County Estimated Total		1,900	NO BID	#VALUE!
Wetzel	Wetzel Co. HQ	1100		
	Pine Grove Substation	700		
	Hundred Substation	900		
Wetzel County Estimated Total		2,700	NO BID	#VALUE!
DISTRICT 6 ESTIMATED TOTAL		24,400		

ROADWAY SALT - SODIUM CHLORIDE
Attachment A - Pricing Pages by Delivery

Vendor shall complete ATT A by providing a unit price per ton for any or all Counties listed.

The Extended Price amount for each County will autofill upon Vendor entry of its Price Per Ton. The price that populates in the Extended Price cells will be a result of the County's estimated tonnage multiplied by the Vendor's Price Per Ton bid entry.

Vendor Name Cargill, Incorporated-Salt, Road Safety

DISTRICT 7				
County	Delivery Site Location	Estimated Tonnage	Price per Ton	Extended Price
Barbour	Barbour Co. HQ (000111)	1,800		
	Belington Substation (000113)	1,400		
Barbour County Estimated Total		3,200	\$ 96.77	\$ 309,664.00
Braxton	Braxton County HQ (000444)	800		
	Heaters Substation (000431)	600		
	Coon Knob Substation (000405)	1,400		
	Burnsville Substation (000432)	1,400		
Braxton County Estimated Total		4,200	\$ 100.93	\$ 423,906.00
Gilmer	Gilmer County HQ (001110)	1,000		
Gilmer County Estimated Total		1,000	NO BID	#VALUE!
Lewis	Lewis County HQ (002108)	1,200		
	APD (Weston Mudlick) (002187)	1,000		
Lewis County Estimated Total		2,200	\$ 103.12	\$ 226,864.00
Upshur	Clow Lot/Upshur County HQ (004912)	2,400		
	Tennerton/Upshur County SubHQ (004903)	100		
	Kanawha Head	800		
Upshur County Estimated Total		3,300	\$ 101.61	\$ 335,313.00
Webster	Cherry Falls	500		
	RT 20/Cowen Substation (005110)	100		
	Webster County HQ @ Bolair	1000		
	Hacker Valley Substation (005120)	500		
Webster County Estimated Total		2,100	\$ 99.35	\$ 208,635.00
DISTRICT 7 ESTIMATED TOTAL		16,000		

ROADWAY SALT - SODIUM CHLORIDE
Attachment A - Pricing Pages by Delivery

Vendor shall complete ATT A by providing a unit price per ton for any or all Counties listed.

The Extended Price amount for each County will autofill upon Vendor entry of its Price Per Ton. The price that populates in the Extended Price cells will be a result of the County's estimated tonnage multiplied by the Vendor's Price Per Ton bid entry.

Vendor Name Cargill, Incorporated-Salt, Road Safety

DISTRICT 8				
County	Delivery Site Location	Estimated Tonnage	Price per Ton	Extended Price
Pendleton	Franklin, 220 North	600		
	Judy Gap Substation	500		
	Brandywine Stockpile	400		
	Onego Stockpile	400		
	Franklin Rt. 220 South Lot	350		
Pendleton County Estimated Total		2,250	\$ 106.47	\$ 239,557.50
Pocahontas	Pocahontas County HQ	800		
	Seebert Stockpile	600		
	Green Bank Substation	500		
	Bartow Lot	600		
	Snowshoe Stockpile	100		
	Slaty Fork Stockpile	450		
Pocahontas County Estimated Total		3,050	\$ 103.91	\$ 316,925.50
Randolph	Randolph Co. HQ	900		
	Harman Substation	800		
	Coalton Substation	750		
	Valley Head Substation	600		
	Mill Creek Substation	650		
	Pickens Substation	350		
	Corridor H	900		
Randolph County Estimated Total		4,950	\$ 99.83	\$ 494,158.50
Tucker	Tucker Co. HQ	800		
	Thomas Substation	600		
	Corrido H - Thomas	900		
Tucker County Estimated Total		2,300	\$ 97.99	\$ 225,377.00
DISTRICT 8 TOTAL		12,550		

6621C062

ROADWAY SALT - SODIUM CHLORIDE
Attachment A - Pricing Pages by Delivery

Vendor shall complete ATT A by providing a unit price per ton for any or all Counties listed.

The Extended Price amount for each County will autofill upon Vendor entry of its Price Per Ton. The price that populates in the Extended Price cells will be a result of the County's estimated tonnage multiplied by the Vendor's Price Per Ton bid entry.

Vendor Name _____ **Cargill, Incorporated-Salt, Road Safety** _____

DISTRICT 10				
County	Delivery Site Location	Estimated Tonnage	Price per Ton	Extended Price
McDowell	McDowell County HQ	2,000		
	Yukon Substation	300		
	Johnny Cake Substation	500		
	Raysal	500		
McDowell County Estimated Total		3,300	NO BID	#VALUE!
Mercer	Mercer County HQ	2,600		
	Flat Top Substation	300		
	I-77 near Princeton	2,600		
Mercer County Estimated Total		5,500	NO BID	#VALUE!
Raleigh	Raleigh County HQ	8,000		
	Bolt Substation	100		
	Bragg Substation	5,000		
Raleigh County Estimated Total		13,100	NO BID	#VALUE!
Wyoming	Wyoming County HQ	3,000		
	Still Run Substation	1,000		
	Hanover Outpost	100		
Wyoming County Estimated Total		4,100	NO BID	#VALUE!
DISTRICT 10 ESTIMATED TOTAL		26,000		

6621C062

**ROADWAY SALT - SODIUM CHLORIDE
Attachment A - Pricing Pages by Delivery**

Vendor shall complete ATT A by providing a unit price per ton for any or all Counties listed.

The Extended Price amount for each County will autofill upon Vendor entry of its Price Per Ton. The price that populates in the Extended Price cells will be a result of the County's estimated tonnage multiplied by the Vendor's Price Per Ton bid entry.

Vendor Name Cargill, Incorporated-Salt, Road Safety

WV PARKWAYS AUTHORITY				
County	Delivery Site Location	Estimated Tonnage	Price per Ton	Extended Price
Kanawha	Chelyan Maintenance	3,000		
	Standard Maintenance	2,900		
Kanawha County Estimated Total		5,900	NO BID	#VALUE!
Mercer	Princeton Maintenance	1,500		
Mercer County Estimated Total		1,500	NO BID	#VALUE!
Raleigh	Beckley Maintenance	6,700		
	Ghent Maintenance	4,100		
Raleigh County Estimated Total		10,800	NO BID	#VALUE!
WV PARKWAYS ESTIMATED TOTAL		18,200		