

**State of West Virginia**  
**Buyer: Crystal Rink**  
**Solicitation # CRFQ 0803 DOT 1900000045**  
**6619C011 – Calcium Magnesium Acetate and a Pre-Wetting Agent**  
**Opens 12-13-2018 @ 1:30 PM Eastern**



**Vendor:**  
**Nachurs Alpine Solutions, LLC**  
**421 Leader St.**  
**Marion, OH 43302**

RECEIVED

2018 DEC 11 AM 10:15

WV PURCHASING  
DIVISION



Crystal Rink, Buyer  
Purchasing Division  
2019 Washington St. East  
Charleston, WV 25305-0130

RE: RFQ 19 – Highways, Proc Folder 494116  
CRFQ 0803 DOT19000000045

December 4, 2018

Dear Ms. Crystal Rink,

Thank you for this opportunity to bid our deicing products for the New River Gorge Bridge.

We are proposing our NASi SF, solid sodium formate as an alternate to CMA (Item 1), as an equal (or better) to the required specifications. More information is included as required per RFQ, under "10. Alternate Model or Brand" to include our specifications, industry literature, and a comparative table demonstrating the equality (or better) of CMA.

Notable points for mention include:

- NASi SF density is slightly higher than CMA, and with the irregular shaped granule, likelihood of blowing in the wind is reduced.
- The effective freeze temperature of NASi SF is significantly lower than CMA.
- SF has been used on Pena Blvd at Denver airport.
- SF has been used on roadways surrounding Dulles airport.
- SF has been used at Standard Parking at the Portland Int'l Jetport, Maine.
- Some states have banned the use of products containing magnesium, i.e., it is not allowed in Illinois and there is a moratorium on its usage. As well, Illinois does not recommend CMA on concrete as an alternate product to sodium chloride.

<http://www.idot.illinois.gov/Assets/uploads/files/Transportation-System/Research/Pavement-Technology-Advisories/Design-Construction-and-Materials-SeriesNew-Folder/PTAD8.pdf>

We are also bidding our RF-11, 50% potassium acetate liquid pre-wetting agent (Item 2) as per the exact specifications in the RFQ.

Nachurs Alpine Solutions, LLC is a leading North American manufacturer of specialty runway and transportation-related deicers. Our 6 plants produce deicer products. Overlaying our plant footprint is an extensive transcontinental rail, terminal, and trucking network to ensure prompt 24/7 customer service and quick deliveries.

Best regards,

Karen Engelbrecht  
Sales Manager  
Office phone: 352-593-4447  
Cell phone: 312-316-0866  
Email: [EngelbrechtK@NASindustrial.com](mailto:EngelbrechtK@NASindustrial.com)

800-622-4877 TOLL FREE

740-382-5701 OFFICE

740-223-3874 FAX



BECAUSE QUALITY CREATES VALUE!

421 Leader Street

Marion, Ohio 43302

[www.nasindustrial.com](http://www.nasindustrial.com)

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Transportation De-icers

## NASi offers a range of quality products to help you keep roads, pathways, and parking lots clear

The attributes that make NASi products so effective for critical applications like runways also apply to bridges, pathways, parking decks, transload facilities and industrial and commercial complexes. NASi products are effective in the most extreme winter conditions below temperatures where other products stop working. They are environmentally friendly and are inherently less corrosive to assets than traditional chloride salts. Winter conditions are tough to predict but NASi's supply chain footprint ensures that products are always close to you when they are needed the most.

## NASi helps you strike the right balance for your snow and ice removal needs



**Alpine Ice Melt® 50% Potassium Acetate liquid** is utilized by DOT's especially on bridges, rail infrastructure, commodity transportation, and industrial/commercial transfer facilities. Alpine Ice Melt® is listed as a PNS\* Qualified Product @-4.8% corrosion effectiveness. It performs better than anything else at extreme low temperatures given its -70F freeze point and extended working capacity under its freeze curve.

[>>> CLICK HERE TO LEARN MORE](#)



**NASi SF™** (Sodium Formate) is an advanced, non-chloride, environmentally friendly, granulated solid. It is especially effective in applications sensitive to corrosion and chloride accumulation. Use on parking decks, stadiums, institution grounds, parks, bridges, and other chloride sensitive environments.

[>>> CLICK HERE TO LEARN MORE](#)

[\\*Pacific Northwest Snowfighters Qualified Product Listing](#)

## Comparative eutectic freeze points of liquid deicers

-20°C	sodium formate or acetate	@ 24%
-21°C	sodium chloride	@ 23%
-28°C	calcium magnesium acetate	@ 33%
-33°C	magnesium chloride	@ 22%
-45°C	ethylene glycol	@ 60%
-46°C	glycerin	@ 67%
-48°C	propylene glycol	@ 60%
-52°C	calcium chloride	@ 30%
-60°C	potassium acetate	@ 50%

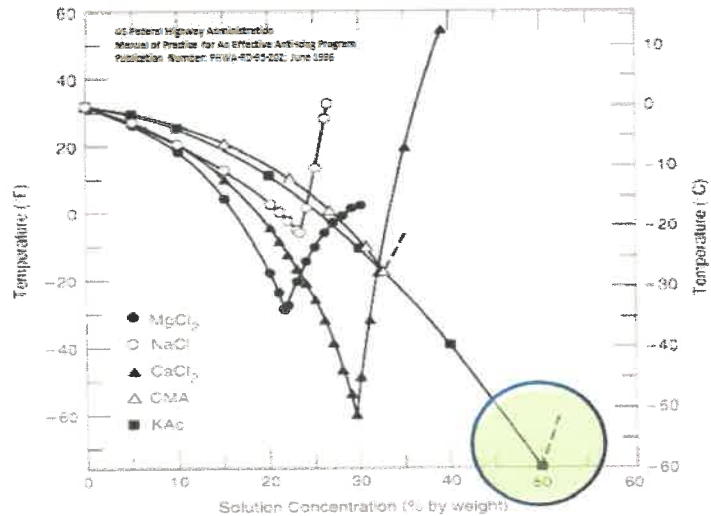


Figure 17. Phase diagrams of five chemical solutions.

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NASI is a major manufacture of the following chemicals and solutions in the industrial market:

- Ammonium Hydroxide
- Ammonium Sulfate (NSF/ANSI 60)
- Aqua Ammonia
- Calcium Nitrate
- Diammonium Phosphate
- Dipotassium Phosphate (FCC, OU)
- Monoammonium Phosphate
- Monopotassium Phosphate
- Phosphoric Acid
- Potassium Acetate
- Potassium Bicarbonate
- Potassium Carbonate (NSF/ANSI 60)
  - Dry or Liquid
- Potassium Carbonate/Potassium Hydroxide Blends
- Potassium Formate
- Urea Liquors (to 50%)
- Toll Production
- Ship to quality/order (every time)
- Logistical management
- Global raw material acquisition
- 24/7 manufacturing & shipping
- Chemical engineering support
- Custom manufacturing to meet specific requirements

THE INFORMATION SET FORTH IN THIS WEBSITE IS BELIEVED TO BE ACCURATE AS OF THE PRESENT DATE. SINCE THE ACTUAL USE BY OTHERS IS BEYOND OUR CONTROL, IT IS THE PURCHASER'S/USER'S RESPONSIBILITY TO DETERMINE THE SUITABILITY OF THE PRODUCT FOR THEIR OWN USE AND PURPOSE. NACHURS ALPINE SOLUTIONS MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED, IMPLIED OR FITNESS FOR A PARTICULAR PURPOSE. NACHURS ALPINE SOLUTIONS NEITHER ASSUMES RESPONSIBILITY REGARDING THE ACCURACY OR SUITABILITY OF SUCH INFORMATION OR PRODUCT FOR APPLICATION TO PURCHASER'S INTENDED USE OR PURPOSE NOR FOR THE CONSEQUENCES OF ITS USE. NO SUGGESTIONS FOR USE ARE INTENDED, AND NOTHING HEREIN SHALL BE CONSTRUED AS A RECOMMENDATION TO INFRINGE ANY EXISTING PATENTS OR TO VIOLATE ANY FEDERAL, STATE OR LOCAL LAWS, RULES OR REGULATIONS.

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## CMA vs. sodium formate solid deicer

	Properties	CMA*	NAS SF or Ecoway
Composition	Active ingredient	96% minimum calcium magnesium acetate	98% sodium formate minimum
	Inert material, assuming corrosion inhibitor	4% maximum	<2%
Appearance	Angular, asymmetrical granules	Typically round pellets	yes, granules
Particle size	Sieve 4 / 14	90% / 10%	particle size 2 - 6 mm
Bulk density	g/cm <sup>3</sup>	0.65 - 0.79	0.90 - 1.0
pH	Diluted	8.0 - 10.0, diluted 10%	12.2 diluted 15%
Odor	per SDS	Vinegar odor	Odorless
Performance	Effective to (eutectic/freeze point)	similar to salt, about 20°F	0°F
	Prevents bonding of snow/ice to pavement	yes	yes
Corrosion inhibition	Aluminum, Weight loss after total immersion in 15% water solution	no test data given	<0.05 mg/cm <sup>2</sup> /24hrs
	Magnesium, dichromate, Weight loss after total immersion in 15% water solution	no test data given	<0.1 mg/cm <sup>2</sup> /24hrs
	Titanium, Weight loss after total immersion in 15% water solution	no test data given	<0.05 mg/cm <sup>2</sup> /24hrs
	Carbon Steel, Weight loss after total immersion in 15% water solution	no test data given	<0.05 mg/cm <sup>2</sup> /24hrs
	Concrete scaling, 50 freeze/thaw cycles, ASTM C-672, 25% solid deicer soln. in H <sub>2</sub> O	no test data given	rating 1, passes
Environment	Aquatic Toxicity, Daphnia Magna, 48 hours	>1000 mg/L	3000 mg/L
	Aquatic Toxicity, Fathead Minnow, 96 hours	no test data given	3375 mg/L
	BOD, kg oxygen/kg solid	20 day, 10°C = 0.67	5 day, 20°C = 0.20
	TOD/COD, mg O <sub>2</sub> /kg solid	no test data given	0.25
	No nitrogen or chlorides	correct	correct
Application**	Grams per square meter	20 - 40	20 - 40
<p>* based on information from <a href="https://www.peterschemical.com/calcium-magnesium-acetate/">https://www.peterschemical.com/calcium-magnesium-acetate/</a>, and linked MSDS and spec sheet.</p> <p>** Application rates are only meant as a recommendation. Every snow/ice occurrence is different so rates will vary, depending on situation. Rate guide is attached.</p>			

Table prepared by Karen Engelbrecht, NASi



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

State of West Virginia  
Request for Quotation  
19 – Highways

Proc Folder: 494116

Doc Description: ADDENDUM 1 6619C011-CAL MAG ACETATE AND A PRE-WETTING AGENT

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2018-11-16	2018-12-13 13:30:00	CRFQ 0803 DOT1900000045	2

**BID RECEIVING LOCATION**

BID CLERK

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION

2019 WASHINGTON ST E

CHARLESTON

WV 25305

US

**VENDOR**

Vendor Name, Address and Telephone Number:

Nachurs Alpine Solutions, LLC  
421 Leader St.  
Marion, OH 43302

**FOR INFORMATION CONTACT THE BUYER**

Crystal Rink  
(304) 558-2402  
crystal.g.rink@wv.gov

Signature X

FEIN #

DATE

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

**ADDITIONAL INFORMATION:**

THE WEST VIRGINIA PURCHASING DIVISION IS SOLICITING BIDS ON BEHALF OF THE WEST VIRGINIA DIVISION OF HIGHWAYS TO ESTABLISH AN OPEN-END CONTRACT FOR CALCIUM MAGNESIUM ACETATE AND A LOW CORROSIVE PRE-WETTING AGENT TO BE USED ON THE NEW RIVER GORGE BRIDGE.

INVOICE TO		SHIP TO	
DIVISION OF HIGHWAYS DISTRICT NINE FAYETTE COUNTY HEADQUARTERS 3121 MAIN ST OAK HILL WV25901 US		DIVISION OF HIGHWAYS DISTRICT NINE FAYETTE COUNTY HEADQUARTERS 3121 MAIN ST OAK HILL WV 25901 US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	CALCIUM MAGNESIUM ACETATE	100.00000	TON		

Comm Code	Manufacturer	Specification	Model #
47131823			

**Extended Description :**

CALDIUM MAGNESIUM ACETATE FOR USE IN THE DEICING OF THE NEW RIVER GORGE BRIDGE

INVOICE TO		SHIP TO	
DIVISION OF HIGHWAYS DISTRICT NINE FAYETTE COUNTY HEADQUARTERS 3121 MAIN ST OAK HILL WV25901 US		DIVISION OF HIGHWAYS DISTRICT NINE FAYETTE COUNTY HEADQUARTERS 3121 MAIN ST OAK HILL WV 25901 US	

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	LOW CORROSIVE PRE-WETTING AGENT NO CHLORIDES	800.00000	GL		

Comm Code	Manufacturer	Specification	Model #
47131823			

**Extended Description :**

LOW CORROSIVE PRE-WETTING AGENT NO CHLORIDE FOR USE IN THE DEICING OF THE NEW RIVER GORGE BRIDGE

**SCHEDULE OF EVENTS**

Line	Event	Event Date
1	QUESTION DEADLINE 10AM EST	2018-11-16

**SOLICITATION NUMBER: CRFQ DOT1900000045**

**Addendum Number: 1**

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The purpose of this addendum is to modify the solicitation identified as ("Solicitation") to reflect the change(s) identified and described below.

**Applicable Addendum Category:**

- ☐ Modify bid opening date and time
- ☐ Modify specifications of product or service being sought
- ☒ Attachment of vendor questions and responses
- ☐ Attachment of pre-bid sign-in sheet
- ☐ Correction of error
- ☐ Other

**Description of Modification to Solicitation:**

1. To provide answers to vendor questions

No other changes at this time

Bid opening date remains December 13, 2018 at 1:30 PM EST

**Additional Documentation:** Documentation related to this Addendum (if any) has been included herewith as Attachment A and is specifically incorporated herein by reference.

**Terms and Conditions:**

1. All provisions of the Solicitation and other addenda not modified herein shall remain in full force and effect.
2. Vendor should acknowledge receipt of all addenda issued for this Solicitation by completing an Addendum Acknowledgment, 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.



## ATTACHMENT A

Addendum #1            CRFQ DOT1900000045

Calcium Magnesium Acetate and a Pre-Wetting Agent

QUESTION 1:            In Section 5.2 regarding payment via a "Purchasing Card Program", do we have to enroll in this? Per Section 15, it states we can be paid via EFT.

RESPONSE 1:           The WVDOH's preferred payment processing is via the "Purchasing Card Program"; however, the WVDOH can pay the vendor via EFT as long as the Vendor is established with the West Virginia Treasurer's Office.

QUESTION 2:           In Section 8.3 Reports, do we have to supply West Virginia with a quarterly and annual report?

RESPONSE 2:           Reports are to be supplied only upon request.

QUESTION 3a:           Do we need to return the "Purchasing Affidavit"?

RESPONSE 3a:           The Purchasing Affidavit is not required to accompany the Vendor's bidding documents; however, it will be required from the potential successful Vendor prior to award.

QUESTION 3b:           Does this apply to deicer suppliers?

RESPONSE 3b:           The Purchasing Affidavit is required from the awarded contracted Vendor prior to award.

QUESTION 4:           The RFQ states orders will come through the OASIS system. Is there any other way to place orders such as through emails, or phone calls?

RESPONSE 4:           Section 5.1 states, "Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website."

QUESTION 5a:           In Section 13 Registration, it talks about a \$125.00 fee to be paid Prior to the Award Contract. Does this get paid with the bid offer, before the bid offer separate from the bid, or once the Award has been announced?

RESPONSE 5a:           The \$125.00 annual fee must be paid prior to award . The prospective awarded vendor will be contacted by the West Virginia State Purchasing Division in regard to resolving any registration issues. Vendors may pay

the fee by utilizing the WVOasis.gov Vendor Self Service portal or by contacting West Virginia Purchasing Division Vendor Registration section. Please refer to <http://www.state.wv.us/admin/purchase/VendorReg.html> for more information on vendor registration.

QUESTION 5b: Are there instructions as to how to do this?

RESPONSE 5b: Complete instructions are contained by following the below link <http://www.state.wv.us/admin/purchase/VendorReg.html>

QUESTION 6: Will all 800 gallons of liquid and 100 tons of CMA be ordered at once or throughout the winter season?

RESPONSE 6: Per Section 4.2 of the solicitation specifications: Vendors should be cautioned as the quantities listed are estimates only. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery whether more or less than the quantities shown. No future use of the Contract or any individual item is guaranteed or implied.

**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.: DOT1900000045**

**Instructions:** Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

**Acknowledgment:** I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

**Addendum Numbers Received:**

(Check the box next to each addendum received)

<input checked="" type="checkbox"/> Addendum No. 1	<input type="checkbox"/> Addendum No. 6
<input type="checkbox"/> Addendum No. 2	<input type="checkbox"/> Addendum No. 7
<input type="checkbox"/> Addendum No. 3	<input type="checkbox"/> Addendum No. 8
<input type="checkbox"/> Addendum No. 4	<input type="checkbox"/> Addendum No. 9
<input type="checkbox"/> Addendum No. 5	<input type="checkbox"/> Addendum No. 10

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

\_\_\_\_\_  
Nachurs Alpine Solutions, LLC

Company

\_\_\_\_\_  


Authorized Signature

\_\_\_\_\_  
December 5, 2018

Date

**NOTE:** This addendum acknowledgement should be submitted with the bid to expedite document processing.  
Revised 6/8/2012



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

State of West Virginia  
Request for Quotation  
19 -- Highways

Proc Folder: 494116

Doc Description: 6619C011-CALCIUM MAGNESIUM ACETATE AND A PRE-WETTING AGENT

Proc Type: Central Master Agreement

Date Issued	Solicitation Closes	Solicitation No	Version
2018-11-13	2018-12-13 13:30:00	CRFQ 0803 DOT1900000045	1

**BID RECEIVING LOCATION**

BID CLERK

DEPARTMENT OF ADMINISTRATION

PURCHASING DIVISION

2019 WASHINGTON ST E

CHARLESTON

WV 25305

US

**VENDOR**

Vendor Name, Address and Telephone Number:

Nachurs Alpine Solutions, LLC

421 Leader St.

Marion, OH 43302

800-622-4877

**FOR INFORMATION CONTACT THE BUYER**

Crystal Rink

(304) 558-2402

crystal.g.rink@wv.gov

Signature X

FEIN #

DATE

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



**ADDITIONAL INFORMATION:**

THE WEST VIRGINIA PURCHASING DIVISION IS SOLICITING BIDS ON BEHALF OF THE WEST VIRGINIA DIVISION OF HIGHWAYS TO ESTABLISH AN OPEN-END CONTRACT FOR CALCIUM MAGNESIUM ACETATE AND A LOW CORROSIVE PRE-WETTING AGENT TO BE USED ON THE NEW RIVER GORGE BRIDGE.

INVOICE TO	SHIP TO
DIVISION OF HIGHWAYS DISTRICT NINE FAYETTE COUNTY HEADQUARTERS 3121 MAIN ST OAK HILL WV25901 US	DIVISION OF HIGHWAYS DISTRICT NINE FAYETTE COUNTY HEADQUARTERS 3121 MAIN ST OAK HILL WV 25901 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
1	CALCIUM MAGNESIUM ACETATE	100.00000	TON	see price included in bid package	

Comm Code	Manufacturer	Specification	Model #
47131823	Nachurs Alpine Solution, LLC		NASi SF

**Extended Description :**

CALDIUM MAGNESIUM ACETATE FOR USE IN THE DEICING OF THE NEW RIVER GORGE BRIDGE

INVOICE TO	SHIP TO
DIVISION OF HIGHWAYS DISTRICT NINE FAYETTE COUNTY HEADQUARTERS 3121 MAIN ST OAK HILL WV25901 US	DIVISION OF HIGHWAYS DISTRICT NINE FAYETTE COUNTY HEADQUARTERS 3121 MAIN ST OAK HILL WV 25901 US

Line	Comm Ln Desc	Qty	Unit Issue	Unit Price	Total Price
2	LOW CORROSIVE PRE-WETTING AGENT NO CHLORIDES	800.00000	GL	see price included in bid package	

Comm Code	Manufacturer	Specification	Model #
47131823	Nachurs Alpine Solutions, LLC		RF-11

**Extended Description :**

LOW CORROSIVE PRE-WETTING AGENT NO CHLORIDE FOR USE IN THE DEICING OF THE NEW RIVER GORGE BRIDGE

**SCHEDULE OF EVENTS**

Line	Event	Event Date
1	QUESTION DEADLINE 10AM EST	2018-11-16

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

☐ 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 person attending the pre-bid meeting may represent more than one Vendor.

An attendance sheet provided at the pre-bid meeting shall serve as the official document verifying attendance. The State will not accept any other form of proof or documentation to verify 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 in order 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 e-mails should have solicitation number in the subject line.

Question Submission Deadline: November 16, 2018 at 10:00 AM EST

Submit Questions to: Crystal Rink  
2019 Washington Street, East  
Charleston, WV 25305

Fax: (304) 558-4115 (Vendors should not use this fax number for bid submission)

Email: [Crystal.G.Rink@wv.gov](mailto:Crystal.G.Rink@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 electronically through wvOASIS or signed and delivered by the Vendor to the Purchasing Division at the address listed below on or before the date and time of the bid opening. 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. The Purchasing Division will not accept bids, modification of bids, or addendum acknowledgment forms via e-mail. Acceptable delivery methods include electronic submission via wvOASIS, hand delivery, delivery by courier, or facsimile.

The bid delivery address is:

✓ Department of Administration, Purchasing Division  
2019 Washington Street East  
Charleston, WV 25305-0130

A bid that is not submitted electronically through wvOASIS should contain the information listed below on the face of the envelope or the bid may be rejected by the Purchasing Division.:

✓ SEALED BID:

BUYER: Crystal Rink  
SOLICITATION NO.: CRFQ DOT1900000045  
BID OPENING DATE: December 13, 2018  
BID OPENING TIME: 1:30 PM EST  
FAX NUMBER: 304-558-3970

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. Submission of a response to an Expression or Interest or Request for Proposal is not permitted in wvOASIS.

**For Request For Proposal ("RFP") Responses Only:** In the event that Vendor is responding to a request for proposal, the Vendor shall submit one original technical and one original cost proposal plus n/a convenience copies of each to the Purchasing Division at the address shown above. Additionally, the Vendor should identify the bid type as either a technical or cost proposal on the face of each bid envelope submitted in response to a request for proposal as follows:

BID TYPE: (This only applies to CRFP)

- ☐ Technical  
☐ Cost

**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: December 13, 2018 at 1:30 PM EST

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 should 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:  
<http://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. A request form to help facilitate the request can be found at:  
<http://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. INTERESTED PARTY DISCLOSURE:** West Virginia Code § 6D-1-2 requires that the vendor submit to the Purchasing Division a disclosure of interested parties to the contract for all contracts with an actual or estimated value of at least \$1 Million. That disclosure must occur on the form prescribed and approved by the WV Ethics Commission prior to contract award. 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.

**23. 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.

## **GENERAL TERMS AND CONDITIONS:**

- 1. CONTRACTUAL AGREEMENT:** Issuance of a Award Document signed by the Purchasing Division Director, or his designee, and approved as to form by the Attorney General's office constitutes acceptance of this Contract made by and between the State of West Virginia and the Vendor. Vendor's signature on its bid 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:** Initial Contract Term: This Contract becomes effective on on award and extends for a period of one year(s).

**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 two (2) 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 maintenance, monitoring, or warranty services will be provided for \_\_\_\_\_ year(s) thereafter.

☐ **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.

☐ **Other:** See attached.

**4. NOTICE TO PROCEED:** Vendor shall begin performance of this Contract immediately upon receiving notice to proceed unless otherwise instructed by the Agency. Unless otherwise specified, the fully executed Award Document will be considered notice to proceed.

**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 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 below must be provided to the Purchasing Division by the Vendor as specified below.

☐ **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 prior to Contract award, in a form acceptable to the Purchasing Division.

☐

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The apparent successful Vendor shall also furnish proof of any additional licenses or certifications contained in the specifications prior to Contract award 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 cancellation, 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 or not that insurance requirement is listed in this section.

Vendor must maintain:

- ☒ **Commercial General Liability Insurance** in at least an amount of: \$1,000,000 (SEE BELOW) per occurrence.
- ☐ **Automobile Liability Insurance** in at least an amount of: \_\_\_\_\_ per occurrence.
- ☐ **Professional/Malpractice/Errors and Omission Insurance** in at least an amount of: \_\_\_\_\_ per occurrence.
- ☐ **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 WV MUST BE LISTED AS ADDITIONAL INSURED ON INSURANCE CERTIFICATE\*\***
- ☒ **\*\*CERTIFICATE HOLDER SHALL 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.

**9. WORKERS' COMPENSATION INSURANCE:** The apparent successful 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

**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.

**14. PAYMENT IN ARREARS:** Payment in advance is prohibited under this Contract. Payment may only be made after the delivery and acceptance of goods or services. The Vendor shall submit invoices, in arrears.

**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 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.

**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 with regard to 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. PURCHASING AFFIDAVIT:** 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. Vendors are required to sign, notarize, and submit the Purchasing Affidavit to the Purchasing Division affirming under oath that it is not in default on any monetary obligation owed to the state or a political subdivision of the state.

**38. ADDITIONAL AGENCY AND LOCAL GOVERNMENT USE:** This Contract may be utilized by other agencies, spending units, and political subdivisions of the State of West Virginia; county, municipal, and other local government bodies; and school districts ("Other Government Entities"), provided that both the Other Government Entity and the Vendor agree. Any extension of this Contract to the aforementioned Other Government Entities must be on the same prices, terms, and conditions as those offered and agreed to in this Contract, provided that such extension is in compliance with the applicable laws, rules, and ordinances of the Other Government Entity. A refusal to extend this Contract to the Other Government Entities shall not impact or influence the award of this Contract in any manner.

**39. 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.

**40. 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.requisitions@wv.gov](mailto:purchasing.requisitions@wv.gov).

**41. BACKGROUND CHECK:** In accordance with W. Va. Code § 15-2D-3, the Director of the Division of Protective Services shall require any service provider whose employees are regularly employed on the grounds or in the buildings of the Capitol complex or who have access to sensitive or critical information to submit to a fingerprint-based state and federal background inquiry through the state repository. The service provider is responsible for any costs associated with the fingerprint-based state and federal background inquiry.

After the contract for such services has been approved, but before any such employees are permitted to be on the grounds or in the buildings of the Capitol complex or have access to sensitive or critical information, the service provider shall submit a list of all persons who will be physically present and working at the Capitol complex to the Director of the Division of Protective Services for purposes of verifying compliance with this provision. 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.

Revised 06/08/2018



Service providers should contact the West Virginia Division of Protective Services by phone at (304) 558-9911 for more information.

**42. 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 hearth, basic oxygen, electric furnace, Bessemer or other steel making process. The Purchasing Division Director may, in writing, authorize the use of foreign steel products if:
- c. 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
- d. 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.

**43. 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.

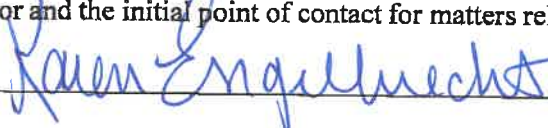
The cost of domestic aluminum, glass, or steel products may be unreasonable if the cost is more than twenty percent (20%) of the bid or offered price for foreign made aluminum, glass, or steel products. If the domestic aluminum, glass or steel products to be supplied or produced in a

"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 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.

**44. 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 supplemental disclosure of interested parties reflecting any new or differing interested parties to the contract, which were not included in the original pre-award 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.

**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)

Karen Engelbrecht, Sales Manager

(Printed Name and Title)

421 Leader St., Marion, OH 43302

(Address)

352-593-4447 / 740-223-3874

(Phone Number) / (Fax Number)

EngelbrechtK@NASindustrial.com

(email address)

**CERTIFICATION AND SIGNATURE:** By signing below, or submitting documentation through wvOASIS, I certify that I have reviewed this Solicitation 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 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.

Nachurs Alpine Solutions, LLC

(Company)

x 

(Authorized Signature) (Representative Name, Title)

John Grega, CFO

(Printed Name and Title of Authorized Representative)

December 5, 2018

(Date)

740-382-5701 x229

Fax 740-383-2615

(Phone Number) (Fax Number)

**ADDENDUM ACKNOWLEDGEMENT FORM**  
**SOLICITATION NO.: CRFQ DOT1900000045**

Instructions: Please acknowledge receipt of all addenda issued with this solicitation by completing this addendum acknowledgment form. Check the box next to each addendum received and sign below. Failure to acknowledge addenda may result in bid disqualification.

Acknowledgment: I hereby acknowledge receipt of the following addenda and have made the necessary revisions to my proposal, plans and/or specification, etc.

Addendum Numbers Received:

*(Check the box next to each addendum received)*

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Addendum No. 1 | <input type="checkbox"/> Addendum No. 6  |
| <input type="checkbox"/> Addendum No. 2            | <input type="checkbox"/> Addendum No. 7  |
| <input type="checkbox"/> Addendum No. 3            | <input type="checkbox"/> Addendum No. 8  |
| <input type="checkbox"/> Addendum No. 4            | <input type="checkbox"/> Addendum No. 9  |
| <input type="checkbox"/> Addendum No. 5            | <input type="checkbox"/> Addendum No. 10 |

I understand that failure to confirm the receipt of addenda may be cause for rejection of this bid. I further understand that any verbal representation made or assumed to be made during any oral discussion held between Vendor's representatives and any state personnel is not binding. Only the information issued in writing and added to the specifications by an official addendum is binding.

Nachurs Alpine Solutions, LLC

Company

x

John Grega

Authorized Signature

December 5, 2018

Date

NOTE: This addendum acknowledgment should be submitted with the bid to expedite document processing.

**REQUEST FOR QUOTATION**  
**CRFQ DOT1900000045**  
**Calcium Magnesium Acetate and Low Corrosive Pre-wetting Agent**  
**(6619C011)**

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**SPECIFICATIONS**

1. **PURPOSE AND SCOPE:** The West Virginia Purchasing Division is soliciting bids on behalf of the West Virginia Division of Highways to establish an open-end contract for Calcium Magnesium Acetate and a Low Corrosive Pre-wetting Agent to be used on the New River Gorge Bridge.
2. **DEFINITIONS:** The terms listed below shall have the meanings assigned to them below. Additional definitions can be found in section 2 of the General Terms and Conditions.
  - 2.1 **“Contract Item” or “Contract Items”** means the list of items identified in Section 3.2 below and on the Pricing Pages.
  - 2.2 **“Pricing Pages”** means the schedule of prices, estimated order quantity, and totals contained in wvOASIS or attached hereto as Exhibit A, and used to evaluate the Solicitation responses.
  - 2.3 **“Solicitation”** means the official notice of an opportunity to supply the State with goods or services that is published by the Purchasing Division.
  - 2.4 **“WVDOH”** used throughout this Solicitation means the West Virginia Division of Highways.
  - 2.8 **“Contractor” or “Vendor”** used throughout this Solicitation and in any cited sections of the West Virginia Department of Transportation, Division of Highways Standard Specifications, Roads and Bridges, adopted latest Standard Spec book edition, as modified by all subsequent annual Supplemental Specifications, are interchangeable.
  - 2.9 **“Standard Specs”** used throughout this Solicitation means the West Virginia Department of Transportation, Division of Highways Standard Specifications, Roads and Bridges, adopted latest Standard Spec book edition, as modified by all subsequent annual Supplemental Specifications.
3. **GENERAL REQUIREMENTS:**
  - 3.1 The following sections of the Standard Specs shall apply to the administration of this contract: Sections 101, 102.4, 102.5, 105.1, 105.3, 105.4, 105.10, 105.11,

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105.12, 105.13, 106.3, 106.4, 106.5, 106.6, 106.7, 106.9, 107.1, 107.2, 107.3, 107.14, 107.19, 107.20, 108.8, 109.1, 109.2 and 109.20.

A hard copy of the current Standard Specs may be purchased at a cost of \$20.00 (\$15.00 for the 2017 book plus \$5.00 for the 2018 Supplemental) using the Attachment A Standard Specifications Order Form and sent to:

West Virginia Division of Highways  
Contract Administration  
Building 5, Room 722  
1900 Kanawha Boulevard, East  
Charleston, West Virginia 25305  
(Phone) 304-558-2885

A free electronic copy of the Standard Specs may be obtained by sourcing:  
<http://www.transportation.wv.gov/highways/contractadmin/specifications/2017StandSpec/Pages/default.aspx>

**3.2 Minimum Material Requirements:**

**3.2.1 Calcium Magnesium Acetate (CMA) shall conform to the following product specifications and shall be delivered in bulk.**

Composition: A nominal 3/7 CMA of this analysis:

$\text{Ca}_x\text{Mg}_y (\text{C}_2\text{H}_3\text{O}_2)_2 (x+y)$

$x = 3 \text{ to } 4$

$y = 7 \text{ to } 6$

CMA 91% Minimum

Water (Free and Hydration) 5% Maximum

Water-Insoluble Material 4% Maximum

Particle Size: Sieve 4 90% minimum

Sieve 14 10% Maximum

Particle Shape: Hard, Angular, Asymmetrical Granules

Specific Gravity: Minimum 1.2

Bulk Density: 40 lb/ft<sup>3</sup> to 44 lb/ft<sup>3</sup>

Residual Base: Maximum 0.4 meg base/gm sample

Product pH: pH 8 to 10 in a 10% solution

**3.2.2 Low Corrosive Pre-wetting Agent/No Chlorides**

Density: At 68° F. 10.7 lbs/gallon

Viscosity: At 68°F. 10 cp maximum

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At 32°F. 20 cp maximum  
Freezing Point: -76°F  
Typical pH: 11.0+/-0.5  
Specific Gravity: At 68°F. 1.25-1.30  
Container Size: 265-gallon tote

**The vendor shall provide bid product label/documentation with their bid for each item bid. WVDOH will evaluate each item on equivalency of bid product to determine if the bid product meets the required specifications.**

**3.3 Sampling and Testing:**

Upon award of this contract, the Vendor shall provide the WVDOH with the proposed source of supply. Acceptance shall be based on suppliers' certification of quality and gradation. This information shall be directed to:

West Virginia Division of Highways  
Materials Section  
190 Dry Branch Road  
Charleston, WV 25306

The WVDOH may conduct sampling and testing to verify material quality or gradation.

**4. CONTRACT AWARD:**

- 4.1 Contract Award:** The Contract is intended to provide Agency with a purchase price on both Contract Items. A Contract will be awarded to the Vendor that provides the lowest Unit Cost, per Ton, for Contract Item #1 and to the Vendor that provides the lowest Unit Cost, per Gallon, for Contract Item #2.
- 4.2 Pricing Pages:** Vendors should complete the Pricing Page by providing delivery unit prices for each Contract Item. Vendors may bid one or both items on the Pricing Page.

Vendors should be cautioned as the quantities listed are estimates only. It is understood and agreed that the Contract shall cover the quantities actually ordered for delivery whether more or less than the quantities shown. No future use of the Contract or any individual item is guaranteed or implied.

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Vendor should type or electronically enter the information into the Pricing Pages through wvOASIS, if available, or as an electronic document. In most cases, the Vendor can request an electronic copy of the Pricing Page for bid purposes by sending an email request to the following address: [crystal.g.rink@wv.gov](mailto:crystal.g.rink@wv.gov).

**5. ORDERING AND PAYMENT:**

- 5.1 Ordering:** Vendor shall accept orders through wvOASIS, regular mail, facsimile, e-mail, or any other written forms of communication. Vendor may, but is not required to, accept on-line orders through a secure internet ordering portal/website. If Vendor has the ability to accept on-line orders, it should include in its response a brief description of how Agencies may utilize the on-line ordering system. Vendor shall ensure that its on-line ordering system is properly secured prior to processing Agency orders on-line.
- 5.2 Payment:** 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, to process payment for goods and services. The Vendor must accept the State of West Virginia's Purchasing Card for payment of all orders under this Contract.

**6. DELIVERY AND RETURN:**

- 6.1 Delivery Time:** Vendor shall deliver standard orders according to the established acceptable delivery date agreed at the time of order. Vendor shall deliver emergency orders within an established acceptable time frame, agreed upon by the WVDOH and the vendor, after orders are received. Vendor shall ship all orders in accordance with the established delivery date and shall not hold orders until a minimum delivery quantity is met. If the vendor is unable to furnish material in accordance with the established delivery date, the WVDOH District Engineer/Manager shall be advised in writing within five (5) working days of the reason for failure to conform to the delivery requirements.
- 6.2 Late Delivery:** The Agency placing the order under this Contract must be notified in writing within five (5) days 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



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the delayed order, and/or obtaining the items ordered from a third party.

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

- 6.3 Delivery Payment/Risk of Loss:** Standard order delivery shall be F.O.B. destination to the Agency's location. Vendor shall include the cost of standard order delivery charges in its bid pricing/discount and is not permitted to charge the Agency separately for such delivery. The Agency will pay delivery charges on all emergency orders provided that Vendor invoices those delivery costs as a separate charge with the original freight bill attached to the invoice.
- 6.4 Return of Unacceptable Items:** 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. If the original packaging cannot be utilized for the return, Vendor will supply the Agency with appropriate return packaging upon request. 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.
- 6.5 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.

**7. VENDOR DEFAULT:**

- 7.1** The following shall be considered a vendor default under this Contract.
- 7.1.1** Failure to provide Contract Items in accordance with the requirements contained herein.
- 7.1.2** Failure to comply with other specifications and requirements contained herein.

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- 7.1.3 Failure to comply with any laws, rules and ordinances applicable to the Contract Services provided under this Contract.
  - 7.1.4 Failure to remedy deficient performance upon request.
- 7.2 The following remedies shall be available to Agency upon default.
  - 7.2.1 Immediate cancellation of the Contract.
  - 7.2.2 Immediate cancellation of one or more Delivery Orders issued under this Contract.
  - 7.2.3 Any other remedies available in law or equity.
- 8. **MISCELLENIOUS:**
  - 8.1 **No Substitutions:** The 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.
  - 8.2 **Vendor Supply:** The Vendor must carry sufficient inventory of the Contract Items being offered to fulfill its obligations under this Contract. By signing its bid, the Vendor certifies that it can supply the Contract Items contained in its bid response.
  - 8.3 **Reports:** The Vendor shall provide quarterly reports and annual summaries to the Agency showing the Contract Items purchased, quantities of Contract Items purchased, and the total dollar value of the Contract Items purchased. The Vendor shall also provide reports, upon request, showing the Contract Items purchased during the term of this Contract, the quantity purchased for each of those Contract Items and the total value of purchases for each of those Contract Items. Failure to supply such reports may be grounds for cancellation of this Contract.
  - 8.4 **Contract Manager:** During its performance of this Contract, the Vendor must designate and maintain a primary contract manager responsible for overseeing the 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. The Vendor should list its Contract manager and his or her contact information below.

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**Contract Manager:** Karen Engelbrecht  
**Telephone Number:** 352-593-4447  
**Fax Number:** 740-223-3874  
**Email Address:** EngelbrechtK@NASindustrial.com  
cell: 312-316-0866

## Exhibit A Pricing Page

CRFQ DOT1900000045

**Item 1**                      **Calcium Magnesium Acetate**  
**Quoting NASi SF, 98% solid sodium formate**

<b>Delivery Location</b>	<b>Estimated Quantity</b>	<b>Unit Cost Per Ton</b>	<b>TOTAL</b>
Fayette County - Oak Hill	100 Tons	\$ 1,344.00	\$ 134,400.00

NOTE: Pricing is based on bulk delivery, transit time 1 - 3 days.

**Item 2**                      **Pre-Wetting Agent No-Chlorides**

<b>Delivery Location</b>	<b>Estimated Quantity</b>	<b>Unit Cost Per Gallon</b>	<b>TOTAL</b>
Fayette County - Oak Hill	800 Gallons	\$ 5.30	\$ 4,240.00

NOTE: Our totes hold **275 gallons**. Delivery is a 3-day transit

<b>GRAND TOTAL (Items 1 and 2)</b>	<b>\$ 138,640.00</b>
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West Virginia Department of Transportation  
Division of Highways

Standard Specifications Order Form

**Ordering Instructions:**

Copies of the *2017 Standard Specifications Roads and Bridges* and latest *Supplemental Specifications* may be purchased by completing this form, indicating the number of books desired, along with proper mailing and billing information.

Submit completed form by e-mail [DOHSpecifications@wv.gov](mailto:DOHSpecifications@wv.gov), or mail to:

Contract Administration Division  
1900 Kanawha Boulevard East  
Building Five, Room 840  
Charleston, WV 25305

**Order Form:**

Delivery Method (check one):      Pick-up ☐      Mail ☐ (S&H fees apply – see below)

Payment Method (check one):      Invoice ☐      Check ☐ (payable to: WV Division of Highways)

Number of Copies	Title	Price Each	Total
	<b>2017 Standard Specifications Roads and Bridges</b>	\$15.00	
	<b>Supplemental Specifications, Latest Edition</b>	\$5.00	
Shipping and Handling (S&H) *			
* 1-9 Items = \$5.00    10+ Items = \$10.00			
Total Amount Due			

NOTICE: The *2017 Standard Specifications Roads and Bridges* and *Supplemental Specifications* are available free of charge on the [Specifications Webpage](#).

**Customer Information:**

Company Name: \_\_\_\_\_

ATTENTION: \_\_\_\_\_

Street Address: \_\_\_\_\_

City, State, Zip Code: \_\_\_\_\_

Telephone: \_\_\_\_\_ Fax: \_\_\_\_\_ e-mail: \_\_\_\_\_

For Office Use Only (Do not write in the space below)				
Order Filled By: _____			Date: _____	
REC ORG	AUTH	ACT	OBJ	P/N
0064	COTH126	126	021	N

## 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](mailto:ethics@wv.gov); website: [www.ethics.wv.gov](http://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: Nachurs Alpine Solutions Address: 421 Leader St.

Marion, OH 43302

Name of Authorized Agent: \_\_\_\_\_ Address: \_\_\_\_\_

Contract Number: \_\_\_\_\_ Contract Description: \_\_\_\_\_

Governmental agency awarding contract: \_\_\_\_\_

☐ 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: [Signature]

Date Signed: Dec. 6, 2018

**Notary Verification**

State of Ohio, County of Marion:

I, John Grege, 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 6th day of December

Notary Public's Signature



JENNIFER L. ADAMS  
Notary Public, State of Ohio  
My Commission Expires  
December 6, 2020

**To be completed by State Agency:**

Date Received by State Agency: \_\_\_\_\_

Date submitted to Ethics Commission: \_\_\_\_\_

Governmental agency submitting Disclosure: \_\_\_\_\_

STATE OF WEST VIRGINIA  
Purchasing Division  
**PURCHASING AFFIDAVIT**

**CONSTRUCTION CONTRACTS:** Under W. Va. Code § 5-22-1(i), the contracting public entity shall not award a construction contract to any bidder that is known to be in default on any monetary obligation owed to the state or a political subdivision of the state, including, but not limited to, obligations related to payroll taxes, property taxes, sales and use taxes, fire service fees, or other fines or fees.

**ALL CONTRACTS:** Under W. Va. Code § 5A-3-10a, no contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and: (1) the debt owed is an amount greater than one thousand dollars in the aggregate; or (2) the debtor is in employer default.

**EXCEPTION:** The prohibition listed above does not apply where a vendor has contested any tax administered pursuant to chapter eleven of the W. Va. Code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

**DEFINITIONS:**

**"Debt"** means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

**"Employer default"** means having an outstanding balance or liability to the old fund or to the uninsured employers' fund or being in policy default, as defined in W. Va. Code § 23-2c-2, failure to maintain mandatory workers' compensation coverage, or failure to fully meet its obligations as a workers' compensation self-insured employer. An employer is not in employer default if it has entered into a repayment agreement with the Insurance Commissioner and remains in compliance with the obligations under the repayment agreement.

**"Related party"** means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceeds five percent of the total contract amount.

**AFFIRMATION:** By signing this form, the vendor's authorized signer affirms and acknowledges under penalty of law for false swearing (W. Va. Code § 61-5-3) 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, that neither vendor nor any related party owe a debt as defined above and that neither vendor nor any related party are in employer default as defined above, unless the debt or employer default is permitted under the exception above.

**WITNESS THE FOLLOWING SIGNATURE:**

Vendor's Name: Nachurs Alpine Solutions, LLC

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

Date: December 6, 2018

State of Ohio

County of Marion, to-wit:

Taken, subscribed, and sworn to before me this 6 day of December

My Commission expires Dec. 6, 2020



**AFFIX SEAL HERE**

**NOTARY PUBLIC** \_\_\_\_\_





# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)  
12/3/2018

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).

<b>PRODUCER</b> Crystal & Company Crystal IBC LLC 32 Old Slip New York NY 10005	<b>CONTACT NAME:</b> Kasey Gray	
	<b>PHONE (A/C, No, Ext):</b> 971-222-3200	<b>FAX (A/C, No):</b> 971-222-3260
<b>INSURED</b> Nachurs Alpine Solutions, LLC 421 Leader Street Marion OH 43302	<b>E-MAIL ADDRESS:</b> kasey.gray@crystalco.com	
	<b>INSURER(S) AFFORDING COVERAGE</b>	
	<b>INSURER A:</b> National Union Fire Insurance Co of	<b>NAIC #</b> 19445
	<b>INSURER B:</b> Ironshore Specialty Insurance Company	<b>25445</b>
	<b>INSURER C:</b> Granite State Insurance Company	<b>23809</b>
	<b>INSURER D:</b> New Hampshire Insurance Company	<b>23841</b>
<b>INSURER E:</b>		
<b>INSURER F:</b>		

## COVERAGES

CERTIFICATE NUMBER: 348874647

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
B	<input checked="" type="checkbox"/> <b>COMMERCIAL GENERAL LIABILITY</b> <input type="checkbox"/> CLAIMS-MADE <input checked="" type="checkbox"/> OCCUR <input checked="" type="checkbox"/> Ded: \$50,000 GEN'L AGGREGATE LIMIT APPLIES PER: <input type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input checked="" type="checkbox"/> LOC OTHER:			000205508	4/1/2018	4/1/2019	EACH OCCURRENCE \$ 1,000,000 DAMAGE TO RENTED PREMISES (Ea occurrence) \$ 500,000 MED EXP (Any one person) \$ 25,000 PERSONAL & ADV INJURY \$ 1,000,000 GENERAL AGGREGATE \$ 2,000,000 PRODUCTS - COMP/OP AGG \$ 2,000,000 \$
	<input checked="" type="checkbox"/> <b>AUTOMOBILE LIABILITY</b> <input checked="" type="checkbox"/> ANY AUTO <input type="checkbox"/> OWNED AUTOS ONLY <input checked="" type="checkbox"/> HIRED AUTOS ONLY <input type="checkbox"/> SCHEDULED AUTOS <input checked="" type="checkbox"/> NON-OWNED AUTOS ONLY			CA3761941	4/1/2018	4/1/2019	COMBINED SINGLE LIMIT (Ea accident) \$ 1,000,000 BODILY INJURY (Per person) \$ BODILY INJURY (Per accident) \$ PROPERTY DAMAGE (Per accident) \$ \$
	<input type="checkbox"/> <b>UMBRELLA LIAB</b> <input type="checkbox"/> EXCESS LIAB <input type="checkbox"/> DED <input type="checkbox"/> RETENTION \$						EACH OCCURRENCE \$ AGGREGATE \$ \$
D C	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b> ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below	Y/N <input type="checkbox"/>	N/A	WC14220951 WC14220952	4/1/2018 4/1/2018	4/1/2019 4/1/2019	<input checked="" type="checkbox"/> PER STATUTE <input type="checkbox"/> OTH-ER E.L. EACH ACCIDENT \$ 1,000,000 E.L. DISEASE - EA EMPLOYEE \$ 1,000,000 E.L. DISEASE - POLICY LIMIT \$ 1,000,000

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

TRIA Coverage Included

RE: "Deicer Liquids and/or Solids Project Bid"

Certificate Holder is included as Additional Insured, as required by written contract or agreement, with respects to above referenced bid.

## CERTIFICATE HOLDER

## CANCELLATION

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

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

*Crystal & Company*

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# State of West Virginia



## Certificate

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

**NACHURS ALPINE SOLUTIONS, LLC**

**Control Number: 9AOEE**

a limited liability company, organized under the laws of the State of  
has filed its "Application for Certificate of Authority" in my office according to the provisions  
of West Virginia Code §31B-10-1002. I hereby declare the organization to be registered as a  
foreign limited liability company from its effective date of November 16, 2018, until a  
certificate of cancellation is filed with our office.

Therefore, I hereby issue this

### **CERTIFICATE OF AUTHORITY OF A FOREIGN LIMITED LIABILITY COMPANY**

to the limited liability company authorizing it to transact business in West Virginia



*Given under my hand and the  
Great Seal of the State of  
West Virginia on this day of  
November 16, 2018*

*Mac Warner*

*Secretary of State*

## 2017-2018 NASi Deicer Reference of Accounts

The following can be used as reference as applying our NASi SF product.

Abdul-Malik Ali, Field Maintenance Manager, (216) 265-6611  
Email: [RHenderson@clevelandairport.com](mailto:RHenderson@clevelandairport.com)  
Cleveland Hopkins International Airport  
5555 West Hanger Rd  
Cleveland, OH 44135

Chris Pasquini, Asst. Maintenance Mgr., Ph. (518) 242-2379  
Email: [cpasquini@albanyairport.com](mailto:cpasquini@albanyairport.com)  
Albany International  
737 Albany Shaker Road  
Albany, NY 12211

Jay Ball, Director of Facilities & Grounds, Ph. (540) 362-1999, ext. 277  
Email: [JayB@flyroa.com](mailto:JayB@flyroa.com)  
Roanoke Regional Airport Commission  
5202 Aviation Drive  
Roanoke, VA 24012

Irene Seyler, Ph. (814) 833-5258  
Email: [iseyler@erieairport.org](mailto:iseyler@erieairport.org)  
Erie International Airport  
Tom Ridge Field  
4411 West 12th Street  
Erie, PA 16505-0393

Zaramie Lindseth, Airfield Maintenance Manager, Ph. (907) 266-2427  
Email: [zaramie.lindseth@alaska.gov](mailto:zaramie.lindseth@alaska.gov)  
Ted Stevens International Airport  
5740 DeHarland Ave.  
Anchorage, AK 99502

The following uses IceShield (a CMA-containing coated salt product) deicer for DOT – type accounts.

Earl Hudson Ph (757) 385-2069  
City of Virginia Beach  
Parks & Recreation  
4141 Dam Neck Rd.  
Virginia Beach, VA 23456

800-622-4877 TOLL FREE

740-382-5701 OFFICE

740-223-3874 FAX



421 Leader Street

Marion, Ohio 43302

[www.nasindustrial.com](http://www.nasindustrial.com)

BECAUSE QUALITY CREATES VALUE!

## CMA vs. sodium formate solid deicer

	Properties	CMA*	NAS SF or Ecoway
Composition	Active ingredient	96% minimum calcium magnesium acetate	98% sodium formate minimum
	Inert material, assuming corrosion inhibitor	4% maximum	<2%
Appearance	Angular, asymmetrical granules	Typically round pellets	yes, granules
Particle size	Sieve 4 / 14	90% / 10%	particle size 2 - 6 mm
Bulk density	g/cm <sup>3</sup>	0.65 - 0.79	0.90 - 1.0
pH	Diluted	8.0 - 10.0, diluted 10%	12.2 diluted 15%
Odor	per SDS	Vinegar odor	Odorless
Performance	Effective to (eutectic/freeze point)	similar to salt, about 20°F	0°F
	Prevents bonding of snow/ice to pavement	yes	yes
Corrosion Inhibition	Aluminum, Weight loss after total immersion in 15% water solution	no test data given	<0.05 mg/cm <sup>2</sup> /24hrs
	Magnesium, dichromate, Weight loss after total immersion in 15% water solution	no test data given	<0.1 mg/cm <sup>2</sup> /24hrs
	Titanium, Weight loss after total immersion in 15% water solution	no test data given	<0.05 mg/cm <sup>2</sup> /24hrs
	Carbon Steel, Weight loss after total immersion in 15% water solution	no test data given	<0.05 mg/cm <sup>2</sup> /24hrs
	Concrete scaling, 50 freeze/thaw cycles, ASTM C-672 with 25% solid deicer	no test data given	rating 1, passes
Environment	Aquatic Toxicity, Daphnia Magna, 48 hours	>1000 mg/L	3000 mg/L
	Aquatic Toxicity, Fathead Minnow, 96 hours	no test data given	3375 mg/L
	BOD, kg oxygen/kg solid	20 day, 10°C = 0.67	5 day, 20°C = 0.20
	TOD/COD, mg O <sub>2</sub> /kg solid	no test data given	0.25
	No nitrogen or chlorides	correct	correct
Application**	Grams per square meter	20 - 40	20 - 40

\* based on information from <https://www.peterschemical.com/calcium-magnesium-acetate/>, and linked MSDS and spec sheet.

\*\* Application rates are only meant as a recommendation. Every snow/ice occurrence is different so rates will vary, depending on situation. Rate guide is attached.

Table prepared by Karen Engelbrecht, NASI

# TECHNICAL DATA SHEET

## NASi SF

Sodium Formate

Typical Analysis

<b>Purity</b>	98.0% Min.
<b>Corrosion inhibitor</b>	2% Max.
<b>pH</b>	8-11
<b>Moisture</b>	1% Max.
<b>Granular size</b>	2-6 mm
<b>Specific gravity kg/m<sup>3</sup></b>	900-950
<b>Bulk density kg/L</b>	0.9-1.0
<b>Miscibility with water</b>	81g per 100 ml at 20°C
<b>Appearance</b>	White irregular granulate

- ❖ Powerful and ecologic de-icing product, designed to maintain adequate friction between aircraft tires and the runway
- ❖ Melts ice and snow faster than urea and sodium acetate
- ❖ Effective at lower temperatures
- ❖ Lower use rates compared to urea and sodium acetate
- ❖ PATENTED USA
- ❖ APPROVED ACCORDING TO AMS1431 CURRENT SPECIFICATIONS BY SMI USA THE WORLDS LEADER OF AEROSPACE MATERIALS LABORATORY
- ❖ APPROVED BY SWEDISH NATIONAL ROAD AND TRANSPORT RESEARCH INSTITUTE (SHRP TEST, ASPHALT CONCRETE DEGRADATION RESISTANCE LFV1-98 AND EFFECTS ON BITUMEN LFV 2-98)

EXCLUSIVE NORTH AMERICAN MARKETER

THE INFORMATION SET FORTH ON THIS DATA SHEET IS BELIEVED TO BE ACCURATE AS OF THE PRESENT DATE. SINCE THE ACTUAL USE BY OTHERS IS BEYOND OUR CONTROL, IT IS THE PURCHASER'S/USER'S RESPONSIBILITY TO DETERMINE THE SUITABILITY OF THE PRODUCT FOR THEIR OWN USE AND PURPOSE. NACHURS ALPINE SOLUTIONS MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED, IMPLIED OR FITNESS FOR A PARTICULAR PURPOSE. NACHURS ALPINE SOLUTIONS NEITHER ASSUMES RESPONSIBILITY REGARDING THE ACCURACY OR SUITABILITY OF SUCH INFORMATION OR PRODUCT FOR APPLICATION TO PURCHASER'S INTENDED USE OR PURPOSE NOR FOR THE CONSEQUENCES OF ITS USE. NO SUGGESTIONS FOR USE ARE INTENDED, AND NOTHING HEREIN SHALL BE CONSTRUED AS A RECOMMENDATION TO INFRINGE ANY EXISTING PATENTS OR TO VIOLATE ANY FEDERAL, STATE OR LOCAL LAWS, RULES OR REGULATIONS.

NEW ISSUE: 5/27/2016

800-622-4877 TOLL FREE

740-382-5701 OFFICE

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421 Leader Street

Marion, Ohio 43302

[www.nasindustrial.com](http://www.nasindustrial.com)



tank label



**NASI**™  
**SF**

## ECOWAY SF/ICECARE

DISTRIBUTED BY: **NACHURS ALPINE SOLUTIONS®**

(800) 622-4877

421 Leader Street • Marion, OH 43302 USA  
1705 North Broadway • Red Oak, IA 51566 USA  
30 Neville Street • New Hamburg, ON N3A 4G7 CANADA

3185 Cline Road • Corydon, IN 47112 USA  
5100 Geigy Access Road • St. Gabriel, LA 70776 USA  
NW12-17-24 W2M • Belle Plaine, SK S0G 0G0 CANADA

[www.nasindustrial.com](http://www.nasindustrial.com)

### SIGNAL WORD: WARNING

**HAZARD STATEMENTS:** CAUSES MILD SKIN IRRITATION. CAUSES EYE IRRITATION. MAY BE HARMFUL IF INHALED.

**PRECAUTIONARY STATEMENTS:** USE ONLY OUTDOORS OR IN A WELL VENTILATED AREA. AVOID BREATHING DUST. WASH SKIN THOROUGHLY AFTER HANDLING. WEAR PROTECTIVE GLOVES, CLOTHING, EYE AND FACE PROTECTION. **IF SWALLOWED**, RINSE MOUTH. DO NOT INDUCE VOMITING. IF ON HAIR OR SKIN, REMOVE ALL CONTAMINATED CLOTHING AND RINSE SKIN WITH WATER. **IF INHALED**, REMOVE VICTIM TO FRESH AIR AND KEEP AT REST IN A POSITION COMFORTABLE FOR BREATHING. **IF IN EYES**, RINSE CAREFULLY WITH WATER FOR SEVERAL MINUTES. REMOVE CONTACTLENSES, IF ABLE AND CONTINUE RINSING. IMMEDIATELY CALL A POISON CENTER OR DOCTOR/PHYSICIAN. SEE FIRST AID INSTRUCTION FOR SPECIFIC TREATMENT. IF SKIN IRRITATION OCCURS, GET MEDICAL ATTENTION. IF EYE IRRITATION PERSISTS, GET MEDICAL ATTENTION. IF YOU FEEL UNWELL, CALL A POISON CENTER OR DOCTOR/PHYSICIAN. WASH CONTAMINATED CLOTHING BEFORE REUSE. ABSORB SPILLAGE TO PREVENT MATERIAL DAMAGE.

**CAUTION:** EXPOSURE MAY AGGRAVATE PRE-EXISTING EYE, SKIN, OR RESPIRATORY CONDITIONS.

**FOR INDUSTRIAL USE ONLY** THE INFORMATION CONTAINED HEREIN IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. WE DO NOT SUGGEST OR GUARANTEE THAT ANY HAZARDS LISTED HEREIN ARE THE ONLY ONES WHICH EXIST. NASI MAKES NO WARRANTY OF ANY KIND, EXPRESS OR IMPLIED, CONCERNING THE SAFE USE OF THIS MATERIAL IN YOUR PROCESS OR IN COMBINATION WITH OTHER SUBSTANCES. USER HAS THE SOLE RESPONSIBILITY TO DETERMINE THE SUITABILITY OF THE MATERIALS FOR ANY USE AND THE MANNER OF USE CONTEMPLATED. USER MUST MEET ALL APPLICABLE SAFETY AND HEALTH STANDARDS.

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**IN CASE OF EMERGENCY CALL:**  
CHEMTREC (US): (800) 424-9300  
CANUTEC (CANADA) (613) 996-6666

**Contains Sodium Formate >98% CAS: 141-53-7**

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## SAFETY DATA SHEET

Name of Product:

**Ecoway SF**

Product #: See Section 1

Revision Date: April 25, 2018

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: **Ecoway SF**  
SYNONYMS: Formic acid sodium salt  
PRODUCT CODES: I000131; I000132

COMPANY IDENTIFICATION: NACHURS ALPINE SOLUTIONS  
DIVISION: Marion  
ADDRESS: 421 Leader Street, Marion, OH43302, United States

PHONE: 800-622-4877 (USA)  
800-265-2268 (CANADA)

EMERGENCY PHONE: United States: Chemtrec: 800-424-9300 (CCN 15189)  
Canada: CANUTEC: 1-613-996-6666  
I TECH: 1-877-324-4402

CHEMICAL NAME: Sodium Formate  
CHEMICAL FAMILY: Formic Acid, Sodium Salt  
CHEMICAL FORMULA: HCOONa

PRODUCT USE: Solid Deicer

### SECTION 2: HAZARDS IDENTIFICATION

GHS ELEMENTS:

Hazard Classification: Skin Irritation (Category 3).  
Eye Irritation (Category 2B).  
Acute Toxicity – Inhalation (Category 5).

Pictogram: None Required.

Signal Word: Warning

Hazard Statements: Causes mild skin irritation.  
Causes eye irritation.  
May be harmful if inhaled.

Precautionary Statements: Use only outdoors or in a well ventilated area. Avoid breathing dust.  
Wash skin thoroughly after handling. Wear protective gloves, clothing, eye and face protection.  
If swallowed, rinse mouth. Do NOT induce vomiting.  
If on hair or skin, remove all contaminated clothing and rinse skin with water.  
If inhaled, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
If in eyes, rinse carefully with water for several minutes. Remove contact lenses, if able and continue rinsing.  
Immediately call a poison center or doctor/physician. See First Aid instruction for specific treatment.  
If skin irritation occurs, get medical attention.  
If eye irritation persists, get medical attention.  
If you feel unwell, call a poison center or doctor/physician.  
Wash contaminated clothing before reuse.  
Absorb spillage to prevent material damage.

POTENTIAL HEALTH EFFECTS

EYES: May cause irritation.  
SKIN: May cause irritation.  
INGESTION: May cause irritation.  
INHALATION: May cause irritation. Do not inhale dust.

ACUTE HEALTH HAZARDS: N/A

CHRONIC HEALTH HAZARDS: N/A

# SAFETY DATA SHEET

Name of Product: **Ecoway SF**

Product #: See Section 1

Revision Date: April 25, 2018

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: N/A

## CARCINOGENICITY:

OSHA: N/A  
ACGIH: N/A  
NTP: N/A  
IARC: N/A  
OTHER: N/A

SECTION 2 NOTES: Human health effects of overexposure may cause skin or eye irritation or skin rash, tearing, or blurring of vision.

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	Sodium Formate	>98%	CAS# 141-53-7
	Corrosion Inhibitor	<2.0%	Proprietary

SARA 313 REPORTABLE: N/A

OSHA PEL-TWA: N/A  
OSHA PEL STEL: N/A  
OSHA PEL CEILING: N/A

ACGIH TLV-TWA: N/A  
ACGIH TLV STEL: N/A  
ACGIH TLV CEILING: N/A

## SECTION 4: FIRST AID MEASURES

EYES: Flush with water immediately and thoroughly for 15 minutes. If irritation persists, seek medical attention.

SKIN: May be harmful if absorbed through skin. May cause skin irritation. Wash thoroughly with soap and water. If irritation persists, seek medical attention.

INGESTION: No specific intervention is indicated as compound is not likely to be hazardous by ingestion. Consult a physician if necessary.

INHALATION: May be harmful if inhaled. May cause respiratory tract irritation. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS: N/A

## SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABILITY: Not flammable.

FLAMMABLE LIMITS IN AIR: UPPER: N/A  
(% BY VOLUME) LOWER: N/A

FLASH POINT: >200°F (93°C)

METHOD USED: Tagged closed cup.

AUTOIGNITION TEMPERATURE: N/A

## NFPA HAZARD CLASSIFICATION:

HEALTH: 1  
FLAMMABILITY: 0



# SAFETY DATA SHEET

Name of Product: **Ecoway SF**

Product #: See Section 1

Revision Date: April 25, 2018

REACTIVITY: 0  
OTHER: 0

## HMIS HAZARD CLASSIFICATION

HEALTH: 1  
FLAMMABILITY: 0  
REACTIVITY: 0  
PROTECTION: B

EXTINGUISHING MEDIA: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus and full protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: None.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon oxides, Sodium/sodium oxides

## SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES: Before handling any spills, always observe the safety precautions described in Section 8. Spills can be removed in the dry form with suitable equipment or flushed away with large quantities of water.

## SECTION 7: HANDLING AND STORAGE

HANDLING AND STORAGE: Hygroscopic. Store in a cool dry, well-ventilated area in tightly closed containers. Keep away from acids.

OTHER PRECAUTIONS: N/A

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Keep container tightly closed and protect from moisture. Use ventilation that is adequate to keep employee exposure to airborne dust limited.

VENTILATION: Use ventilation that is adequate to keep employee exposure to airborne dust limited. A dust mask is recommended when handling large quantities in small confined non-ventilated area.

RESPIRATORY PROTECTION: Respiratory protection is not required under normal circumstances. If material is misted, use appropriate NIOSH approved respirator or self-contained breathing apparatus.

EYE PROTECTION: Coverall Chemical splash goggles and full face shield.

SKIN PROTECTION: Rubber or plastic gloves.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: N/A

WORK HYGIENIC PRACTICES: Always follow good safety and industrial hygienic practices.

EXPOSURE GUIDELINES: See section 2.

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: white granules

ODOR: slight specific odor.

ODOR THRESHOLD: No data available.

PHYSICAL STATE: Solid/crystalline granular

# SAFETY DATA SHEET

Name of Product: **Ecoway SF**

Product #: See Section 1

Revision Date: April 25, 2018

pH : 8.0-11.0 (15% solution)

BOILING POINT: F°: Unknown  
C°: Unknown

MELTING POINT: F°: >608  
C°: >320

FREEZING POINT: F°: N/A  
C°: N/A

FLASH POINT: F°: >200  
C°: >93

METHOD USED: Tagged Closed Cup

EVAPORATION RATE: N/A

FLAMABILITY: Not flammable.

FLAMMABLE LIMITS IN AIR: UPPER: N/A  
(% BY VOLUME) LOWER: N/A

VAPOR PRESSURE (mmHg): N/A

SPECIFIC GRAVITY (kg/m<sup>3</sup>): 900-950

VAPOR DENSITY (AIR = 1): N/A

DENSITY @ 20°C 0.9-1.0 kg/l

SOLUBILITY IN WATER: soluble (>3.75 lbs./gal.)

PARTITION COEFFICIENT: n-octanol/water - N/A

PERCENT SOLIDS BY WEIGHT: >98

PERCENT VOLATILE: N/A

VOLATILE ORGANIC COMPOUNDS (VOC): N/A

AUTOIGNITION TEMPERATURE: N/A

THERMON DECOMPOSITIONS: N/A

MOLECULAR WEIGHT: 68

## SECTION 10: STABILITY AND REACTIVITY

STABLE

UNSTABLE

x

STABILITY:

CONDITIONS TO AVOID (STABILITY):

INCOMPATIBILITY (MATERIAL TO AVOID):

Prevent contamination with other chemicals

Contact with acids

# SAFETY DATA SHEET

Name of Product: **Ecoway SF**

Product #: See Section 1

Revision Date: April 25, 2018

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Thermal decomposition may generate carbon monoxide and carbon dioxide.

HAZARDOUS POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID (POLYMERIZATION): N/A

## SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION: Acute oral toxicity LD50: >2000 mg/kg (rats).IE  
Acute inhalation toxicity LC50: >680 mg/m<sup>3</sup> (dust, rats, 4 hrs.).  
LC0: >680 mg/m<sup>3</sup> (dust, rats, 4 hrs). No mortality during 14 day observation.  
Skin irritation: nonirritant (Rabbits).  
Eye irritation: nonirritant (Rabbits).

## SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: Biological elimination: >90% (Static test, 7 days) DIN 38 412-L25) Toxicity to bacteria ECo:> 10000 (OECD 209, after 3 hours)  
Chemical oxygen demand COD: - 211 mg oxygen/g. (DIN 38409-H41) Daphnia acute toxicity ECo: 3.3 g/l (24h); 3.2 g/l (48h)  
EC50: 4.8 g/l (24h); 4.4 g/l (48h)  
Fish Toxicity LC50: 1000 mg/l (96 h, Zebra fish, OECD 203)

## SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Reclaim and reuse as much as possible. Dispose in accordance with all federal, state, and local regulations.

RCRA HAZARD CLASS: N/A

## SECTION 14: TRANSPORT INFORMATION

### U.S. DEPARTMENT OF TRANSPORTATION:

PROPER SHIPPING NAME: Ecoway SF (Sodium Formate)  
HAZARD CLASS: N/A  
ID NUMBER: N/A  
PACKING GROUP: N/A  
LABEL STATEMENT: N/A

### WATER TRANSPORTATION:

PROPER SHIPPING NAME: Ecoway SF (Sodium Formate)  
HAZARD CLASS: N/A  
ID NUMBER: N/A  
PACKING GROUP: N/A  
LABEL STATEMENTS: N/A

### AIR TRANSPORTATION:

PROPER SHIPPING NAME: Ecoway SF (Sodium Formate)  
HAZARD CLASS: N/A  
ID NUMBER: N/A  
PACKING GROUP: N/A  
LABEL STATEMENTS: N/A

## SECTION 15: REGULATORY INFORMATION

### U.S. FEDERAL REGULATIONS:

TSCA (TOXIC SUBSTANCE CONTROL ACT): Yes

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT): No

# SAFETY DATA SHEET

Name of Product: **Ecoway SF**

Product #: See Section 1

Revision Date: April 25, 2018

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT): N/A

311/312 HAZARD CATEGORIES: N/A

313 REPORTABLE INGREDIENTS: N/A

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## SECTION 16: OTHER INFORMATION

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### **PREPARATION INFORMATION:**      *Technical Services*

**DISCLAIMER:**      The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and NACHURS ALPINE SOLUTIONS will not be liable for any damages, losses, injuries or consequential damages which may result from the use or reliance on any information contained herein.

"NASI" is a trademark of Nachurs Alpine Solutions Corp.

LAST REVISION: 25 APRIL 2018

## IceCare™

### Sodium Formate Runway Deicer Application Guidelines

This chart is designed to be used as a guideline for general airport runway deicing and anti-icing. Your situations will always vary depending on relative humidity, dew point, and wind conditions. For deicing it is best to start at a rate of 10 to 20 grams IceCare per square meter (1.5 to 5 pounds per 1000 square feet) of pavement. Adjustments, plus/minus can be made from there. Allow enough time for IceCare to penetrate the snow pack or ice before plowing or brooming. IceCare penetrates faster at higher temperatures. It also has a residual effect once the frozen precipitation has been removed however it is best to re-apply when snow/freezing rain first starts accumulating to keep it from bonding to the surface.

Recommended Application rates in **grams per square meter of pavement**:

De-icing situation	Ambient temperature 0 to -5 degrees C	Ambient temperature -5 to -10 degrees C	Ambient temperature -10 to -14
Packed snow, 1.25 to 2.5 cm	19 to 26.5	26.5 to 35	35 to 41
Packed snow, Less than 1.25 cm	7 to 15	15 to 22.5	22.5 to 30
Black ice, <0.25 cm	22.5 to 30	30 to 37.5	37.5 to 45

Recommended Application rates in **pounds per 1000 square feet of pavement**:

De-icing situation	Ambient temperature 20 to 32 degrees F	Ambient temperature 10 to 20 degrees F	Ambient temperature 0 to 10 degrees F
Packed snow, ½" to 1"	4 to 5.5	5.5 to 7	7 to 8.4
Packed snow, Less than ½"	1.4 to 3	3 to 4.6	4.6 to 6.1
Black ice, <1/10"	4.5 to 6.1	6.1 to 7.7	7.7 to 9.2

#### IceCare Anti-icing:

When expectations of freezing rain or wet snow, use 22.5 to 45 grams per square meter (4.5 to 9.2 pounds per 1000 square) of pavement.



# THE SCIENCE OF DE-ICING®

## PRODUCT DESCRIPTION

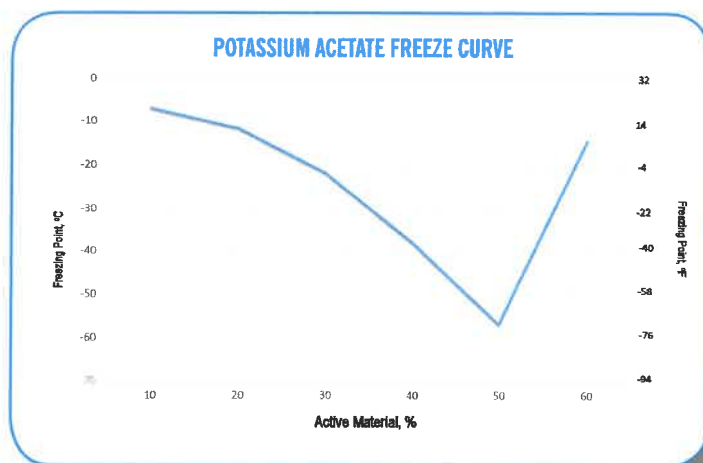
Alpine Ice-Melt®, a 50% w/w **potassium acetate** solution, is an environmentally safe and effective alternative to chlorides. It is friendlier to corrosion sensitive infrastructures such as bridges and parking decks, and is effective in the most extreme winter conditions. Alpine Ice-Melt is listed as a Pacific Northwest Snowfighters (PNS) qualified product with an exceptional corrosion % rate effectiveness. Alpine Ice-Melt is actively applied to bridges by various DOT's.



## TYPICAL PROPERTIES

Active Ingredients	50%
pH	9.5-10.5
Specific Gravity @ 20°C	1.27-1.30
Density, lbs/gal @ 20°C	10.58-10.83
Appearance	Clear, nearly colorless liquid*
Odor	Mild, Characteristic
Water Miscibility	Complete
Freezing Point	-72°F (-58°C)
BOD (5 day), g O2/g of fluid	0.25
COD, g O2/g of fluid	0.35

\*Available tinted blue by request



## liquid application rates

Local conditions such as ground and air temperatures, the frequency and intensity of precipitation (freezing rain, sleet, snow, rain or a mixture), humidity, and surface materials and application equipment will have significant effect on fluid and/or solid de-icer requirements. Liquid properties including viscosity, specific gravity and surface tension as well as temperature will influence nozzle selection and spray pressure. Suggested application rates are only to be taken as a starting point. Lane mile rates are assuming a 12 foot wide lane.

Alpine Ice-Melt® may be used as an anti-icer or de-icer. It is ready to use and requires no dilution, mixing, or heating.







### ANTI-ICING

The most efficient use of Alpine Ice-Melt® is as an anti-icer. Pre-treat the pavement uniformly before the onset of precipitation to help prevent the adhesion of ice and snow and ease mechanical removal.

For the best anti-icer performance, loose snow should be mechanically removed prior to applying.

**SUGGESTED MINIMUM APPLICATION RATE:**  
½ Gallon per 1,000 sq. ft.  
22-42 gallons per lane mile

### DE-ICING

When using Alpine Ice-Melt® as a de-icer it is best applied in bands using high diffusion nozzles. This allows the fluid to penetrate the ice to break the bond with the surface to ease mechanical removal.

**SUGGESTED APPLICATION RATE:**  
1 Gallon per 1,000 sq. ft. for thin ice and increase depending on the thickness of the accumulation — approximately 3 gallons per 1,000 sq. ft. for ice up to an inch thick.  
44-84 gallons per lane mile

### PRE-WETTING SOLID

Alpine Ice-Melt® improves the effectiveness of solid de-icers and sand.

Alpine Ice-Melt® can be sprayed directly on sand or solid de-icer or on the pavement when spreading.

**SUGGESTED APPLICATION RATE:**  
The estimated application rate range is 5% to 15% by weight of solid material. This is approximately 1.25 gallons of Alpine Ice-Melt® per 100 lbs. of sand or solid de-icer.

## liquid storage & handling\*

NASi anti-icer/de-icer liquid products are formulated with a proprietary corrosion inhibitor package to improve its compatibility with copper, brass, aluminum, aluminum alloys, zinc and other metals and alloys. The corrosion inhibitors work by forming a protective barrier between the metal and the product.

All equipment surfaces that are frequently exposed to de-icing chemicals should be routinely rinsed with warm water (especially before and after the winter season) to prevent the accumulation of residue, minimize staining, and maintain equipment integrity.

**Pumps:** The preferred material is stainless steel, however plastic is acceptable. While the corrosion inhibitor package improves compatibility with brass, cast aluminum and cast iron, these materials should be avoided because of abrasion effects. Avoid pumps that contain zinc or galvanized wetted parts. The high abrasion effects combined with the reactivity of de-icers towards zinc will dissolve the galvanized coating.

**Pipes:** Acceptable materials are stainless and carbon steel, polyethylene (PE), polypropylene (PP), polyvinyl chloride (PVC), polyvinylidene fluoride (PVDF), butyl and natural rubber. Minimize contact with zinc or galvanized metals. While welded or flanged pipe

joints are recommended, threaded fittings and joints are acceptable when a high quality pipe sealant is applied.

**Seals and Gaskets:** Recommended materials are natural and butyl rubber, ethylene propylene rubber (EPR, EPM, EPDM) and isoprene. Neoprene and nitrile (Buna-N) rubbers are acceptable. Materials to avoid are: any type of silicon rubber, styrene butadiene (Buna-S), polyurethane, polyacrylate, fluorosilicone and fluorocarbon rubbers and butadiene.

**Tanks:** Stainless steel, fiberglass or polyethylene tanks are recommended. If clean and rust-free, alloy steel or carbon steel tanks may be used. While acceptable in the presence of the corrosion inhibitor package, aluminum tanks should be avoided for long term storage. Ensure tanks are designed to accommodate the viscosity, relatively high density, and low surface tension. Containment should be compliant with local regulatory requirements. Prior to fill, inspect tanks to ensure they are free of residue, rust, or other particulates.

**\*See SDS for additional information. Please follow the Personal Injury Protection (PIP) Guidelines regarding first aid and special protection.**

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# TECHNICAL DATA SHEET



## Typical Properties

Parameter	Unit of Measure	Limits
Potassium Acetate, as CH <sub>3</sub> COOK	w/w%	49-51
Moisture	w/w%	49-51
pH (neat)	SI	9.5-10.5
Refractive Index		1.39-1.40
<b>Physical Properties**</b>		
Specific Gravity @ 20°C	Water=1	1.27-1.30
Density	lbs/gal	10.58-10.83
	kg/L	1.27-1.30
Approximate salt out temperature	°C/°F	-58/-72
Viscosity, 20°C	cPs	5.5
0°C	cPs	11.4
-10°C	cPs	29.3
-20°C	cPs	35.9
-30°C	cPs	74.4
-40°C	cPs	184.5
Appearance		Clear, nearly colorless liquid

\*\*INFORMATIONAL ONLY

THE INFORMATION SET FORTH ON THIS DATA SHEET IS BELIEVED TO BE ACCURATE AS OF THE PRESENT DATE. SINCE THE ACTUAL USE BY OTHERS IS BEYOND OUR CONTROL, IT IS THE PURCHASER'S/USER'S RESPONSIBILITY TO DETERMINE THE SUITABILITY OF THE PRODUCT FOR THEIR OWN USE AND PURPOSE. NACHURS ALPINE SOLUTIONS MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESSED, IMPLIED OR FITNESS FOR A PARTICULAR PURPOSE. NACHURS ALPINE SOLUTIONS NEITHER ASSUMES RESPONSIBILITY REGARDING THE ACCURACY OR SUITABILITY OF SUCH INFORMATION OR PRODUCT FOR APPLICATION TO PURCHASER'S INTENDED USE OR PURPOSE NOR FOR THE CONSEQUENCES OF ITS USE. NO SUGGESTIONS FOR USE ARE INTENDED, AND NOTHING HEREIN SHALL BE CONSTRUED AS A RECOMMENDATION TO INFRINGE ANY EXISTING PATENTS OR TO VIOLATE ANY FEDERAL, STATE OR LOCAL LAWS, RULES OR REGULATIONS.

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## Alpine Ice Melt

### Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Revision Date: 10/12/2018

Date of Issue: 05/03/2018

Version: 2.0

## SECTION 1: IDENTIFICATION

### 1.1. Product Identifier

**Product Form:** Mixture

**Product Name:** Alpine Ice Melt

**Product Number:** I000008, I000037, I000102, F000138, F000273, F000277, F000278, F000318

### 1.2. Intended Use of the Product

Deicer.

### 1.3. Name, Address, and Telephone of the Responsible Party

#### Company

Nachurs Alpine Solutions

421 Leader St.

Marion, OH 43302

740-382-5701

### 1.4. Emergency Telephone Number

**Emergency Number** : CHEMTREC: 1-800-424-9300 (USA)

CANUTEC: 1-613-996-6666 (CANADA)

QM: 1-887-387-7745 (CANADA)

## SECTION 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the Substance or Mixture

#### GHS-US/CA Classification

Not classified

### 2.2. Label Elements

#### GHS-US/CA Labeling

No labeling applicable

### 2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

### 2.4. Unknown Acute Toxicity (GHS-US/CA)

No data available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. Substance

Not applicable

### 3.2. Mixture

Name	Product Identifier	% *	GHS Ingredient Classification
Potassium hydroxide	(CAS-No.) 1310-58-3	< 0.1046	Met. Corr. 1, H290 Acute Tox. 3 (Oral), H301 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 1, H370

Full text of H-phrases: see section 16

\*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

## SECTION 4: FIRST AID MEASURES

### 4.1. Description of First-aid Measures

**General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**Inhalation:** When symptoms occur: go into open air and ventilate suspected area. Obtain medical attention if breathing difficulty persists.

# Alpine Ice Melt

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

**Skin Contact:** Remove contaminated clothing. Drench affected area with water for at least 15 minutes. Obtain medical attention if irritation develops or persists.

**Eye Contact:** Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention.

**Ingestion:** Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

### 4.2. Most Important Symptoms and Effects Both Acute and Delayed

**General:** Not expected to present a significant hazard under anticipated conditions of normal use.

**Inhalation:** Prolonged exposure may cause irritation.

**Skin Contact:** Prolonged exposure may cause skin irritation.

**Eye Contact:** May cause slight irritation to eyes.

**Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

### 4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

## SECTION 5: FIRE-FIGHTING MEASURES

### 5.1. Extinguishing Media

**Suitable Extinguishing Media:** Water spray, dry chemical, foam, carbon dioxide.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### 5.2. Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not considered flammable but may burn at high temperatures.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** Hazardous reactions will not occur under normal conditions.

### 5.3. Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Carbon oxides (CO, CO<sub>2</sub>). Potassium oxides. Sodium oxides.

### Reference to Other Sections

Refer to Section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### 6.1. Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Avoid prolonged contact with eyes, skin and clothing. Avoid breathing (vapor, mist, spray).

#### 6.1.1. For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protective equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### 6.1.2. For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Ventilate area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

### 6.2. Environmental Precautions

Prevent entry to sewers and public waters.

### 6.3. Methods and Materials for Containment and Cleaning Up

**For Containment:** Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams.

**Methods for Cleaning Up:** Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

### 6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

# Alpine Ice Melt

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

### SECTION 7: HANDLING AND STORAGE

#### 7.1. Precautions for Safe Handling

**Precautions for Safe Handling:** Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid prolonged contact with eyes, skin and clothing. Avoid breathing vapors, mist, spray.

**Hygiene Measures:** Handle in accordance with good industrial hygiene and safety procedures.

#### 7.2. Conditions for Safe Storage, Including Any Incompatibilities

**Technical Measures:** Comply with applicable regulations.

**Storage Conditions:** Keep container closed when not in use. Store in a dry, cool place. Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials.

**Incompatible Materials:** Strong acids, strong bases, strong oxidizers.

#### 7.3. Specific End Use(s)

Deicer.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

Potassium hydroxide (1310-58-3)		
USA ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Alberta	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
British Columbia	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Manitoba	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
New Brunswick	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nova Scotia	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nunavut	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Northwest Territories	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Ontario	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Prince Edward Island	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Québec	PLAFOND (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Saskatchewan	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Yukon	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>

#### 8.2. Exposure Controls

**Appropriate Engineering Controls:** Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Gloves. Protective clothing. Protective goggles.



**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear protective gloves.

**Eye and Face Protection:** Chemical safety goggles.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

**Other Information:** When using, do not eat, drink or smoke.

# Alpine Ice Melt

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

### SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1. Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear to Nearly Colorless
Odor	: Characteristic, Slight Acetic
Odor Threshold	: Not available
pH	: 9.5 - 10.5
Evaporation Rate	: Not available
Melting Point	: Not available
Freezing Point	: Not available
Boiling Point	: Not available
Flash Point	: < 100 °C (< 212 °F)
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: Not available
Upper Flammable Limit	: Not available
Vapor Pressure	: Not available
Relative Vapor Density at 20°C	: Not available
Relative Density	: Not available
Density	: 10.58 - 10.83 lb/gal
Specific Gravity	: 1.27 - 1.30
Solubility	: Complete
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Similar to Water

### SECTION 10: STABILITY AND REACTIVITY

- 10.1. **Reactivity:** Hazardous reactions will not occur under normal conditions.
- 10.2. **Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).
- 10.3. **Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.
- 10.4. **Conditions to Avoid:** Direct sunlight, extremely high or low temperatures, and incompatible materials.
- 10.5. **Incompatible Materials:** Strong acids, strong bases, strong oxidizers.
- 10.6. **Hazardous Decomposition Products:** None expected under normal conditions of use.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### 11.1. Information on Toxicological Effects - Product

**Acute Toxicity (Oral):** Not classified  
**Acute Toxicity (Dermal):** Not classified  
**Acute Toxicity (Inhalation):** Not classified  
**LD50 and LC50 Data:** Not available  
**Skin Corrosion/Irritation:** Not classified  
**pH:** 9.5 - 10.5  
**Eye Damage/Irritation:** Not classified  
**pH:** 9.5 - 10.5  
**Respiratory or Skin Sensitization:** Not classified  
**Germ Cell Mutagenicity:** Not classified  
**Carcinogenicity:** Not classified  
**Specific Target Organ Toxicity (Repeated Exposure):** Not classified  
**Reproductive Toxicity:** Not classified  
**Specific Target Organ Toxicity (Single Exposure):** Not classified  
**Aspiration Hazard:** Not classified

# Alpine Ice Melt

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

**Symptoms/Injuries After Inhalation:** Prolonged exposure may cause irritation.

**Symptoms/Injuries After Skin Contact:** Prolonged exposure may cause skin irritation.

**Symptoms/Injuries After Eye Contact:** May cause slight irritation to eyes.

**Symptoms/Injuries After Ingestion:** Ingestion may cause adverse effects.

**Chronic Symptoms:** None expected under normal conditions of use.

### 11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

<b>Potassium hydroxide (1310-58-3)</b>	
LD50 Oral Rat	284 mg/kg

## SECTION 12: ECOLOGICAL INFORMATION

### 12.1. Toxicity

Ecology - General: Not classified.

### 12.2. Persistence and Degradability

<b>Alpine Ice Melt</b>	
Persistence and Degradability	Not established.

### 12.3. Bioaccumulative Potential

<b>Alpine Ice Melt</b>	
Bioaccumulative Potential	Not established.
<b>Potassium hydroxide (1310-58-3)</b>	
Log Pow	0.65

### 12.4. Mobility in Soil

Not available

### 12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

## SECTION 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

**Waste Disposal Recommendations:** Dispose of contents/container in accordance with local, regional, national, provincial, territorial and international regulations.

**Ecology - Waste Materials:** Avoid release to the environment.

## SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

**14.1. In Accordance with DOT** Not regulated for transport

**14.2. In Accordance with IMDG** Not regulated for transport

**14.3. In Accordance with IATA** Not regulated for transport

**14.4. In Accordance with TDG** Not regulated for transport

## SECTION 15: REGULATORY INFORMATION

### 15.1. US Federal Regulations

<b>Potassium hydroxide (1310-58-3)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
CERCLA RQ	1000 lb

### 15.2. US State Regulations

<b>Potassium hydroxide (1310-58-3)</b>	
U.S. - Massachusetts - Right To Know List	
U.S. - New Jersey - Right to Know Hazardous Substance List	
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List	
U.S. - Pennsylvania - RTK (Right to Know) List	

### 15.3. Canadian Regulations

# Alpine Ice Melt

## Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

**Potassium hydroxide (1310-58-3)**

Listed on the Canadian DSL (Domestic Substances List)

### SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

**Date of Preparation or Latest Revision** : 10/12/2018

**Revision**

**Other Information** : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

#### GHS Full Text Phrases:

Acute Tox. 3 (Oral)	Acute toxicity (oral) Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
STOT SE 1	Specific target organ toxicity (single exposure) Category 1
H290	May be corrosive to metals
H301	Toxic if swallowed
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H370	Causes damage to organs

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.*

NA GHS SDS 2015 (Can, US)

# Technical Sheet-Material Compatibility



## CORROSION INHIBITORS:

Alpine Ice Melt contains a proprietary corrosion inhibitor package to improve its compatibility with copper, brass, aluminum, aluminum alloys, zinc and other metals and alloys. The corrosion inhibitors work by forming a protective barrier between the metal and the potassium acetate solution.

## EQUIPMENT CONSIDERATIONS:

All equipment surfaces that are frequently exposed to potassium acetate de-icers should be regularly rinsed with warm water (especially before and after the winter season) to prevent the build-up of residue and to minimize staining and maintain the equipment integrity.

**Pumps:** The preferred material is stainless steel. While the corrosion inhibitor package improves compatibility with brass, cast aluminum and cast iron, these materials should be avoided because of abrasion effects. Avoid pumps that contain zinc or galvanized wetted parts. The high abrasion effects combined with the reactivity of potassium acetate towards zinc will dissolve the galvanizing and expose the metal to agents which cause corrosion.

**Pipes:** Acceptable materials are stainless and carbon steel, polyethylene (PE), polypropylene (PP), polyvinyl chloride (PVC), polyvinylidene fluoride (PVDF), butyl and natural rubber. Minimize contact with zinc or galvanized metals. A high quality pipe sealant is important for threaded fittings and joints, however welded or flanged pipe joints are recommended.

**Seals and Gaskets:** Recommended materials are natural and butyl rubber, ethylene propylene rubber (EPR, EPM, EPDM) and isoprene. Neoprene and nitrile (Buna-N) rubbers are acceptable materials. Materials to avoid are: any type of silicon rubber, styrene butadiene (Buna-S), polyurethane, polyacrylate, fluorosilicone and fluorocarbon rubbers and butadiene.

## STORAGE CONSIDERATIONS:

All tanks should be cleaned and maintained both before and after the winter season to maintain the integrity of the tank and minimize staining and deterioration.

**Tanks:** Stainless steel, fiberglass or polyethylene tanks are recommended. If clean and rust-free, alloy steel or carbon tanks may be used. While aluminum is acceptable in the presence of the corrosion inhibitor package, aluminum tanks should be avoided for long term storage. Ensure tanks are built to withstand potassium acetates high viscosity, high density and low surface tension.

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